

Vertebrate alpha2,8-sialyltransferases (ST8Sia): a teleost perspective.

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Supplementary data 2: Multiple sequence alignments (clustalX) of ST8Sia sequences used to draw: A) supplemental figure 1; B) figure 2; C) figure 5

A) Multiple sequence alignments (ClustalX) of 324 ST8Sia sequences used in supplemental figure 1

Mega

CLUSTAL X (1.81) multiple sequence alignment

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1
Latcal_3      IVFSIGENFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Perflu_3      IVFSIGENFHSLLPA----VSPILN---KHYNVCVVVGNNGSILTGSHCGA
Serdum_3      IVFSIGENFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Stepar_3      IVFSIGENFRSLLPE----ASPILN---KHYNVCVVVGNNGSILTGSRGCGP
Tetcal_3      VVFSVSNFSRLLPE----VPPILK---MHYNTCAVVGNNGSILTGSSCGA
Monalb_3      IVFSISENFRSLLPK----VSPVLN---KHYNVCVVVGNNGSILTGSRGCGP
Molmol_3      IVFSIGENFRSLLPE----TSPILN---KHFNVCAVVGNNGSILTGSRGCGA
Takrub_3      VVFSIGENFRSLLPE----TSPILQ---KHYNVCVVVGNNGSILTGSRGCGQ
Canlupfam_3   VVFSISNNFRSLLPD----VSPIVN---KHFNVCAVVGNNGSILTGSRGCGQ
Bostau_3      VVFSISNNFRSLLPD----VSPIVN---KRYNVCVVVGNNGSILTGSRGCGP
Homsap_3      VVFSISNNFRSLLPD----VSPIMN---KHYNVCVVVGNNGSILTFIQCGR
Siltro_3      VVFSISNNFRSLLPD----TSPVMN---KRYNVCVVVGNNGSILTESQCGA
Anocar_3      VVFSISNSFRMLLPD----VSPIQN---KHYNVCVVVGNNGSILVGSQCGQ
Musmus_3      VVFSISNNFRSLLPD----VSPIMN---KRYNVCVVVGNNGSILTGSRGCGQ
Pantro_3      VVFSISNNFRSLLPD----VSPIMN---KHYNVCVVVGNNGSILTGSRGCGQ
Ratnor_3      VVFSISNNFRSLLPD----VSPILN---KRYNVCVVVGNNGSILTGSRGCGQ
Galgai_3      VVFSISNNFRSLLPD----VSPILN---KHYNVCVVVGNNGSILTGSRGCGQ
Lepocu_3      VVFSISNNFRSLLPD----TSPILN---KQYNVCVVVGNNGSILTGSRGCGP
Tetnig_3      IVFSIGENFRSLLPE----VSPIRQ---KHYNVCVVVGNNGSILTGSRGCGQ
Squaca_3      VVFSVSNFSRLLPE----VPPILK---MHYNTCAVVGNNGSILTGSGCGA
Perfla_3      IVFSIGENFHSLLPA----VSPILN---KHYNVCVVVGNNGSILTGSRGCGA
Salsal_3      IVFSIGENFKSLLPE----ASPIVN---KHYNVCVVVGNNGSILTGSRGCGP
Serlaldor_3   IVFSIGENFRSLLPE----ASPILN---KHYNVCVVVGNNGSILTGSRGCGP
Treber_3      IVFSISNNLKSLLPD----TSPIRN---KHYSMCAVVGNNGSILTGSHCGP
Cynsem_3      IVFSIGENFHSLLPE----VSPIVN---KHYNVCVVVGNNGSILTGSRGCGP
Paroli_3      IVFSISNNFKSLLPD----ASPVLN---KHYSVCVVVGNNGSILTGSHCGP
Paroli_3b     IVFSIGENFRSLLPD----ASPILN---KHYNVCVVVGNNGSILTGSRGCGP
Plaste_3      IVFSISNNFKSLLPD----ASPLLN---KHYSVCVVVGNNGSILTGSHCGP
Plaste_3b     IVFSIGENFRSLLPE----ASPILN---KHYNVCVVVGNNGSILTGSRGCGP
Erpcal3       VVFSISNNFKSLLPD----ASPVLN---KHYNVCVVVGNNGSILTGSRGCGP
Calmil_3b     VVFSISNNFRMLLPD----VSPILK---MHYNTCAVVGNNGSILRGSRCGD
Hetzeb_3      IVFSVSNFSRLLPD----VPPILK---MHYNTCAVVGNNGSILIGSRCGA
Latcha_3      VVFSISNNFKSLLPD----VSPILN---KCYNVCVVVGNNGSILTDSQCGA
Anates_3      IVFSIGENFRSLLPD----ASPILN---KHYNVCVVVGNNGSILTGSRGCGP
Ampcit3       IVFSISENFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Auslim_3      IVFSIGENFRSLLPE----ASPILN---KRYNVCVVVGNNGSILTGSRGCGA
Cypvar_3      IVFSIGENFRSLLPE----VSPILN---KQYNVCVVVGNNGSILTGSRGCGA
Krymar_3      IVFSIGENFRSLLPE----VSPILD---KHYNVCVVVGNNGSILTGSRGCGA
Funhet_3      IVFSIGENFRSLLPE----ASPVLN---KRYNVCVVVGNNGSILTGSRGCGA
Gamaff3       IVFSIGDNFRSLLPD----VSPILN---MRYNVCVVVGNNGSILTGSRGCGA
Orylat_3      MVYSIGENFRSLLPE----VSPILN---RHYNVCVVVGNNGSILTGLCGA
Orenil_3      IVFSISENFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Mayzeb_3      IVFSISDNFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Punnye_3      IVFSISDNFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Punnye_3a     IVFSISDNFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Neobri_3      IVFSISDNFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Misang_3      VVFSIGENLRSLLPD----SSPIIN---KRYNVCVVVGNNGSILTGSRGCGP
Sinrhi3       IVFSIGENLRSLLPD----SSPVLN---KHFNTCAVVGNNGSILTGSRGCGA
Singra_3      VVFSIGENLRSLLPD----SSPVLN---KRFNSCAVVGNNGSILTGSRGCGT
Hapbur_3      IVFSISDNFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Astcal_3      IVFSISDNFRSLLPE----VSPILN---KHYNVCVVVGNNGSILTGSRGCGP
Notfur_3      IVFSIGENFRSLLPN----VSPILN---KHYNVCVVVGNNGSILTGSRGCGT
Cypcar_3      YVFSIGENLRSLLPD----SSPVLN---KRFNSCAVVGNNGSILTGSRGCGA
Poefor3       IVFSIGENFRSLLPE----VSPVLN---KRYNVCVVVGNNGSILTGSRGCGA
Poelat_3      IVFSIGENFRSLLPE----VSPVLN---KRYNVCVVVGNNGSILTGSRGCGA
Poeret_3      IVFSIGENFRSLLPE----VSPVLN---KRYNVCVVVGNNGSILTGSRGCGA
Angang_3      VVFSISNNFKSLLPE----SSPIVE---RRFNVCALVGNNGSVLTGSRGCGP
Xipmac_3      IVFSIGENFRSLLPE----VSPVLN---KRYNVCVVVGNNGSILTGSRGCGA
Masarm_3      IVFSIGENFYSLVPE----VSPILN---KHYNVCVVVGNNGSILSGSRGCGS
Permag_3      VVYSIGENFYSLPE----ASPILH---RHYKRCVVVGNNGSILTGSKCGT
Gnapet3       VVFSISSNFKSLLPE----SSPIQN---KHYNVCVVVGNNGSILTGSSCGP
Ostbic_3      VVFSVSSSFRSLLPD----SSPIEK---KHYNVCVVVGNNGSILTGSSCGP
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Gadmor_3	IVFSIGQNFHSLLEPE----ASPILN---KHYNVCAVVGNSGILTGSKCGP
ScIfor_3	VVFSVSGSFRSLLEPD----SSPVEK---KHYNVCAVVGNGGILTGSSCGP
Acapol3	IVFSIGENFRSLLEPD----VSPILN---KHYNVCAVVGNSGILTGSRGCP
Ampoce_3	IVFSIGENFRSLLEPD----VSPILN---KHYNVCAVVGNSGILTGSRGCP
ScIfor_3b	VVFAISNNFKSLLEPV----TSPIQN---KHYNTCAVVGNSGILTSSHCHG
Ostbic_3b	VVFAISNNFKSLLEPE----TSPIQN---KHYNTCAVVGNSGILTSSHCHG
Parkin_3	VVFSISNNFKSLLEPE----SSPIQN---KHYNVCAVVGNSGILTGSSCGH
Amppe3	IVFSIGENFRSLLEPD----VSPILN---KHYNVCAVVGNSGILTGSRGCP
Oncmyk_3	IVFSIGENFKSLLEPE----ASPIVN---KHYNVCAVVGNSGVLTGSRGCP
Gasacu_3	IVFSIGENFRSLLEPE----VSPILN---KHYNVCAVVGNSGILTGSRGCP
Labber_3	IVFSIGENFRSLLEPE----VSPILN---KHYNVCAVVGNSGILTGSRGCP
Panbuc_3	VVFSISSSFRSLLEPD----HSPILN---KHYNTCAVVGNSGILIGSRGCP
Parhas3	VVFSIGENFRSLLEPD----SSPVLN---KRYNTCAVVGNSGILTGSRGCA
Cluhar_3	VVFSIGENFRSLLEPE----LSPILN---KRYNTCAVVGNSGILTGSRGCP
Aloalo_3	VVFSIGENFRSLLEPE----ISPILN---KRYNTCAVVGNSGILTGSRGCP
Panhyp_3	VVFSIGENFRSLLEPD----SSPILN---KRYNTCAVVGNSGILTGSRGCA
Eleele_3	VVFSIGENFRSLLEPD----SSPILN---KLYNTCAVVGNSGILTGSRGCA
Denclu_3	IVFSIGENFKSLLEPE----TSPVMN---KLYNTCAVVGNSGILMGSRCGP
Sarpil_3	VVFSIGENFRSLLEPE----ISPILN---KRYNTCAVVGNSGILTGSRGCP
Eigvir_3	VVFSIGENFRSLLEPD----SSPILN---KRYNTCAVVGNSGILTDSRCGS
Aptalb_3	VVFSIGENFRSLLEPD----SSPVLN---KRYNTCAVVGNSGILTGSRGCA
Sinans_3	VVFSIGENLRSLLPD----SSPVLN---RRFNTCAVVGNSGILTGSRGCA
Pygnat_3	VVFSIGENFRSLLEPD----SSPILN---KRYNTCAVVGNSGILTGSRGCP
Astmex_3	IVFSIGENFRSLLEPD----SSPVLN---KRYNTCAVVGNSGILTGSRGCP
Caraur_3	VVFSIGENLRSLLPD----SSPVLN---KRFNSCAVVGNSGILTGSRGCA
Danrer_3	VVFSIGENLRSLLPD----ASPVLN---KRYNTCAVVGNSGILTGSRGCP
Ictpun_3	YVFSIGENFRSLLEPD----SSPILN---KRYNTCAVVGNSGILTGSRGCA
Plealt_3	YVFSIGENFKSLLEPE----ASPVVN---KHYNVCAVVGNSGILTGSRGCA
Plealt_9	YVFSISNNFKSLLEPE----TSPILN---KHYNVCAVVGNSGILTGSHCGS
Gasacu_9	IVFSISNNLKSLLEPD----ASPIRN---KHYSVCAVVGNSGILTGSHCGP
Parkin_9	VVFAISGNFKSLLEPD----SSPILN---KHYNMCVVGNSGILTGSRGCP
Acapol_9	IVFSISNNFKSLLEPE----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Larcro_9	IVFSISNNFKSLLEPE----TSPIHN---KHYSICSVVGNSGILTGSHCGP
Notcor_9	IVFSISNNLKSLLEPD----TSPIRN---KHYSMCAVVGNSGILTGSHCGP
Latcal_9	IVFSISNNFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Serlaldor_9	IVFSISNNFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Monalb_9	IVFSISNSFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Serdum_9	IVFSISNNFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Perflu_9	IVFSISNNLKSLLEPD----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Perfla_9	IVFSISNNLKSLLEPD----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Stepar_9	IVFSISNNFKSLLEPE----TSPIHN---KHYSVCAVVGNSGILTGSHCGP
Molmol_9	IVFSISNNFKSLLEPD----TSPIRN---KHYSICSVVGNSGILTGSHCGP
Hipcom_9	IVFSISNNFKSLLEPD----ASPILD---KHYGTCAVVGNSGILTGSHCGS
Takrub_9 B	IVFSISNNFKSLLEPD----TSPIHN---KHYSLCSVVGNSGILTGSHCGD
Takrub_9	IVFSISNNFKSLLEPD----TSPIHN---KHYSLCSVVGNSGILTGSHCGA
Cynsem_9	IVFSISNNFKSLLEPD----ISPILN---KHYSMCAVVGNSGILTGSHCGP
Scomax_9	IVFSISNNLKSLLEPD----ISPILN---KHYSVCAVVGNSGILTGSHCGP
Corlav_9	VVFSISNNLKSLLEPD----ASPIQN---KHYNVCAVVGNSGILTGSHCGP
Oncmyk_9	VVFSISNNLKSLLEPD----ASPIQN---KHYNVCAVVGNSGILTGSHCGP
Salsal_9	VVFSISNNLKSLLEPD----ASPIQN---KHYNVCAVVGNSGILTGSHCGP
Onctsh_9	VVFSISNNLKSLLEPD----ASPIQN---KHYNVCAVVGNSGILTGSHCGP
Salalp_9	VVFSISNNLKSLLEPD----ASPIQN---KHYNVCAVVGNSGILTGSHCGP
Ampoce_9	IVFSISNNFKSLLEPE----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Amppe9	IVFSISNNFKSLLEPE----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Labber_9	IVFSISNNFKSLLEPD----TSPIRN---KHYSICSVVGNSGILTGSHCGP
Umppyg_3B	IVFSIGENFQSLLEPE----VSPIVD---KHYNVCAIVGNSGILTGSRGCP
Esoluc_3b	VVFSIGENFKSLLEPE----ASPIAN---KHYNVCAVVGNSGILTGSRGCP
Gadmor_9	IVFSISNNFKSLLEPD----MSPIYN---KHYNVCAVVGNSGILTGSRGCP
Umppyg_9	VVFSISNNLKSLLEPD----ASPIQN---KHYNVCAVVGNSGILTGSHCGP
Esoluc_9	VVFSISNNLKSLLEPD----ASPIQN---KHYNVCAVVGNSGILTGSHCGP
Permag_9	IVFSISNNFKSLLEPD----TSPILN---KHYSVCSVVGNSGILTDSHCGP
Bolpec_9	IVFSISNNFKSLLEPD----TSPILN---KHYSVCSVVGNSGILTDSHCGP
Poefor9	IVFSISNNFKSLLEPE----ASPILN---KHYSTCAVVGNSGILTGSHCGP
Masarm_9	IVFSISNNFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Angjap_9	VVFSIGENFMSLLEPE----SSPIVPE--RRFNVCALVGNSGVLTGSRGCP
Poelat_9	IVFSISNNFKSLLEPE----ASPILN---KHYSTCAVVGNSGILTGSHCGP
Poeret_9	IVFSISNNFKSLLEPE----ASPILN---KHYSTCAVVGNSGILTGSHCGP
Xipmac_9	IVFSISNNFKSLLEPD----ASPIRN---KHYSTCAVVGNSGILTGSHCGP
Hapbur_9	IVFSISNNFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Orylat_9	IVFSISNNFKSLLEPE----ISPILN---KHYSVCAVVGNSGILTGSHCGP
Gamaff_9	IVFSISNNFKSLLEPD----ASPIRN---KHYSTCAVVGNSGILTGSHCGP
Neobri_9	IVFSISNNFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Funhet_9	IVFSISNNFKSLLEPE----TSPILN---KHYSTCAVVGNSGILTGSHCGP
Punnye_9	IVFSISNNFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Cypvar_9	IVFSISNNFKSLLEPE----TSPILN---KHYSTCAVVGNSGILTGSHCGP
Krymar_9	IVFSISNNFKSLLEPD----ISPIFN---KHYSMCAVVGNSGILTGSHCGP
Notfur_9	IVFSISNNFKSLLEPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP

Notpie_9	IVFSISNNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Orenil_9	IVFSISNNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Auslim_9	IVFSISNNFKSLLPE----TSPITN---RHYSVCAVVGNSGILTGSHCGP
Anates_9	IVFSISNNFKSLLPD----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Astcal_9	IVFSISNNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Mayzeb_9	IVFSISNNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Orymel_9	IVFSISNNFKSLLPD----ISPILN---KHYSVCAVVGNSGILTGSHCGP
Ampcit9	IVFSISNNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Macfas_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Macmul_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Macnem_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Musmus_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Ponabe_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Papanu_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Nomleu_2	ATMNVSQNLYELLPR----TSPLKN---KHFRCAIVGNSGVLLNSGCGQ
Pantro_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Latcha_2	ATMNISQNLKLLPR----VSPLKN---RHFQCAIVGNSGILLNSNCGR
Gnapet2	ATMNISDSLYQLLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGP
Panbuc_2b	ATTNVSENLQLLPS----VSPLKH---QHYGRCAIVGNSGILLNSSCGQ
Ostbic_2	ATMNVSENLQLLPK----VSPLKN---QFHKCAIVGNSGILLNSSCGK
Sinrhi2	ATTNISENLHLLPT----VSPMKN---QHYKQCAIVGNSGILLNSSCGR
Hetzeb_2	ATLNISHSLYELLPR----TSPMKN---KHFKQCAIVGNSGILLNSGCGQ
Hipcom_2	PTTNISENLHLLPS----VSPLKN---RHYRLCAIVGNSGILLNSSCGS
Prigla_2	ATLNVSLSLYELLPR----ISPMKN---KHYKQCAIVGNSGILLNSGCGQ
Scytor_2	ATLNISHSLYELLPR----TSPMKN---KHFKQCAIVGNSGILLNSGCGQ
Tetcal_2	ATLNISYSLYELLPR----TSPMKN---KHFKQCAIVGNSGILLNSGCGQ
Rhityp_2	ATLNISHSLYELLPR----TSPMKN---KHFKCAIVGNSGILLNSGCGQ
Parkin_2b	ATTNVSENLHLLPT----TSPMKN---RHYQCAIVGNSGILLNSSCGK
Angang_2	ATVNVSESLYRLPT----VSPMKD---RHYQCAIVGNSGILLNSSCGR
Pygnat_2	ATTNISENLRLPT----ASPMKN---QHIEQCAIVGNSGILLNSSCGA
Parkin_2	ATMNVASLYQLLPT----VSPMKN---QHHKCAIVGNSGILLNSSCGP
Gorgor_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Thegel_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Tupchi_2	ATMNVSQNLYELLPR----TSPLKN---KHFRCAIVGNSGVLLNSGCGQ
Galgai_2	ATMNVSQNLYELLPR----TSPLK---KQFPCAIVGNSGVLLNSGCGP
Eleele_2	ATTNISENLRLPT----VSPMKN---QHYKCAIVGNSGILLNSSCGP
Danrer_2	ATTNISENLRLPT----VSPMKN---QHYRCAIVGNSGILLNSSCGR
CanlupFam_2	ATMNVSQNLYDLLPT----TSPLKN---KHFRCAIVGNSGVLLNSGCGQ
Aloalo_2	PTMNVSENLRLPT----ASPMKN---QRHRCIAIVGNSGILLNSSCGS
Astmex_2	ATTNISENLRLPT----VSPMKN---QHYERCAIVGNSGILLNSSCGP
Sinans_2	ATTNISENLHLLPT----VSPMKN---QHYKQCAIVGNSGILLNSSCGR
Scifor_2	ATLNVPNELYELLPR----VSPLKN---QFYKCAIVGNSGILLNSSCGQ
Ceraty_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Anocar_2	ATMNVSQNLYALLPR----TSPLK---KHFRCAIVGNSGILLNSGCGE
Anates_2	PTTNISENLRLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGH
Ambic_2	PTTNISENLRLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGL
Sarpil_2	PTMNVSENLISLPT----ASPMKN---QHHKCAIVGNSGILLNSSCGS
Xenlae_2	ATMNISKNLYELLPR----TSPLKN---KHFKCAIVGNSGILLNSGCGK
Cluhar_2	PTMNVSENLRLPT----ASPMKN---QHHKCAIVGNSGILLNSSCGP
Cypcar_2	ATTNISENLNLLPT----VSPMKN---QHYKQCAIVGNSGILLNSSCGR
Denclu_2	ATTNISENLRLPT----ASPMKN---QHRLCAIVGNSGILLNSSCGP
Notpie_2	PTTNISENLRLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Erpcal2	ATMNISKSLYQLIPK----QSPLK---QHFKCAIVGNSGVLLNSGCGK
Amical_2	ATMNISETLYQLIPK----VSPMK---QHYRCAIVGNSGILLNSRCGE
Lepocu_2	ATMNVSETLYQLIPK----VSPMK---QHYRCAIVGNSGILLNSRCGA
Homsap_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Bostau_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Caraur_2	ATTNISENLNLLPT----VSPMKN---RHYKQCAIVGNSGILLNSSCGR
Thythy_2B	PTTNISENLRLPT----TSPMKN---QYHRRCAIVGNSGVLLNSSCGP
Onctsh_2B	PTTNISENLQLLPT----ASPMKN---QHRRCAIIGNSGILLNSSCGP
Salsal_2B	PTTNISENLQLLPT----VSPMKN---QYHRRCAIIGNSGILLNSSCGP
Oncmk_2B	PTTNISENLQLLPT----ASPMKN---QHRRCAIIGNSGILLNSSCGP
Onckis_2B	PTTNISENLQLLPT----ASPMKN---QHRRCAIIGNSGILLNSSCGP
Salsal_2A	PTTNISENLRLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Thythy_2A	PTTNISENLRLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Salalp_2A	PTTNISENLRLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Corlav_2A	PTTNISENLRLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Cormar_2A	PTTNISENLRLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Onctsh_2A	PTTNISENLRLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Oncmk_2A	PTTNISENLQLLPT----ASPMKN---QHRRCAIVGNSGIQLNSSCGP
Neobri_2	PTTNISENLRLPT----VSPMKN---QHYRCAIVGNSGILLNSSCGP
Takrub_2	PTTNVSETLYHFLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGP
Tetnig_2	PTTNISETLYHFLPS----VSPMKN---QHRRCAIVGNSGVLLNSSCGP
Orenil_2	PTTNISENLRLPT----ISPMKN---QHYRCAIVGNSGILLNSSCGP
Orylat_2	PTTNISENLRLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGS
Krymar_2	PTTNISENLRLPT----ASPMRR---QHRRCAIVGNSGVLLNSSCGP
Notfur_2	PTTNISENLRLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP

Poelat_2	PTTNISENLRYLLPT----ASPMKN---QYHRRCAIVGNSGILLNSSCGP
Gadmor_2	PTTNISENLRYLLPT----VSPMRN---QHHRKCAIVGNSGILLNSSCGQ
Xipmac_2	PTTNISENLRYLLPT----ASPMKN---QYHRRCAIVGNSGILLNSSCGP
Poeret_2	PTTNISENLRYLLPT----ASPMKN---QYHRRCAIVGNSGILLNSSCGS
Astcal_2	PTTNISENLRYLLPT----VSPMKN---QHYRRCIAIVGNSGILLNSSCGP
Hapbur_2	PTTNISENLRYLLPT----VSPMKN---QHYRRCIAIVGNSGILLNSSCGP
Acapol_2B	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGL
Ampoce_2A	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGL
Acapol_2A	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGL
Mayzeb_2	PTTNISENLRYLLPT----VSPMKN---QHYRRCIAIVGNSGILLNSSCGP
Punnye_2	PTTNISENLRYLLPT----VSPMKN---QHYRRCIAIVGNSGILLNSSCGP
Latcal_2	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGP
Singra_2	ATTNISENLRYLLPT----VSPMKN---QHYKQCAIVGNSGILLNSSCGR
Auslim_2	PTTNVSENLYRLLPT----VSPLKH---QHHRSCAIVGNSGVLLNSSCGP
Monalb2	PTTNISENLRYLLPT----VSPMKN---QHX-----TGKK----NSSCGP
Ampoce_2B	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGL
Chiham_2	PTTNISENLRYLLPT----VSPMKN---QHHRCAIVGNSGILLNSSCGP
Gasacu_2	PTTNVSENLYRLLPT----ASPMKN---QHHRRCIAIVGNSGILLNSSCGP
Gymacu_2	PTTNISENLRYLLPT----VSPMKN---QHHRCAIVGNSGILLNSSCGP
Labber_2	PTTNISENLRYLLPT----ASPLKN---QHHRRCIAIVGNSGILLNSSCGP
Cypvar_2	PTTNISENLRYLLPT----ASPLKN---QYHKRCAIVGNSGILLNSSCGP
Funhet_2	PTTNISEDLYRLLPT----ASPMKN---QYHRRCAIVGNSGILLNSSCGP
Larcro_2	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGS
Paroli_2	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGH
Perflu_2	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGP
Serdu_2	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGP
Stepar_2	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGILLNSSCGL
Notcor_2	PTTNISENLRYLLPT----VSPMKN---QHHRCAIVGNSGILLNSSCGP
Treber_2	PTTNISENLRYLLPT----VSPMKN---QHHRCAIVGNSGILLNSSCGP
Serlaldor_2	PTTNISENLRYLLPT----ISPMKN---QHHRRCIAIVGNSGILLNSSCGP
Plaste_2	PTTNISENLRYLLPT----VSPMKN---QHHRRCIAIVGNSGVLLNSSCGQ
Clabat_4	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLKSGCGK
Ictpun_4A	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLKSGCGK
Panhyp_4	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLKSGCGK
Umbpyg_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCALVGNSGVLLRSGCGR
Esoluc_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGR
Plealt_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Onckis_4B	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Onckis_4A	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Onctsh_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Oncmky_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Corlav_4	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLNSGCGK
Astmex_4A	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLKSGCGK
Pygnat_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGILLKSGCGK
Aloalo_4	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLSSGCGQ
Cluhar_4	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLSSGCGH
Denclu_4	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGILLNSGCGR
Konpun4	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLNSGCGQ
Sarpil_4	ATLNVSHTLHSLLEP----VSPLKN---KRFKTCAVVGNSGVLLSSGCGQ
Caraur_4	ATFNISQTLHSLLEP----VSPMKN---KTFKTCAVVGNSGVLLKSGCGK
Cteide_4	ATFNVSHTLHSLLEP----VSPLKN---KMFKTCAVVGNSGILLKSGCGK
Petmar_4	ATFNVSHTLHSLLEP----VSPLKN---KMFKTCAVVGNSGILLKSGCGK
Cypcar_4	ATFNISQTLHSLLEP----VSPLKN---KTFKTCAVVGNSGVLLKSRGCGK
Danrer_4	ATFNVSHTLHSLLEP----VSPLKN---KTFKTCAVVGNSGILLKSGCGK
Misang_4	ATFNVSHTLHSLLEP----VSPLKN---KMFKTCAVVGNSGILLKSRGCGK
Angjap_4	ATFNVSHTLHSLLEP----VSPMKN---RRFRTCAVVGNSGVLLNSGCGP
Cypcar_4A	ATFNISQTLHSLLEP----VSPLKN---KTFKTCAVVGNSGVLLKSRGCGK
Angang_4	ATLNVSRALHSLLEP----VSPMKN---RRFRTCAVVGNSGVLLNSGCGR
Cypcar_4B	ATFNVSHTLHSLLEP----VSPLKN---KTFKTCAVVGNSGVLLKSGCGK
Sinans_4A	ATFNISQTLHSLLEP----VSPLKN---KTFKTCAVVGNSGILLKSRGCGK
Sinans_4B	ATFNVSHTLHSLLEP----VSPLKN---KTFKTCVVGNSGVLLKSGCGK
Singra_4A	ATFNISQTLHSLLEP----VSPLKN---KTFKTCAVVGNSGILLKSRGCGK
Aptalb_4	AKLSVSHTLHSLLEP----VSPLKN---RRFRTCAVVGNSGVLLKSGCGK
Eigvir_4	ATLNVSHTLHSLLEP----VSPLKN---KRFGTCAVVGNSGVLLKSGCGK
Eleele_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLKSGCGK
Parhas_4	AKLNVSHTLHSLLEP----VSPLKN---RRFRTCAVVGNSGVLLKSGCGK
Scifor_4	ATLNVSHTLHSLLEP----VSPMKN---RRFRTCAVVGNSGILLKSGCGK
Gnapet4	ATLNVSHTLHSLLEP----TSPMKN---RRFRTCAVVGNSGVLLNSGCGK
Ostbic_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGILLNSGCGK
Parkin_4	ATLNVSHTLHSLLEP----ASPMKN---RRFRTCAVVGNSGVLLNSGCGK
Panbuc_4	ATFNVSHTLHSLLEP----VSPMKN---KRFRTCAVVGNSGVLLNSGCGR
Erpcal4	ATLNVSHTLHSLLEP----VSPMKN---RRFRTCAVVGNSGILLGSGCGR
Salsal_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Saltru_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Salalp_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Salfon_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLNSGCGK
Thythy_4	ATLNVSHTLHSLLEP----VSPLKN---KRFRTCAVVGNSGVLLHSGCGK

Calmil_4	ATLNISRNLHSLLEPE----VSPMKN---KRFNACAVVGNSGILLGSGCGK
Hetzeb_4	ATLNISHNLHSLLEPE----VSPMKN---KRFSTCAVVGNSGILLGSGCGK
Rhityp_4	ATLNISHNLHRLLEPE----VSPMKN---KRFSSCAVVGNSGILLGSGCGK
Scytor_4	ATLNISRNLHSLLEPD----VSPMKN---KRFSTCAVVGNSGILLGSGCGK
Squaca_4	ATLNISQNLHSLLEPE----VSPMKN---KRFSTCAVVGNSGILLGSGCGK
Amical_4	ATLNISHNLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILINS GCGR
Lepocu_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILINS GCGR
Agema_4	ATLNVSHTLHSLLEPE----VSPLKN---KRFKTCAVVGNSGVLLKSGCGK
Anocar_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKMCAVVGNSGILLDSGCGK
Canlupfam_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Crigri_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Galgai_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Mesaur_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Homsap_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Notscuscu_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Psetextex_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Musmus_4	ATLNISHNLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Pogvit_4	ATLNISQDLHRLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Promuc_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Pantro_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Pytbiv_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Ratnor_2	ATMNVSQNLYELLPR----TSPLKN---KHFQTCaIVGNSGVLLNSGCGQ
Ratnor_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Siltro_2	ATMNIKNLYELLPR----TSPLKN---KHFQTCaIVGNSGILLNSGCGK
Siltro_4	ATLNISQNLHSLLEPE----VSPMKS---RRFRTCAVVGNSGILLNSGCGK
Susscr_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Taegut_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLNSGCGK
Termextri_4M	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSACGK
Thasirsir_4	ATLNISQDLHRLLEPE----VSPMKN---RRFKCAVVGNSGILLDSGCGK
Xenlae_4B	ATLNISQNLHSLLEPE----VSPMKS---RRFRTCAVVGNSGILLNSGCGN
Xenlae_4A	ATLNISQNLHSLLEPE----VSPMKS---RRFRTCAVVGNSGILLSSGCGK
	51
Latcal_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Perflu_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Serdum_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Stepar_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Tetcal_3	DIDKSDFVFR--CNFAP-TETTFENDVGRKTNL TTFN-PSILEKYNNLLT
Monalb_3	QIEKFDFVFR--CNFAP-TEVFKKDVGRRTNM TTFN-PSILEKYNNLLT
Molmol_3	QIEKFDFVLR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Takrub_3	QIDRFDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Canlupfam_3	EIDKSDFVFR--CNFAP-TEAFQRDVGRKTNL TTFN-PSILEKYNNLLT
Bostau_3	QIDKSDFVFR--CNFAP-TEAFQRDVGRKTNL TTFN-PSILEKYNNLLT
Homsap_3	EIDKSDFVFR--CNFAP-SEAFQRDVGRKTNL TTFN-PSILEKYNNLLT
Siltro_3	EIDKADFVFR--CNFAP-TEGFQKDVGRKTNL TTFN-PSILEKYNNLLT
Anocar_3	EIDKYDFVFR--CNFAP-TEAFHKDVGRKTNL TTFN-PSILEKYNNLLT
Musmus_3	EIDKSDFVSR--CNFAP-TEAFHKDVGRKTNL TTFN-PSILEKYNNLLT
Pantro_3	EIDKSDFVFR--CNFAP-TEAFQRDVGRKTNL TTFN-PSILEKYNNLLT
Ratnor_3	EIDKSDFVFR--CNFAP-TEAFHKDVGRKTNL TTFN-PSILEKYNNLLT
Galgai_3	EIDKSDFVFR--CNFAP-TEAFQKDVGRKTNL TTFN-PSILEKYNNLLT
Lepocu_3	EIDKSDFIFR--CNFAP-TEIFHKDVGRKTNL TTFN-PSILEKYNNLLT
Tetnig_3	EIDSLDFVFR--CNFAP-TELFKKDVGRRTNM TTFN-PSILEKYNNLLT
Squaca_3	EIDKSDFVFR--CNFAP-TETFEKDVGRKTNL TTFN-PSILEKYNNLLT
Perfla_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Salsal_3	EIEKFDFVFR--CNFAP-TEIFRDVGRRTNL TTFN-PSILEKYNNLLT
Serlaldor_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Treber_3	EIDQADFVFR--CNFAP-TEIYSKDVGRKTNL TTFN-PSILERYNNLLT
Cynsem_3	QIEKFDFVFR--CNFAP-TEVFKKDVGRRTNM TTFN-PSILEKYNNLLT
Paroli_3	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNL TTFN-PSILERYNNLLT
Paroli_3b	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Plaste_3	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNL TTFN-PSILERYNNLLT
Plaste_3b	QIEKFDFVFR--CNFAP-TELFKKDVGRQTNM TTFN-PSILEKYNNLLT
Erpcal3	EIDKSDFIFR--CNFAP-TEIFQKDVGRKTNL TTFN-PSILEKYNNLLT
Calmil_3b	SIDKSDFVFR--CNFAP-TEFFEKDVGRKTNL TTFN-PSILEKYNNLMA
Hetzeb_3	DIDKSDFVFR--CNFAP-TESEFKDVGRKTNL TTFN-PSILEKYNNLLT
Latcha_3	EIDQSDVFR--CNFAP-TEIFHKDVGRKTNL TTFN-PSILEKYNNLLT
Anates_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNL TTFN-PSILEKYNNLLT
Ampcit3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Auslim_3	HIERYDYVFR--CNFAP-TEIFRKDVGRRTNM TTFN-PSILEKYNNLLT
Cypvar_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Krymar_3	QIERYDYVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Funhet_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Gamaff3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Orylat_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Orenil_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Mayzeb_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Punnye_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT
Punnye_3a	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNM TTFN-PSILEKYNNLLT

Neobri_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Misang_3	EIDKYDFVFR--CNFAP-TEVFRKDVGRRTNLTTFN-PSILEKYNNLLT
Sinrhi3	QIDSYDFVFR--CNFAP-TEVFRRDVGRRTNLTTFN-PSILEKYNNLLT
Singra_3	QIDSYDFVFR--CNFAP-TEAFRRDVGRRTNLTTFN-PSILEKYNNLLT
Hapbur_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Astcal_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Notfur_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Cypcar_3	QIDSYDFVFR--CNFAP-TEVFRRDVGRRTNLTTFN-PSILEKYNNLLT
Poefor3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Poelat_3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Poeret_3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Angang_3	EIDRSDFVFR--CNFAP-TEIFHRDVGRRTNLTTFN-PSILEKYNNLLT
Xipmac_3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Masarm_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Permag_3	QIDSFDFVFR--CNFAP-TEVFKKDVGRRTNMTTFN-PSILEKYNNLLT
Gnapet3	QIDKSDFVFR--CNFAP-TEVFHKDVGHKTNLTTFN-PSILEKYNNLLT
Ostbic_3	RIDSSDFVFR--CNFAP-TELFRRKDVGRKTNLTTFN-PSILEKYNNLLT
Gadmor_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
ScIfor_3	RIDGSDVFR--CNFAP-TELFHRDVGRKTNLTTFN-PSILEKYNNLLT
Acapol3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Ampoce_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
ScIfor_3b	EIDRFDFVFR--CNFAP-TELFHKDVGHKTNITTFN-PSILEKYNNLLT
Ostbic_3b	EIDRFDFVFR--CNFAP-TELFHKDVGHKTNITTFN-PSILEKYNNLLT
Parkin_3	QIDESDFVFR--CNFAP-TEVFHKDVGHKTNLTTFN-PSILEKYNNLLT
Amppe3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Oncmyk_3	EIEKFDFVFR--CNFAP-TEIFHRDVGRRTNLTTFN-PSILEKYNNLLT
Gasacu_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Labber_3	QIEKFDFVFR--CNFAP-TEVFKKDVGRQTNMTTFN-PSILEKYNNLLT
Panbuc_3	EIDRYDFVFR--CNFAP-TEAFRRKDVGRKTNLTTFN-PSILEKYNNLLT
Parhas3	AIDKYDFVFR--CNFAP-TEAFRRKDVGRRTNLTTFN-PSILEKYNNLLT
Cluhar_3	EIDKFDFVFR--CNFAP-TEVFRKDVGRHTNLTTFN-PSILEKYNNLLT
Aloalo_3	EIDKFDFVFR--CNFAP-TEVFRKDVGRHTNLTTFN-PSILEKYNNLLT
Panhyp_3	AIDAYDFVFR--CNFAP-TEVFRKDVGRRTNLTTFN-PSILEKYNNLLT
Eleele_3	TIDQYDFVFR--CNFAP-TEVFRKDVGRRTNLTTFN-PSILEKYNNLLT
Denclu_3	DIDKYDFVFR--CNFAP-TELFRRKDVGRRTNLTTFN-PSILEKYNNLLT
Sarpil_3	EIDKFDFVFR--CNFAP-TEVFRKDVGRRTNLTTFN-PSILEKYNNLLT
Eigvir_3	AIDKYDFVFR--CNFAP-TEVFRKDVGRRTNLTTFN-PSILEKYNNLLT
Aptalb_3	AIDRYDFVFR--CNFAP-TEAFRRKDVGRRTNLTTFN-PSILEKYNNLLT
Sinans_3	QIDSYDFVFR--CNFAP-TEVFRRDVGRRTNLTTFN-PSILEKYNNLLT
Pygnat_3	TIDKYDFVFR--CNFAP-TEVFRRDVGRRTNLTTFN-PSILEKYNNLLT
Astmex_3	TIDKYDFVFR--CNFAP-TEVFRRDVGRRTNLTTFN-PSILEKYNNLLT
Caraur_3	QIDSYDFVFR--CNFAP-TEIFRRDVGRRTNLTTFN-PSILEKYNNLLT
Danrer_3	EIDKYDFVFR--CNFAP-TEVFRRDVGRRTNLTTFN-PSILEKYNNLLT
Ictpun_3	AIDAYDFVFR--CNFAP-TEVFRRDVGRRTNLTTFN-PSILEKYNNLLT
Plealt_3	EIEKFDFVFR--CNFAP-TEIFRRDVGRRTNMTTFN-PSILEKYNNLLT
Plealt_9	EIDKADFVFR--CNFAP-TEVFYKDVGRKTNMTTFN-PSILEHYNNLLT
Gasacu_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Parkin_9	EIDKFNFVFR--CNFAP-TEIYHRDVGRKTNMTTFN-PSILERYNNLLT
Acapol_9	EIDEADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Larcro_9	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNLTTFN-PSILERYNNLLT
Notcor_9	EIDQADFVFR--CNFAP-TEIYSKDVGKKTNLTTFN-PSILERYNNLLT
Latcal_9	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNLTTFN-PSILERYNNLLT
Serlaldor_9	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNLTTFN-PSILERYNNLLT
Monalb_9	EIDQADFVFR--CNFAP-TEVYFKDVGRKTNLTTFN-PSILERYNNLLT
Serdm_9	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNLTTFN-PSILERYNNLLT
Perflu_9	EIDQADFVFR--CNFAP-TEFYSKDVGKKTNLTTFN-PSILERYNNLLT
Perfla_9	EIDQADFVFR--CNFAP-TEFYSKDVGKKTNLTTFN-PSILERYNNLLT
Stepar_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Molmol_9	EIDQADFVFR--CNFAP-TEIYSKDVGRKTNLTTFN-PSILERYNNLLT
Hipcom_9	EIDRADFVFR--CNFAP-TEVYAKDVGRKTNLTTFN-PSILERYNNLLT
Takrub_9 B	NIDQADFVFR--CNFAP-TEVYSKDVGRKTNMTTFN-PSILERYNNLLT
Takrub_9	NIDQADFVFR--CNFAP-TEVYSKDVGRKTNMTTFN-PSILERYNNLLT
Cynsem_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Scomax_9	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNLTTFN-PSILERYNNLLT
Corlav_9	EIDSADFVFR--CNFAP-TDSYKDVGRKTNLTTFN-PSILERYNNLLT
Oncmyk_9	EIDSADFVFR--CNFAP-TDSYKDVGRKTNLTTFN-PSILERYNNLLT
Salsal_9	EIDSSDFVFR--CNFAP-TDSYKDVGRKTNLTTFN-PSILERYNNLLT
Onctsh_9	EIDSADFVFR--CNFAP-TDSYKDVGRKTNLTTFN-PSILERYNNLLT
Salalp_9	EIDSADFVFR--CNFAP-TDSYKDVGRKTNLTTFN-PSILERYNNLLT
Ampoce_9	EIDEADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Amppe9	EIDEADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Labber_9	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNLTTFN-PSILERYNNLLT
Umbpyg_3B	EIEKFDFVFR--CNFAP-TEIFRRDVGRRTNLTTFN-PSILEKYNNLLT
Esoluc_3b	EIEKFDFVFR--CNFAP-TEVFRRDVGRRTNLTTFN-PSILEKYNNLLT
Gadmor_9	EIDQADFVFR--CNFAP-TEVYKDVGRKTNMTTFN-PSILERYNNLLT
Umbpyg_9	EIDSADFVFR--CNFAP-IDSYKDVGRKTNLTTFN-PSILERYNNLLT
Esoluc_9	EIDSADFVFR--CNFAP-IESYKDVGRKTNLTTFN-PSILERYNNLLT

Permag_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Bolpec_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Poefor9	EIDQADFVFR--CNFAP-TEVYFKDVGKKTNLTTFN-PSILERYNNLLT
Masarm_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Angjap_9	EIDRSDFVFR--CNFAP-TEVFHRDVGKKTNLTTFN-PSILEKYNNLLT
Poelat_9	EIDQADFVFR--CNFAP-TEVYFKDVGKKTNLTTFN-PSILERYNNLLT
Poeret_9	VIDQADFVFR--CNFAP-TEFYFKDVGKKTNLTTFN-PSILERYNNLLT
Xipmac_9	EIDQADFVFR--CNFAP-TEIYFKDVGKKTNLTTFN-PSILERYNNLLT
Hapbur_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Orylat_9	EIDQADFVFR--CNFAP-TDVYSKDVGRKTNMTTFN-PSILERYNNLLT
Gamaff_9	EIDQADFVFR--CNFAP-TEVYFKDVGKKTNLTTFN-PSILERYNNLLT
Neobri_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Funhet_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Punnye_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Cypvar_9	EIDQADFVFR--CNFAP-TDVYSKDVGKKTNLTTFN-PSILERYNNLLT
Krymar_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Notfur_9	EIDQADFVFR--CNFAP-TEIYSKDVGKKTNMETFN-PSILERYNNLLT
Notpie_9	EIDQADFVFR--CNFAP-TEIYSKDVGKKTNMETFN-PSILERYNNLLT
Orenil_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Auslim_9	EIDQADFVFR--CNFAP-TEIYSKDVGRKTNLTTFN-PSILERYNNLLT
Anates_9	EIDQADFVFR--CNFAP-TDVYSKDVGKKTNLTTFN-PSILERYNNLLT
Astcal_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Mayzeb_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Orymel_9	EIDQADFVFR--CNFAP-TDVYSKDVGRKTNMTTFN-PSILERYNNLLT
Ampcit9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Macfas_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Macmul_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Macnem_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Musmus_2	EIDTHSFVIR--CNRAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Ponabe_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Papanu_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Nomleu_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Pantro_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Latcha_2	EIDDHQFVIR--CNLAP-VQEYASDVGKTDFVTMN-PSVIQRAFEDLVN
Gnapet2	EIDSHDFVIR--CNLAP-VEEYERDVGLRSSLVTMN-PSVVQRAFEDLAS
Panbuc_2b	EIDACDYVIR--CNLAP-VQEYVTDVGQRTSMVTMN-PSVVQRAFQDLAS
Ostbic_2	EIDSNDFVIR--CNLAP-VDEYEQDVGRRTSLVTMN-PSVVQRAFQDLAS
Sinrhi2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Hetzeb_2	EIDAHSFVIR--CNLAP-VEEYAHDVGLKTDLVTMN-PSVVQRAFEDLKN
Hipcom_2	QIDSHDFVIR--CNLAP-VEEYADDVGHRDGLVTMN-PSVVQRAFEDLVD
Prigla_2	EIDTHEFVIR--CNLAP-VEEYAQDVGLKTDLVTMN-PSVVQRAFEDLKN
Scytor_2	EIDTHEFVIR--CNLAP-VEEYAQDVGLKTDLVTMN-PSVVQRAFEDLKN
Tetcal_2	EIDAHEFVIR--CNLAP-VEEYVQDVGMKTDLVTMN-PSVVQRAFEDLKN
Rhityp_2	EIDDHQFVIR--CNLAP-VEEYAQDVGLKTDLVTMN-PSVVQRAFEDLKN
Parkin_2b	EIDSHDFVIR--CNLAP-VQEFELDVGLRTGLVTMN-PSVVQRAFQDLGS
Angang_2	QIDSHDFVIR--CNLAP-VEEYAADVGQRTSLVTMN-PSVVQRAFEDLSS
Pygnat_2	EIDSHDFVIR--CNLAP-VEEYTNVGLRTSLVTMN-PSVVQRAFQDLNS
Parkin_2	EIDSHDFVIR--CNLAP-VEEYEHVGLRSSLVTMN-PSVVQRAFEDLAS
Gorgor_2	EIDAHSFVIR--CNLAP-VQEYARDVGPKTDLVTMN-PSVIQRAFEDLVN
Thegel_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Tupchi_2	EIDTHSFVIR--CNLAP-VQEYAQDVGLKTDLVTMN-PSVIQRAFEDLVN
Galgal_2	EIDTHSFVIR--CNLAP-VQEYSQDVGKTDLVTMN-PSVIQRAFEDLMN
Eleele_2	EIDSHDFIIR--CNLAP-IEHYVKDVGVRTGLVTMN-PSVVVERVFQDLSS
Danrer_2	EIDSHDFVIR--CNLAP-VEEYAADVGLRTSLVTMN-PSVVQRAFQDLNS
Canlupfam_2	EIDTHSFVIR--CNLAP-VQEYGRDVGLKTDLVTMN-PSVIQRAFEDLVN
Aloalo_2	EIDSYDFVIR--CNLAP-VDEFTADVGHRTNLVTMN-PSVVQRAFQDLSS
Astmex_2	EIDSHDFVIR--CNLAP-VEEYAEVGLRSSLVTMN-PSVVQRAFQDLSS
Sinans_2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
ScIfor_2	EIDSNDFVIR--CNLAP-VEEYEQDVGHRTSLVTMN-PSVVQRAFQDLAS
Ceraty_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Anocar_2	EIDAHSFVIR--CNLAP-VQEYSRDVGTKMDLVTMN-PSVIQRAFEDLVN
Anates_2	EIDSHDFIIR--CNLAP-VEEYSRDVGWQTNLVTMN-PSVVQRAFQDLVS
Ampbic_2	EIDSHDFVIR--CNLAP-VEDYSRDVGRTDLVTMN-PSVVQRAFQDLVS
Sarpil_2	EIDSYDFVIR--CNLAP-VDEFSAVGHRTSLVTMN-PSVVQRAFQDLSS
Xenlae_2	EIDSHDFVIR--CNLAP-VEEYAKDVGKTNLVTMN-PSVVQRAFEDLVN
Cluhar_2	EIDAHDFVIR--CNLAP-VNEFSADVGHRTNLVTMN-PSVVQRAFQDLSS
Cypcar_2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Denclu_2	EIDSHDFVIR--CNLAP-VEEYAADVGHRTDLVTMN-PSVVQRAFQDLAN
Notpie_2	EIDSHDFVIR--CNLAP-VEEYSQDVGWRTNLVTMN-PSVVQRAFQDLVT
Erpcal2	EIDTHEFVIR--CNLAP-VQEFASDVGIRTNLVTMN-PSVVQRAFEDLAN
Amical_2	EIDSHDFVIR--CNLAP-VEEYADDVGLRTSLVTMN-PSVVQRAFQDLVS
Lepocu_2	EIDSHDFVIR--CNLAP-VEEYRADVGRRTSLVTMN-PSVVQRAFQDLAS
Homsap_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Bostau_2	EIDTHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVVQRAFEDLVN
Caraur_2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Thythy_2B	EIDSHDFVIR--CNLAP-VEEYAGDVGRHTNLVTMN-PSVVQRAFQDLAS
Onctsh_2B	EIDSYDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS

Salsal_2B	EIDSYDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS
Oncmyk_2B	EIDSYDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS
Onckis_2B	EIDSYDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS
Salsal_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Thythy_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Salalp_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Corlav_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Cormar_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Onctsh_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Oncmyk_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Neobri_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Takrub_2	EIDSHDFVIR--CNLAP-VEDYYKDVGWRTNLVTMN-PSVVQRAFRLDAS
Tetnig_2	EIDSHDFVIR--CNLAP-VEDFHNDVGWRTNLVTMN-PSVVQRAFRLDAS
Orenil_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Orylat_2	EIDSHDFVIR--CNLAP-VDEYSQDVGRQTNLVTMN-PSVVQRAFQDLVS
Krymar_2	EIDSHDFVIR--CNLAP-VEEYSRDVGRRDNLVTMN-PSVVQRAFQDLVT
Notfur_2	EIDSHDFVIR--CNLAP-VEEYSQDVGWRTNLVTMN-PSVVQRAFQDLVT
Poelat_2	EIDSHDFVIR--CNLAP-VEEYSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Gadmor_2	EIDSHDFVIR--CNLAP-VKEYSVDVGRRTNLVTMN-PSVVQRAFQDLAS
Xipmac_2	EIDSHDFVIR--CNLAP-VEEYSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Poeret_2	EIDSHDFVIR--CNLAP-VEEYSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Astcal_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Hapbur_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Acapol_2B	EIDSHDFVIR--CNLAP-VDDYSRDVGRRTNLVTMN-PSVVQRAFQDLVS
Ampoce_2A	EIDSHDFVIR--CNLAP-VEDYSRDVGRQTNLVTMN-PSVVQRAFQDLVN
Acapol_2A	EIDSHDFVIR--CNLAP-VDDYSRDVGRRTNLVTMN-PSVVQRAFQDLVS
Mayzeb_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Punnye_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Latcal_2	EIDSHDFVIR--CNLAP-VEEYSRDVGWRTNLVTMN-PSVVQRAFQDLVS
Singra_2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Auslim_2	EIDSHDFVIR--CNLAP-VEEYSEDVGRRTNLVTMN-PSVVQRAFQDLVT
Monalb2	EIDSHDFVIR--CNLAP-VEEYSRDVGRRTNLVTMN-PSVVQRAFQDLVT
Ampoce_2B	EIDSHDFVIR--CNLAP-VEDYSRDVGRQTNLVTMN-PSVVQRAFQDLVN
Chiham_2	DIDSHDFVIR--CNLAP-VDEFSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Gasacu_2	DIDSHDFVIR--CNLAP-VEDYSLDVGRRTNLVTMN-PSVVQRAFQDLVS
Gymacu_2	DIDSHDFVIR--CNLAP-VDEFSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Labber_2	EIDSHDFVIR--CNLAP-VADYYQDVGWRTNLVTMN-PSVVQRAFQDLVS
Cypvar_2	EIDSHDFVIR--CNLAP-VEEYSQDVGLRTNLVTMN-PSVVQRAFQDLIS
Funhet_2	EIDSHDFVIR--CNLAP-VEEYSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Larcro_2	EIDSHDFVIR--CNLAP-VEEYRDVGWRTNLVTMN-PSVVQRAFQDLVS
Paroli_2	EIDSHDFVIR--CNLAP-VEEFSWDVGRRTNLVTMN-PSVVQRAFQDLVS
Perflu_2	DIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVS
Serdum_2	EIDSHDFVIR--CNLAP-VEEYSRDVGRRTNLVTMN-PSVVQRAFMDLVS
Stepar_2	EIDSHDFVIR--CNLAP-VEDYSRDVGRRTNLVTMN-PSVVQRAFQDLVS
Notcor_2	DIDSHDFVIR--CNLAP-VDEFSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Treber_2	DIDSHDFVIR--CNLAP-VDEFSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Serlaldor_2	EIDSHDFVIR--CNLAP-VEEYSRDVGRRTNLVTMN-PSVVQRAFMDLVS
Plaste_2	EIDSHDFVIR--CNLAP-VEEYSWDVGRRTSLVTMN-PSVVQRAFQDLVS
Clabat_4	EIDSHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRYVGGLSN
Ictpun_4A	EIDSHDFVIR--CNLAP-LAEFADDVGLRSDFTTMN-PSVIQRYVGGLLN
Panhyp_4	EIDSHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRYVGGLLN
Umbpyg_4	EIDSHDFVIR--CNLAP-LAEFESDVGLRSDFTTMN-PSVIQRAYGGLKN
Esoluc_4	EIDSHDFVIR--CNLAP-LAQFAEDVGLRSDFTTMN-PSVIQRAYGGLRN
Plealt_4	EIDSHDFVIR--CNLAP-LSEYADDVGRSDFTTMN-PSVIQRAYGGLKN
Onckis_4B	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Onckis_4A	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Onctsh_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Oncmyk_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Corlav_4	EIDRHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRYVGGLKN
Astmex_4A	EIDGHDFVIR--CNLAP-LAEFAEDVGLKSDFTTMN-PSVIQRYVGGLRN
Pygnat_4	EIDSHDFVIR--CNLAP-LVEFAEDVGLKSDFTTMN-PSVIQRYVGGLRN
Aloalo_4	EIDSHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRAYGGLRN
Cluhar_4	EIDSHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRAYGGLRN
Denclu_4	EIDSHDFVIR--CNLAP-LKEFAEDVGLRSDFTTMN-PSVIHRVYGGLQK
Konpun4	EIDSHDFVIR--CNLAP-LVEFAEDVGLRSDFTTMN-PSVIQRAYSGGLRN
Sarpil_4	EIDSHDFVIR--CNLAP-LAEFADDVGLRSDFTTMN-PSVIQRAYGGLRN
Caraur_4	EIDSHGFVIR--CNLAP-LVEFADDVGLRSDFTTMN-PSVIQRAYGGLRD
Cteide_4	EIDNHDFVIR--CNLAP-LKDFADDVGLRSDFTTMN-PSVIQRYVYKGLRD
Petmar_4	EIDQHDFVIR--CNLAP-VEGYERDVGSRVDFVTMN-PSVVERTYGGGLRT
Cypcar_4	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRYVYGGGLQD
Danrer_4	EIDNHSFVIR--CNLAP-LEGFADDVGLRSDFTTMN-PSVIQRYVYGGGLRE
Misang_4	EIDNHDFVIR--CNLAP-LEEFSDDVGLKSDFTTMN-PSVIQRYVYGGGLHN
Angjap_4	EIDGHDFVIR--CNLAP-LEEFAEDVGLRSDFTTMN-PSVIQRAYGGLRN
Cypcar_4A	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRYVYGGGLQD
Angang_4	EIDGHDFVIR--CNLAP-LEEFAEDVGLRSDFTTMN-PSVIQRAYGGLRN
Cypcar_4B	EIDSHGFVIR--CNLAP-LEDFAEDVGLRSDFTTMN-PSVIQRYVYGGGLRD
Sinans_4A	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRYVYGGGLRD

Sinans_4B	EIDSHGFVIR--CNLAP-LEEFADDVGSRSDFTTMN-PSVIPRVFGGLRD
Singra_4A	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIPRVFGGLQD
Aptalb_4	EIDSHDFVIR--CNLAP-LAEFIKDVGLKSDFTTMN-PSVIQRMYGGLRN
Eigvir_4	EIDHDHFVIR--CNLAP-LAEFIKDVGWKSDFTTMN-PSVIQRVYHGLRN
Eleele_4	EIDSHDFVIR--CNLAP-LAKFAEDVGLKSDFTTMN-PSVIQRMYGGLRN
Parhas_4	EIDSHDFVIR--CNLAP-LAEFIKDVGLKSDFTTMN-PSVIQRMYGGLRN
Scifor_4	EIDSHDFVIR--CNLAP-LVEFSEDVGLQSDFTTMN-PSVIQRAFGGGLKN
Gnapet_4	EIDSNDFVIR--CNLAP-LANFSEDVGLRSDFTTMN-PSVIQRAFGGGLRN
Ostbic_4	EIDSHDFVIR--CNLAP-LVEFSEDVGLRSDFTTMN-PSVIQRVFGSLKN
Parkin_4	EIDSNDFVIR--CNLAP-LANFSEDVGLRSDFTTMN-PSVIQRAFGGGLRN
Panbuc_4	EIDSHDFIIR--CNLAP-VTEFAVDVGQRSHFITMN-PSVIQRAYGSLRN
Erpcal_4	EIDNHDFVIR--CNLAP-VVEFAEDVGNRSDFITMN-PSVIQRAFGGFQN
Salsal_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Saltru_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Salalp_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Salfon_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Thythy_4	EIDSHDFVIR--CNLAP-LADFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Calmil_4	EIDSHEFVIR--CNLAP-LVEYTDVVGSKSDFTTMN-PSVVQRAFGLSQN
Hetzeb_4	EIDSHDFVIR--CNLAP-LMEYTDVGLKSDFTTMN-PSVVQRAFGLSLRS
Rhityp_4	EIDSHEFVIR--CNLAP-LVEYADDVGLKSDFTTMN-PSVVQRAFGLSLRS
Scytor_4	EIDSHEFVIR--CNLAP-LVEYADDVGLKSDFTTMN-PSVVQRAFGLSLRS
Squaca_4	EIDSHEFVIR--CNLAP-LVEYADDVGLKSDFTTMN-PSVVQRAFGLSLQS
Amical_4	EIDSHDFVIR--CNLAP-LAEFSEDVGLRSDFITMN-PSVIQRAFGGFKN
Lepocu_4	EIDNHDFVIR--CNLAP-LAEFSEDVGLRSDFITMN-PSVIQRAFGGFKN
Agema_4	EIDSHDFVIR--CNLAP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLLN
Anocar_4	EIDSHEFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Canlupfam_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Crigri_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Galgai_4	EIDTHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Mesaur_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Homsap_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Notscusc_4	EIDSHEFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Psetextex_4	EIDSHEFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Musmus_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Pogvit_4	EIDNHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Promuc_4	EIDNHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQKAFGGFRN
Pantro_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Pytbiv_4	EIDNHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Ratnor_2	EIDTHDFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Ratnor_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Siltro_2	EIDSHDFVIR--CNLAP-VEEYATDVGKTNLVTMN-PSVVQRAFEDLVN
Siltro_4	EIDSHDFVIR--CNLAP-VVEFAAHVGTKSDFITMN-PSVVQRAFGGFRN
Susscr_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Taegut_4	EIDSHDFVIR--CNLAP-VVEYAADVGTKSDFITMN-PSVVQRAFGGFRN
Termextri_4M	EIDNHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Thasirsir_4	EIDSHEFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Xenlae_4B	EIDSHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
Xenlae_4A	EIDSHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFRN
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Latcal_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Perflu_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Serdum_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Stepar_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Tetcal_3	IQDR-NKFFLNKRLDGAAILWIPAFFFHSTAPVTRTLVDFFIEHRAQ---
Monalb_3	VQDR-NNFFLSLKKLDGAAILWIPAFFFHSTATVTRTLVDFFVEHKGQ---
Molmol_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Takrub_3	VQDR-NNFFLSLKKLDTTILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Canlupfam_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Bostau_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Homsap_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Siltro_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTASVTRTLVDFFVEHRDQ---
Anocar_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATITRTLVDFFIEHRAQ---
Musmus_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Pantro_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Ratnor_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Galgai_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Lepocu_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHKGQ---
Tetnig_3	VQDR-NNFFLSLKKLDPAAILWIPAFFFHSTATVTRTLVDFFVEPRGQ---
Squaca_3	IQDR-NKFFLNKRLDGAAILWIPAFFFHSTAPVTRTLVDFFMEHRAQ---
Perfla_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Salsal_3	IQDR-NNFFLSLKKLDRAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Serlaldor_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Treber_3	IQDR-NNFFLNKKLEGAILWIPAFFLHSTATVTRTLVDFFVEHKGQ---
Cynsem_3	VQDR-NNFFLSLKKLDNAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Paroli_3	IQDR-NNFFLNKKLEGAILWIPAFFLHSTATVTRTLVDFFVEHKGQ---
Paroli_3b	VQDR-NNFFLSLKKLDNAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Plaste_3	IQDR-NNFFLNKKLESAILWIPAFFLHSTATVTRTLVDFFVEHKGQ---

Plaste_3b	VQDR-NNFFLSLKKLDSAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Ercpal3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Calmil_3b	IQDR-NKFFLNKKLDGAILWIPAFFFHSSALVTRTLVDFFVEHRRQ---
Hetzeb_3	IQDR-NKFFLNKKLDGAILWIPAFFFHSTSAPVTRTLVDFFIEHRAQ---
Latcha_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Anates_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Ampcit3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRDQ---
Auslim_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Cypvar_3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Krymar_3	VQDR-NNFFLSLKKLDSAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Funhet_3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Gamaff3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Orylat_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Orenil_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Mayzeb_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Punnye_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Punnye_3a	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Neobri_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Misang_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Sinrhi3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Singra_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Hapbur_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Astcal_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Notfur_3	VQDR-NNFFLSLKKLDGAVLWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Cypcar_3	IQDR-NNFYLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Poefor3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Poelat_3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Poeret_3	VQDR-NNFFLSLKKLDTAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Angang_3	IQDR-NNFFLSLKKLDGAVLWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Xipmac_3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Masarm_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Permag_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Gnapet3	IQDR-NNFFLSLKKLDSAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Ostbic_3	IQDR-NNFFLSLKKLDDAILWIPAFFFHSTSATVTRTLVDFFVEHKDQ---
Gadmor_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Scfor_3	IQDR-NNFFLSLKKLDDAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Acapol3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Ampoce_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Scfor_3b	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Ostbic_3b	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Parkin_3	IQDR-NNFFLSLKKLDSAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Ampper3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Oncmyk_3	LQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Gasacu_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Labber_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Panbuc_3	IQDR-NNFFLSLKKLDGAVLWIPAFFFHSTSATVTRTLVDFFVEHQGQ---
Parhas3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Cluhar_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Aloalo_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Panhyp_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Eleele_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Denclu_3	IQDR-NNFFLSLKKLDGAVLWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Sarpil_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Eigvir_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHQGQ---
Aptalb_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Sinans_3	IQDR-NNFYLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Pygnat_3	IQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Astmex_3	IQDR-NNFFLSLKKLDRAVLWIPAFFFHSTSATVTRTLVDFFVEHQGQ---
Caraur_3	IQDR-NNFYLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Danrer_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Ictpun_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Plealt_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Plealt_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Gasacu_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Parkin_9	IQDR-NNFFLNKKKLEGAILWIPAFFFHSTSAPVTRTLIDFFIEHKDQ---
Acapol_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Larcro_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Notcor_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Latcal_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Serlaldor_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Monalb_9	IQDR-NNFFLSLKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Serdum_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Perflu_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKKQ---
Perfla_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKKQ---
Stepar_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Molmol_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Hipcom_9	IQDR-NNFFLHLKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---

Takrub_9	B	IQDR-NNFFLNKKLGGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Takrub_9		IQDR-NNFFLNKKLGGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Cynsem_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKSQ----
Scomax_9		IQDR-NNFFLSLKKLEAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Corlav_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Oncmyk_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Salsal_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Onctsh_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Salalp_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Ampoce_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Amppe9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Labber_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Umbpyg_3B		IQDR-NNFFLSLKKLDGAILWI-AFFFFHTSATVTRTLVDFFVEHRGQ----
Esoluc_3b		IQDR-NNFFLSLKKLDGAILWIPAFFHTSATVTRTLVDFFVEHRGQ----
Gadmor_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Umbpyg_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Esoluc_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Permag_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Bolpec_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Poefor9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Masarm_9		IQDR-NNFFLSLKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Angjap_9		IQDR-NNFFLSLKKLDGVVLWIPAFFHTSATVTRTLVDFFVEHRGQ----
Poelat_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Poeret_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Xipmac_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Hapbur_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Orylat_9		IQDR-NNFFLHLKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Gamaff_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Neobri_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Funhet_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Punnye_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Cypvar_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Krymar_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Notfur_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Notpie_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Orenil_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Auslim_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Anates_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Astcal_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Mayzeb_9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Orymel_9		IQDR-NNFFLHLKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Ampcit9		IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Macfas_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Macmul_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Macnem_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Musmus_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNALILKHH-----
Ponabe_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Papanu_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Nomleu_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Pantro_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Latcha_2		ETWK-EKFLQRLQSLNGSIFWIPAFMAKGGEERVEWVNLI IKSG-----
Gnapet2		QQWR-DHFLQRLRSIAGGVLWIPAFMAKGGEERVELAARLILRHG-----
Panbuc_2b		ESWQ-ERFLQRLDQLGSSVLWIPAFMAKGGEERVEWALDLIRQHA-----
Ostbic_2		KQWK-GRFLQRLQGLNGSVLWIPAFMAKGGEERVAWAVRLILQHA-----
Sinrhi2		EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Hetzeb_2		ETWK-EKLLHRLKMLDGGILWIPAFMAKGGEERVEWVNLI IKHK-----
Hipcom_2		DEWR-RRFARRLASLSGSVLWIPAFMAKGGEERVEWALRLILRHA-----
Prigla_2		ETWK-EKLLHRLKMLDDGILWIPAFMAKGGEERVEWVNLI IEHK-----
Scytor_2		DTWK-EKLLHRLKMLDGGILWIPAFMAKGGEERVEWVNRI IEHK-----
Tetcal_2		ETWK-EKLLHRLTMLDGAILWIPAFMAKGGEERVEWVNLI IEHK-----
Rhityp_2		ETWK-EKLLHRLKMLDGGILWIPAFMAKGGEERVEWVNLI IKHK-----
Parkin_2b		ARWR-EHFLQRLRGLGDAVLWIPAFMAKGGERVELALDVIRRQR-----
Angang_2		EAWR-ERFVRRRLALEGSVLWIPAFMAKGGEDRVEWATRLILRHA-----
Pygnat_2		EEWR-QRFVQRLQALSGSVLWIPAFMAKGGEERVEWAVRLILSHT-----
Parkin_2		QLWR-DHFLQRLRSIAGGVLWIPAFMAKGGEERVELAARLILRHS-----
Gorgor_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Thegel_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Tupchi_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHR-----
Galgai_2		ETWR-EKLLQRLHSLNGSILWIPAFMAKGGERVEWVNELILKHR-----
Eleele_2		EEWR-QQFVQRLRELGSSVLWIPAFMAKGGEERVEAIRLILSHT-----
Danrer_2		EEWV-QRFVQRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Canlupfam_2		ATWR-EKLLQRLSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Aloalo_2		EEWR-QRFIRRLQDLSGSVLWIPAFMAKGGEERVEWAIIRLILTHT-----
Astmex_2		KEWR-QRFVRRQLALSGSVLWIPAFMAKSGEDRVEWAVHLILSHT-----
Sinans_2		EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Scifor_2		EQWK-GRFLRRQLGNGSVLWIPAFMAKGGEERVAWAVRLILQHA-----
Ceraty_2		ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----

Anocar_2	DTWR-EKLLQRLHSLNGSILWIPAFMAKGKKERVEVWVNELILKNH-----
Anates_2	EEWR-ARFLRRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Ampbic_2	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Sarpil_2	EEWR-QRFIRRLQDLSGSVLWIPAFMAKGGEERVEWAIRLILTHT-----
Xenlae_2	DTWK-DKFLQRLKSLNESILWIPAFMAKGGEERVEWVNDLIKHH-----
Cluhar_2	EEWR-QRFVRRQLDLSGSVLWIPAFMAKGGEERVEWAIRLIIMHT-----
Cypcar_2	EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Denclu_2	EEWR-ERFVQRLRALSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Notpie_2	EEWK-ERFLQRLRNLSGSVLWIPAFMAKRGEDRVEWVLRILLHT-----
Erpcal2	DTWK-DRLLQRLQNLNGSILWIPAFMAKGGEQRVELVNSLILKHQ-----
Amical_2	ESWR-ERFLQRLQSLNGSVLWIPAFMAKGGEERVEWANDLILKHH-----
Lepocu_2	SHWR-ERFLERLSSLNGSVLWIPAFMAKGGEERVQWASELILRHG-----
Homsap_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEVWVNELILKHH-----
Bostau_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKQERVEVWVNELILKHH-----
Caraur_2	EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Thythy_2B	EEWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Onctsh_2B	EEWR-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Salsal_2B	EEWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Oncmvk_2B	EEWR-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Onckis_2B	EEWR-ERFLQRLQSLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Salsal_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Thythy_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Salalp_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Corlav_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Cormar_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Onctsh_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Oncmvk_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Neobri_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Takrub_2	EEWR-ARFLRRLQSLSGSVLWIPAFMAKGGEERVEWTLRLILLHT-----
Tetnig_2	EEWR-DRFLRRLQSLSGSILWIPAFMAKGGEERVDWTLRLILLHT-----
Orenil_2	DEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Orylat_2	EEWK-QRFQRLQSLGGSVLWIPAFMAKGGEERVEWALRLILRHT-----
Krymar_2	EEWR-ERFLQRLRDLRGVWLWVPAFMAKGGEERVEWALRLILLHA-----
Notfur_2	EEWK-ERFLQRLRNLSGSVLWIPAFMAKRGEDRVEWVLRILLHT-----
Poelat_2	DEWK-DRFLQRLQNLSGSVLWIPAFMAKGGEERVEWALRLILVHT-----
Gadmor_2	PEWR-ARFVARLQSLRGSVLWIPAFMAKGGEERVEWAARLILLHT-----
Xipmac_2	DEWK-DRFLQRLQNLSGSVLWIPAFMAKGGEERVEWALRLILVHT-----
Poeret_2	DEWK-DRFLRRLQNLSGSVLWIPAFMAKGGEERVEWALRLILVHT-----
Astcal_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Hapbur_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Acapol_2B	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Ampoce_2A	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Acapol_2A	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Mayzeb_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Punnye_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Latcal_2	EEWR-DRFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Singra_2	EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIRLILLHT-----
Auslim_2	EEWK-ERFLRRLRDLGGSVLWIPAFMAKGGEERVEWALRLILLHA-----
Monalb2	DEWR-ERFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Ampoce_2B	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Chiham_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILSHT-----
Gasacu_2	DEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILSHT-----
Gymacu_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILSHT-----
Labber_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Cypvar_2	EEWK-DRFLQRLRDLSGSVLWIPAFMAKGGEERVEWALRLILVHT-----
Funhet_2	DEWK-ERFLQRLRNLSGSVLWIPAFMAKGGEERVEWALRLIRVHT-----
Larcro_2	EEWR-DRFLKRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Paroli_2	DEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Perflu_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Serdum_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Stepar_2	EEWK-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Notcor_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILSHT-----
Treber_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILSHT-----
Serlaldor_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Plaste_2	DEWR-NRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Clabat_4	ETTR-ERFVQRLRLLNDSVLWIPAFMVKGGKEKHVEGVNELILKKK-----
Ictpun_4A	ETVR-ENFVQRLRLLNDSVLWIPAFMVKGGKEKHVEGVNELILKKK-----
Panhyp_4	ATDT-ELFVQRLSLLNDSVLWIPAFMVKGGKEKHVEGVNELILKKK-----
Umbpyg_4	ATDT-ERFVQRLRMLKDSVLWIPAFMVKGGQHVVERVNELIVKRR-----
Esoluc_4	ASDM-ERFVQRLRMLNDSVLWIPAFMVKGGERHVESVNELIVKRR-----
Plealt_4	VSDA-ERFVRRRLRMLNDSVLWIPAFMVKGGKEKHVECVNELIVKRR-----
Onckis_4B	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKRR-----
Onckis_4A	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKRR-----
Onctsh_4	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKRR-----
Oncmvk_4	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKRR-----
Corlav_4	ATDT-ERFVQRLRMLNDSVLWIPAFMVKGGERHVESVNELIVKRR-----
Astmex_4A	ETQR-ERFVERLSMLNDSVLWIPAFMVKGGKEKHVEGVNELILKKK-----

Pygnat_4	ETVR-EHFVERLGMNDNSVLWIPAFMVKGGEKHVEGVNELILKRK-----
Aloalo_4	ATDR-ERFVERLRALNDNSVLWIPAFMVKGGEKHVEGVNELILQRS-----
Cluhar_4	ATDR-ERFVERLQALNDNSVLWIPAFMVKGGEKHVEGVNELILQRG-----
Denclu_4	ESDR-EKFVHRLIALNDNSVLWIPAFMVKGGEKHVEVVNNFILKQG-----
Konpun4	STDR-ERFVERLRALNDNSVLWIPAFMVKGGEKHVEGVNELILQRG-----
Sarpil_4	ATDR-ERFVERLRALNDNSVLWIPAFMVKGGEKHVEGVNELILQRG-----
Caraur_4	ERQQ-ERFIRRLQQLNNSVLWIPAFMVKGGERHVEIVNQLILKHK-----
Cteide_4	ETEQ-ENFILRLQQLNNSVLWIPAFMVKGGERHVEIVNELILKHK-----
Petmar_4	KADH-DRFGRRLRALNNSILWIPAFMAKGGEQHVEIVNNLLTLG-----
Cypcar_4	ERQR-ERFIQRLQQLNNSVLWIPAFMVKGGERHVEIVNELILKHK-----
Danrer_4	ETQQ-ENLIQRLQQLNNSVLWIPAFMVKGGMKHVDVTNELILKHK-----
Misang_4	KTAQ-EHFIQRLQQLNNSVLWIPAFMVKGSEKHVEGVNELILKNK-----
Angjap_4	DSDR-ERFVRRLGALNDNSVLWIPAFMVKGGERHVECVNDLILRHR-----
Cypcar_4A	ERQR-ERFIQRLQQLNNSVLWIPAFMVKGGERHVEIVNELILKHK-----
Angang_4	DSDR-ERFVRRLGALNDNSVLWIPAFMVKGGERHVECVNDLILRHR-----
Cypcar_4B	ERQR-ERFIRRLQQLNNSVLWIPAFMVKGGERHVEIVNQLILKHK-----
Sinans_4A	ERQR-ESFILRLQQLNNSVLWIPAFMVKGGERHVEIVNELILKHK-----
Sinans_4B	ERQR-VQFIRRLQQLNNSVLWIPAFMVKGGERHVEIVNQLILKHR-----
Singra_4A	ERQQ-ESFIRRLQQLNNSVFWIPAFMVKGGERHVETVNELILKHK-----
Aptalb_4	ETVR-EGFLRRLAALNDNSVLWIPAFMVKGGEKHVEGVNELILRRK-----
Eigvir_4	ETAR-ESFLRRLAALNDNSILWIPAFMVKGGEKHVEGVNELILRRK-----
Eleele_4	ETAR-DCFLLRLAVLNDNSVLWIPAFMVKGGEKHVEGVNELILQRK-----
Parhas_4	VTVR-EGFLRRLAALNDNSVLWIPAFMVKGGEKHVEGVNELILRRK-----
ScIfor_4	ESDR-VRFVQRLTMLNESVLWIPAFMVKGGEQHVERVNELILKNK-----
Gnapet4	ESDR-ERFVQRLIMLNDNSILWIPAFMVKGGEKHVEGVNELILNRK-----
Ostbic_4	ESDR-EKFVQRLIMLNDNSILWIPAFMVKGGEQHVEHVSELILKNR-----
Parkin_4	ESDR-ERFVQRLIMLNDNSILWIPAFMVKGGEKHVEGVNELILNRK-----
Panbuc_4	ATDR-QRFVQRLVALNDNSVLWIPAFMVKGGEKHVESVNELILKNG-----
Erpcal4	ETDR-EKFVQRLAMLNDNSVLWIPAFMVKGGEKHVEWVNELILKNK-----
Salsal_4	ATDT-ERFVQRLRGLNDNSVLWIPAFMVKGGERHVESVNELIVKRK-----
Saltru_4	ATDT-ERFVQRLRGLNDNSVLWIPAFMVKGGERHVESVNELIVKRK-----
Salalp_4	ATDT-ERFVERLRGLNDNSVLWIPAFMVKGGERHVESVNELIVKRK-----
Salfon_4	ATDT-ERFVERLRGLNDNSVLWIPAFMVKGGERHVESVNELIVKRK-----
Thythy_4	ATDT-ERFVHRLQVLNDNSVLWIPAFMVKGGERHVESVNELIVKRK-----
Calmil_4	ETDR-ENFVRRLAVLNDNSVLWIPAFMVKGGERHVEWVNELILKNK-----
Hetzeb_4	ETDR-EKFVDRRLAVLNDNSVLWIPAFMVKGGEKHVEYVNELILKNR-----
Rhityp_4	ETDR-EKFVDRRLTVLNDNSVLWIPAFMVKGGEKYVEYVNELILKNR-----
Scytor_4	ETDR-EKFVDRRLAVLNDNSVLWIPAFMVKGGEKHVEYVNELILKNR-----
Squaca_4	ETDR-EKFVDRRLAVLNDNSVLWIPAFMVKGGEKHVEYVNELILKNR-----
Amical_4	ETDR-EKFVRRLTMLNDNSVLWIPAFMVKGGEKHVECVNELILKNK-----
Lepocu_4	ETDR-ERFVQRLTLLNDNSVLWIPAFMVKGGEKHVECVNELILKNK-----
Agema_4	ETVR-ERFVQRLSLNDNSVLWIPAFMVKGGEKHVEGVNELILKRK-----
Anocar_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Canlupfam_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Crigri_4	ESDR-AKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Galgai_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHLEWVNALILKNK-----
Mesaur_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Homsap_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Notscuscu_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVQWVNALILKNK-----
Psetextex_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVQWVNALILKNK-----
Musmus_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Pogvit_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Promuc_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Pantro_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Pytbiv_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Ratnor_2	ATWR-EKLLQRLHGLNGSILWIPAFMARGGKERVVEWVNALILKHH-----
Ratnor_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Siltro_2	DTWK-DKFLQRLKSLNESILWIPAFMAKGGEERVEWVNDLIIKHH-----
Siltro_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNQ-----
Susscr_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Taegut_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Termextri_4M	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Thasirsir_4	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Xenlae_4B	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNQ-----
Xenlae_4A	ESDR-EKFVHRLSMLNDNSVLWIPAFMVKGGEKHVEWVNALILKNQ-----
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Latcal_3	LKVQLAWPGN-IMQYINNYWKTQQLSPKRLSTGILMYT----LASSMCDQ
Perflu_3	LKVQLAWPGN-IMQYVNSYWKTQQLSPKRLSTGILMYT----LASSMCDQ
Serdum_3	LKVQLAWPGN-IMQYINNYWKTQQLSPKRLSTGILMYT----LASSMCDQ
Stepar_3	LKVQLAWPGN-IMQYINNYWKTQQLSPKRLSTGILMYT----LASSMCDQ
Tetcal_3	LKVQLAWPGN-IMQHINKYWKTQQLSPKRLSTGILMYT----LASAICEE
Monalb_3	LKVQLAWPGN-IMQYINNYWKTQQLSPKRLSTGILMYT----LASSMCDQ
Molmol_3	LKVQLAWPGN-IMQYINNYWKTQQLSPKRLSTGILMYT----LASSMCDQ
Takrub_3	LKVRLAWPGN-IMQYINNYWKTQQLSPKRLSTGILMYT----LASSMCDQ
Canlupfam_3	LKVQLAWPGN-IMQHVNRYYWKNKHLSPKRLSTGILMYT----LASAICEE
Bostau_3	LKLQQLAWPGN-IMQHVNRYYWKNKHLSPKRLSTGILMYT----LASAVCEE
Homsap_3	LKVQLAWPGN-IMQHVNRYYWKNKHLSPKRLSTGILMYT----LASAICEE

Siltro_3	LKVQLDWPNG-IMQHVNRWYKKNKHLSPKRLSTGILMYT----LASSVCEE
Anocar_3	LKVQLAWPGN-IMQHVNRWYKKNKHLAPKRLSTGILMYT----LASAICDE
Musmus_3	LKVQLAWPGN-IMQHVNRWYKKNKHLSPKRLSTGILMYT----LASAICDE
Pantro_3	LKVQLAWPGN-IMQHVNRWYKKNKHLSPKRLSTGILMYT----LASAICEE
Ratnor_3	LKVQLAWPGN-IMQHVNRWYKKNKHLSPKRLSTGILMYT----LASAICEE
Galgal_3	LKVQLAWPGN-IMQHVNRWYKKNKHLSPKRLSTGILMYT----LASAICEE
Lepocu_3	LKVQLAWPGN-IMQYVNRWYKTKHLAPKRLSTGILMYT----LASAMCEE
Tetnig_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCE
Squaca_3	LKVQLAWPGN-IMQYVNSYWKTQLSPKRLSTGILMYT----LASSMCDQ
Perfla_3	LKVQLAWPGN-IMQYVNSYWKTQLSPKRLSTGILMYT----LASSMCDQ
Salsal_3	LKVQLAWPGN-IMQYVNRWYKTKQLSPKRLSTGILMYT----LASSMCEE
Serlaldor_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Treber_3	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Cynsem_3	LKVQLAWPGN-IMQYIN-----STGILMYT----LASSMCDQ
Paroli_3	LKVQLAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Paroli_3b	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Plaste_3	LKVQLAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Plaste_3b	LKVQLAWPGN-IMQYINSYWKTQLSPKRLSTGILMYT----LASSMCDQ
Erpcal3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASAMCEE
Calmil_3b	LKVELAWPGN-IMQYVNRWYKTKQLSPKRLSTGILMYT----LASSVCEE
Hetzeb_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASAICEE
Latcha_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASAMCDE
Anates_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Ampcit3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Auslim_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Cypvar_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Krymar_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Funhet_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Gamaff3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Orylat_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Orenil_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Mayzeb_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Punnye_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Punnye_3a	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Neobri_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Misang_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Sinrhi3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Singra_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Hapbur_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Astcal_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Notfur_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Cypcar_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Poefor3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Poelat_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Poeret_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Angang_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Xipmac_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Masarm_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Permag_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Gnapet3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Ostbic_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Gadmor_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Scifor_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Acapol3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Ampoce_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Scfor_3b	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Ostbic_3b	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Parkin_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Ampper3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Oncmyk_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Gasacu_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Labber_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Panbuc_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Parhas3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Cluhar_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Aloalo_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Panhyp_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Eleele_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Denclu_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Sarpil_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Eigvir_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Aptalb_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Sinans_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Pygnat_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Astmex_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Caraur_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Danrer_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCDQ

Ictpun_3	LRVQLAWPGN-IMQYVNRKYWKTQKLSPKRLSTGILMFT----LASSLCDQ
Plealt_3	LKVQLAWPGN-IMQYVNRKYWKTQKLSPKRLSTGILMYT----LASSMCDE
Plealt_9	LKIELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Gasacu_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Parkin_9	LNQQLAFPGN-IMHYINSYWKTKQKLSPKRLSTGILMYT----LASAMCEE
Acapol_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Larcro_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Notcor_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Latcal_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Serlaldor_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Monalb_9	LKVDLAWPGN-IMHNINKYWKTKSLSPKRLSTGILMYT----LATAMCDE
Serdum_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Perflu_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Perfla_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Stepar_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Molmol_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Hipcom_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Takrub_9 B	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Takrub_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRVSTGILMYT----LASAMCDE
Cynsem_9	LKVKLAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Scomax_9	LKVKLAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Corlav_9	LKIELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Oncmk_9	LKVELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Salsal_9	LKIELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Onctsh_9	LKIELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Salalp_9	LKIELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Ampoce_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Amppe9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Labber_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Umbpyg_3B	LKVKLAWPGN-IMHYVNRKYWKTQKLSPKRLSTGILMYT----LASAMCEE
Esoluc_3b	LKVQLAWPGN-IMHYINSYWKTKQKLSPKRLSTGILMYT----LASAMCEE
Gadmor_9	LKIELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Umbpyg_9	LKVELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Esoluc_9	LKVELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Permag_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Bolpec_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Poefor9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Masarm_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Angjap_9	LKVQLAWPGN-IMQYVNRKYWKTQKLSPKRLSTGILMYT----LASAMCEE
Poelat_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Poeret_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Xipmac_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Hapbur_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAICDE
Orylat_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAFSMCDE
Gamaff_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Neobri_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAICDE
Funhet_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Punnye_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAICDE
Cypvar_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Krymar_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Notfur_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Notpie_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Orenil_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAICDE
Auslim_9	LKVELAWPGN-IMQDVNKYWKTKNLSPKRLSTGILMYT----LASAMCDE
Anates_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAYAMCDE
Astcal_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAICDE
Mayzeb_9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAICDE
Orymel_9	LKVELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LAFAMCDE
Ampcit9	LKIELAWPGN-IMHVDNKYWKTKNLSPKRLSTGILMYT----LASAICDE
Macfas_2	VNVRTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Macmul_2	VNVRTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Macnem_2	VNVRTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Musmus_2	VNVRTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Ponabe_2	VNVRTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNE
Papanu_2	VNVRTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Nomleu_2	VNVRTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Pantro_2	VNVRTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Latcha_2	INVQTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCDE
Gnapet2	LNVRPAFPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----MATRFCDE
Panbuc_2b	VHVRPAFPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Ostbic_2	INVHTAFPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----MATRFCEQ
Sinrhi2	VNVRTAFPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----MATRFCDE
Hetzeb_2	IRVQTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCDE
Hipcom_2	ADVRTAFPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----MATRFCEE
Prigla_2	IHVQTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCDE
Scytor_2	IHVQTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCDE
Tetcal_2	IHVQTAYPSLRLHAVRGYWLTKNVHIKRPTTGILMYT----LATRFCDE

Rhityp_2	LHVQTAYPSLRLHHAVRGYWLTKVLIKRPTTGLLMYT----LATRFCDE
Parkin_2b	LAVRPAPPSLRLHDAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Angang_2	LNVRTAFPSLRLHHAVRGYWLTKVLIKRPTTGLLMYT----MATRFCDE
Pygnat_2	VNVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Parkin_2	LDVRPAPPSLRLHDAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Gorgor_2	VNVRTAYPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNQ
Thegel_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNQ
Tupchi_2	VNVRTAYPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNQ
Galgai_2	INVRTAYPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNR
Eleele_2	GNVHAAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Danrer_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Canlupfam_2	VNVRTAYPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNQ
Aloalo_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Astmex_2	VSVHAAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Sinans_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Scifor_2	INVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Ceraty_2	VNVRTAYPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNQ
Anocar_2	INVRTAYPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNR
Anates_2	VDVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Ampbic_2	VDVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Sarpil_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Xenlae_2	INVHTAYPSLRLHHAVRGYWLTKVHIKRPTTGILMYT----LATRFCNR
Cuuhar_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Cypcar_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Denclu_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Notpie_2	VDVRMAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Ercal2	INVQTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCDE
Amical_2	INVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGMLMYT----LATRFCEE
Lepocu_2	INVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCEE
Homsap_2	VNVRTAYPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNQ
Bostau_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCNQ
Caraur_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Thythy_2B	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Onctsh_2B	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Salsal_2B	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Oncmyk_2B	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Onckis_2B	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Salsal_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Thythy_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Salalp_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Corlav_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Cormar_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Onctsh_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Oncmyk_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Neobri_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Takrub_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Tetnig_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Orenil_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Orylat_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Krymar_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Notfur_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Poelat_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Gadmor_2	VGIRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Xipmac_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Poeret_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Astcal_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Hapbur_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Acapol_2B	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Ampoce_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Acapol_2A	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Mayzeb_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Punnye_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Latcal_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Singra_2	VNVRTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Auslim_2	VDVRMAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Monalb2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----LATRFCEE
Ampoce_2B	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Chiham_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Gasacu_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Gymacu_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCDE
Labber_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Cypvar_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Funhet_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Larcro_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Paroli_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Perflu_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE
Serdum_2	VDVHTAFPSLRLHHAVRGYWLTKVHIKRPTTGLLMYT----MATRFCEE

Stepar_2	VDVRTAFPSLRLHHA VRGYWLTNNVHIKRP TTGLLMYT----MATRFCEE
Notcor_2	VDVRTAFPSLRLHHA VRGYWLTNNVHIKRP TTGLLMYT----MATRFCDE
Treber_2	VDVRTAFPSLRLHHA VRGYWLTNNVHIKRP TTGLLMYT----MATRFCDE
Serlaldor_2	VDVRTAFPSLRLHHA VRGYWLTNNVHIKRP TTGLLMYT----MATRFCEE
Plaste_2	VDVRTAFPSLRLHHA VRGYWLTNNVHIK-PTTGLLMYT----MATRFCDE
Clabat_4	LPVRMAYPSLRLVHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Ictpun_4A	LPVHMAYPSLRLVHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Panhyp_4	LPVRMAYPSLRLVHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Umbpyg_4	LSVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Esoluc_4	LRVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Plealt_4	LRVKTAYPSLRLVHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCNE
Onckis_4B	LRVRTAYPSLRLIHV VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Onckis_4A	LRVRTAYPSLRLIHV VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Onctsh_4	LRVRTAYPSLRLIHV VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Oncmvk_4	LRVRTAYPSLRLIHV VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Corlav_4	LRVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Astmex_4A	LPLRTAYPSLRLIHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Pygnat_4	LPVHMAYPSLRLIHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Aloalo_4	LRVRTAYPSLRLIHA VRGYWLTNRIHIKRPSTGLLMYT----LATRFCDE
Cluhar_4	LSVKPAYPSLRLIHA VRGYWLTNKIHIKRPSTGLLMYT----LATRFCDE
Denclu_4	LHLRMAYPSLRLFHA VRGYWLTNKVN IKRPSTGLLMYT----LATRFCDE
Konpun4	LRVRTAYPSLRLIHA VRGYWLTNKIHIKRPSTGLLMYT----LATRFCDE
Sarpil_4	LRVRTAYPSLRLIHA VRGYWLTNRIHIKRPSTGLLMYT----LATRFCDE
Caraur_4	LKVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----MATRFCDE
Cteide_4	LKVRMAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----MATRFCDE
Petmar_4	LPLRAAFPSLRLMHA VRGYWLTNKVYIKRP TTGLLMYT----LATRFCRE
Cypcar_4	LRLRTAYPSLRLIHA VRGFWLTNKIN IKRPSTGLLMYT----LATRFCDE
Danrer_4	LKVRTAYPSLRLIHA VRGFWLTNKIN IKRPSTGLLMYT----MATRFCDE
Misang_4	LKVRTAYPSLRLIHA VRGYWLTNKIKI KRPSTGLLMYT----MTRFCDE
Angjap_4	LRVRTAYPSLRLIHA VRGYWLTNKVN IKRPSTGLLMYT----LATRFCDE
Cypcar_4A	LRLRTAYPSLRLIHA VRGFWLTNKIN IKRPSTGLLMYT----LATRFCDE
Angang_4	LRVRPPTPRSGLIHA VRGYWLTNKVN IKRPSTGLLMYT----LATRFCDE
Cypcar_4B	LKVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Sinans_4A	LKVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----MATRFCDE
Sinans_4B	LKVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----MATRFCDE
Singra_4A	LKVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----MATRFCDE
Aptalb_4	LPVRMAYPSLRLVHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Eigvir_4	LPVHMAYPSLRLIHA VRGYWLTNKVN IKRPSTGLLMYT----LATRFCDE
Eleele_4	LPVRMAYPSLRLIHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Parhas_4	LPVRMAYPSLRLVHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Scifor_4	LKLRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Gnapet4	LLLRTAYPSLRLIHA VRGYWLTNKVN IKRPSTGLLMYT----LATRFCNE
Ostbic_4	LRVRTAYPSLRLNHA VRGYWLTNKIKI KRPSTGLLMYT----LATRFCDE
Parkin_4	LLLRTAYPSLRLIHA VRGYWLTNKVN IKRPSTGLLMYT----LATRFCNE
Panbuc_4	LKVRTAYPSLRLIHA VRGYWLTNKVN IKRPSTGLLMYT----LATRFCDE
Erpcal4	LKVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Salsal_4	LRVRTAYPSLRLIHV VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Saltru_4	LRVRTAYPSLRLIHV VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Salalp_4	LRVRTAYPSLRLIHV VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Salfon_4	LRVRTAYPSLRLIHV VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Thythy_4	LSVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Calmil_4	LSIQTAYPSLRLIHA VRGYWLTNKVYI KRPSTGLLMYT----LATRFCDE
Hetzeb_4	LSIQTAYPSLRLIHA VRGYWLTNKIYI KRPSTGLLMYT----LATRFCDE
Rhityp_4	LNlQTAYPSLRLIHA VRGYWLTNKIYI KRPSTGLLMYT----LATRFCDE
Scytor_4	LNlQTAYPSLRLIHA VRGYWLTNKIYI KRPSTGLLMYT----LSTRFCDE
Squaca_4	LSIQTAYPSLRLIHA VRGYWLTNKVYI KRPSTGLLMYT----LATRFCDE
Amical_4	LKVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Lepocu_4	LKVRTAYPSLRLIHA VRGYWLTNKIN IKRPSTGLLMYT----LATRFCDE
Agema_4	LPVRMAYPSLRLVHA VRGYWLTNKVN IKRPSTGLLMYT----MATRFCDE
Anocar_4	LKVRTAYPSLRLIHA VRGYWLTNKVFI KRPSTGLLMYT----LATRFCDE
Canlupfam_4	LKVRTAYPSLRLIHA VRGYWLTNKVPI KRPSTGLLMYT----LATRFCDE
Crigri_4	LKVRTAYPSLRLIHA VRGYWLTNKVPI KRPSTGLLMYT----LATRFCDE
Galgai_4	LKVRTAYPSLRLIHA VRGYWLTNKVHI KRPSTGLLMYT----LATRFCDE
Mesaur_4	LKVRTAYPSLRLIHA VRGYWLTNKVPI KRPSTGLLMYT----LATRFCDE
Homsap_4	LKVRTAYPSLRLIHA VRGYWLTNKVPI KRPSTGLLMYT----LATRFCDE
Notscuscu_4	LKVQTAYPSLRLIHA VRGYWLTNKVYI KRPSTGLLMYT----LATRFCDE
Psetextex_4	LKVRTAYPSLRLIHA VRGYWLTNKVYI KRPSTGLLMYT----LATRFCDE
Musmus_4	LQVRTAYPSLRLIHA VRGYWLTNKVPI KRPSTGLLMYT----LATRFCDE
Pogvit_4	LKVRTAYPSLRLIHA VRGYWLTNKVFI KRPSTGLLMYT----LATRFCDE
Promuc_4	LKVRTAYPSLRLIHA VRGYWLTNKVYI KRPSTGLLMYT----LATRFCDE
Pantro_4	LKVRTAYPSLRLIHA VRGYWLTNKVPI KRPSTGLLMYT----LATRFCDE
Pytbiv_4	LKVRTAYPSLRLIHA VRGYWLTNKVYI KRPSTGLLMYT----LATRFCDE
Ratnor_2	VNVRTAYPSLRLHHA VRGYWLTNKVHIKRP TTGLLMYT----LATRFCNQ
Ratnor_4	LKVRTAYPSLRLIHA VRGYWLTNKVPI KRPSTGLLMYT----LATRFCDE
Siltro_2	INVHTAYPSLRLHHA VRGYWLTNKVHIKRP TTGLIMYT----LATRFCNR
Siltro_4	LKVRTAYPSLRLIHA VRGYWLTNKVQI KRPSTGLLMYT----LATRFCDE
Susscr_4	LKVRTAYPSLRLIHA VRGYWLTNKVPI KRPSTGLLMYT----LATRFCDE

Taegut_4	LKVRTAYPSLRLIHAVRGYWLTKNVHIKRPSTGLLMYT----LATRFCDE
Termextri_4M	LKVRTAYPSLRLIHAVRGYWLTKNVHIKRPSTGLLMYT----LTTRFCDE
Thasirsir_4	LKVRTAYPSLRLIHAVRGYWLTKNVYIKRPSTGLLMYT----LATRFCDE
Xenlae_4B	LKVRTAYPSLRLIHAVRGYWLTKNVQIKRPSTGLLMYT----LATRFCDE
Xenlae_4A	LKVRTAYPSLRLIHAVRGYWLTKNVQIKRPSTGLLMYT----LATRFCDE
	201
Latcal_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Perflu_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Serdum_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Stepar_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Tetcal_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Monalb_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Molmol_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Takrub_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPT
Canlupfam_3	IHLYG----FWPFGFDPNTR---EDLPYHYDCKGKFTTKWQESHQLPA
Bostau_3	IHLYG----FWPFGFDPNTR---EDLPYHYDCKGKFTTKWQESHQLPA
Homsap_3	IHLYG----FWPFGFDPNTR---EDLPYHYDCKGKFTTKWQESHQLPA
Siltro_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Anocar_3	IHLYG----FWPFGFDPNTR---EDLPYHYDCKGKFTTKWQESHQLPA
Musmus_3	IHLYG----FWPFGFDPNTR---EDLPYHYDCKGKFTTKWQESHQLPA
Pantro_3	IHLYG----FWPFGFDPNTR---EDLPYHYDCKGKFTTKWQESHQLPA
Ratnor_3	IHLYG----FWPFGFDPNTR---EDLPYHYDCKGKFTTKWQESHQLPA
Galgal_3	IHLYG----FWPFGFDPNTR---EDLPYHYDCKGKFTTKWQESHQLPA
Lepocu_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPT
Tetnig_3	IHLYG----FWPFGWDPNTG---RELPHYHYDCKGKFTTKWQESHQLPT
Squaca_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Perfla_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Salsal_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Serlaldor_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Treber_3	IHLYG----FWPFGWDPNTG---NDLPYHYDCKGKFTTKWQETHQLPT
Cynsem_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Paroli_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQETHQLPS
Paroli_3b	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Plaste_3	IHLYG----FWPFGWDPNTG---NDLPYHYDCKGKFTTKWQETHQLPS
Plaste_3b	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Erpcal3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPT
Calmil_3b	IHLYG----FWPFGWDPNTG---RELPHYHYDCKGKFTTNWQETHQLPA
Hetzeb_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Latcha_3	IHLYG----FWPFGWDPNSG---KELPYHYDCKGKFTTKWQESHQLPA
Anates_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Ampcit3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Auslim_3	VHLYG----FWPFGWDPNTG---KELPYHYDRKGKFTTKWQESHQLPA
Cypvar_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Krymar_3	VHLYG----FWPFGWDPNTG---KELPYHYDRKGKFTTKWQESHQLPA
Funhet_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Gamaff3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Orylat_3	IHLYG----FWPFGWDPNTG---KELPYHYDRKGKFTTKWQESHQLPA
Orenil_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Mayzeb_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Punnye_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Punnye_3a	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Neobri_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Misang_3	VHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPT
Sinrhi3	VHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPT
Singra_3	VHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPT
Hapbur_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Astcal_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Notfur_3	IHLYG----FWPFGWDPNTG---KELPYHYDRKGKFTTKWQESHQLPA
Cypcar_3	-----
Poefor3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Poelat_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Poeret_3	VHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Angang_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPS
Xipmac_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Masarm_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Permag_3	-----LPYHYDCKGKFTTKWQESHQLPA
Gnapet3	VHLYG----FWPFGWDPSTG---RELPHYHYDRKGKFTTKWQESHQLPA
Ostbic_3	VHLYG----FWPFGWDPNTG---KELPYHYDRKGKFTTKWQETHQLPT
Gadmor_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Scifor_3	VHLYG----FWPFGWDPNTG---KELPYHYDRKGKFTTKWRESHELPS
Acapol3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Ampoce_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Scifor_3b	IHLYG----FWPFGWDPISG---KGLPHYHYDCKGKFTTKWQESHQLPA
Ostbic_3b	IHLYG----FWPFGWDPISG---KGLPHYHYDCKGKFTTKWQESHQLPA
Parkin_3	VHLYG----FWPFGWDPSTG---RELPHYHYDRKGKFTTKWQESHQLPA
Amppe3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA
Oncmyk_3	IHLYG----FWPFGWDPNTG---KELPYHYDCKGKFTTKWQESHQLPA

Gasacu_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPA
Labber_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPA
Panbuc_3	VHLYG----	FWPFGWDPASG---	RELPYHHYDKKGT	KFTTKWQESHQLPA
Parhas3	VHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQESHQLPT
Cluhar_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Aloalo_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Panhyp_3	VHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Eleele_3	VHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Denclu_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Sarpil_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Eigvir_3	VHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Aptalb_3	VHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQESHQLPT
Sinans_3	VHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Pygnat_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Astmex_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Caraur_3	VHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Danrer_3	VHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Ictpun_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPT
Plealt_3	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPA
Plealt_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Gasacu_9	IHLYG----	FWPFGWDPNTG---	NDLPYHHYDKKGT	KFTTKWQETHQLPS
Parkin_9	VHLYG----	FWPFGWDPISG---	KGLPYHYFDKKGT	KFTTKWQESHQLPA
Acapol_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Larcro_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Notcor_9	IHLYG----	FWPFGWDPNTG---	NDLPYHHYDKKGT	KFTTKWQETHQLPT
Latcal_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Serlaldor_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Monalb_9	VHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQEAHQLPS
Serdum_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Perflu_9	IHLYG----	FWPFGWDPNSG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Perfla_9	IHLYG----	FWPFGWDPNSG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Stepar_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Molmol_9	IHLYG----	FWPFGWDPNTG---	NDLPYHHYDKKGT	KFTTKWQETHQLPS
Hipcom_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Takrub_9 B	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPT
Takrub_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPT
Cynsem_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Scomax_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Corlav_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Oncmyk_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Salsal_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPA
Onctsh_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Salalp_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Ampoce_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Ampper9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Labber_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPT
Umbpyg_3B	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPA
Esoluc_3b	IHLYG----	FWPFGWDPNTG---	KELPYHHYDRKGT	KFTTKWQESHQLPA
Gadmor_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Umbpyg_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Esoluc_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Permag_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDRKGT	KFTTKWQETHQLPN
Bolpec_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDRKGT	KFTTKWQETHQLPN
Poefor9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Masarm_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Angjap_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQESHQLPS
Poelat_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Poeret_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Xipmac_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Hapbur_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Orylat_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Gamaff_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Neobri_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Funhet_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Punnye_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Cypvar_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Krymar_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Notfur_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Notpie_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Orenil_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Auslim_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Anates_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Astcal_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Mayzeb_9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Orymel_9	IHLYG----	FWPFGWDPNTG---	KELPYHHYDKKGT	KFTTKWQETHQLPS
Ampcit9	IHLYG----	FWPFGWDPNTG---	KDLPYHHYDKKGT	KFTTKWQETHQLPS
Macfas_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHHYDSLKYGYTSQASP	-HTMPL

Macmul_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Macnem_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Musmus_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Ponabe_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Papanu_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Nomleu_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Pantro_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Latcha_2	IHLYG----FWPFRDHS-E---RPVKYHYDLSLTYEYTSQASP-HTMPL
Gnapet2	IHLYG----FWPFALGPQ-G---NPVKYHYDLSLTYQYTSQASP-HTMPL
Panbuc_2b	IHLYG----FWPFRDVG-G---RPVKYHYDALTGYTSQAGP-HAMPL
Ostbic_2	IHLYG----FWPFPLGPH-G---NPVKYHYDALTGYEYTSQVGP-HTMPL
Sinrhi2	IHLYG----FWPFAHDPD-G---KSVKYHYDTLTYHYTSGASP-HTMPL
Hetzeb_2	IHLYG----FWPFPKDQK-G---NVVKYHYDLSLTYEYNSRATP-HTMPL
Hipcom_2	IHLYG----FWPFSDAA-G---KAVKYHYDTLKYEYTSSSSP-HSMPL
Prigla_2	IHLYG----FWPFPKDQK-G---NVVKYHYDLSLTYEYNSRATP-HTMPL
Scytor_2	IHLYG----FWPFPKDQK-G---NAVKYHYDLSLTYEYNSRATP-HTMPL
Tetcal_2	IHLYG----FWPFKDPK-G---NAVKYHYDLSLTYEYNSRATP-HTMPL
Rhityp_2	IHLYG----FWPFKDHK-G---NAVKYHYDLSLTYEYNSRATP-HTMPL
Parkin_2b	IHLYG----FWPFSDAQ-G---NPVKYHYDLSLTYGYTSRTSP-HTMPL
Angang_2	IHLYG----FWPFQDPQ-G---NPMKYHYDTLTYEYDSHSSP-HTMPL
Pygnat_2	IHLYG----FWPFRDSE-G---KPVKYHYDTLTYQYTSSSSP-HTMPL
Parkin_2	IHLYG----FWPFALGPQ-G---NPVKYHYDLSLTYEYTSQASP-HTMPL
Gorgor_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Thegel_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Tupchi_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Galgai_2	IHLYG----FWPFLDQN-Q---QPVKYHYDLSLKYGYTSQASP-HTMPL
Eleele_2	IHLYG----FWPFSGPE-G---KPVKYHYDALTGYEYTSSSSP-HTMPL
Danrer_2	IHLYG----FWPFAHDPD-G---KPVKYHYDTLTYHYTSSASP-HTMPL
Canlupfam_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Aloalo_2	IHLYG----FWPFHRDHQ-G---KRVKYHYDTLTYEFTSRASP-HTMPL
Astmex_2	IHLYG----FWPFRDSE-G---KPVKYHYDTLKYQYTSSSSP-HTMPL
Sinans_2	IHLYG----FWPFAHDPD-G---KPVKYHYDTLTYHYTSSASP-HTMPL
Scifor_2	IHLYG----FWPFLGPH-G---NPVKYHYDALTGYEYTSQVGP-HTMPL
Ceraty_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Anocar_2	IYLYG----FWPFRDQD-Q---NPVKYHYDTLKYGYMSQTSP-HTMPL
Anates_2	IHLYG----FWPFLDPQ-G---KPVKYHYDALKYEYTSSSSP-HTMPL
Ampbic_2	IHLYG----FWPFLDPH-G---KPVKYHYDTLKYEYTSSSSP-HTMPL
Sarpil_2	IHLYG----FWPFHRDHQ-G---KRVKYHYDTLTYQFTSRASP-HTMPL
Xenlae_2	IYLYG----FWPFRDLH-Q---NPVKYHYDLSLKYGYTSQAGP-HAMPL
Cluhar_2	IHLYG----FWPFHRDHQ-G---NVVKYHYDTLTYEFTSRASP-HTMPL
Cypcar_2	IHLYG----FWPFAHDPD-G---KPVKYHYDMLTYHYTSSASP-HTMPL
Denclu_2	IHLYG----FWPFHRDAQ-G---KPVKYHYDALTGYEYTSASSP-HTMPL
Notpie_2	IHLYG----FWPFLDPK-G---KTVKYHYDTLKYEYTSSSSP-HTMPL
Ercal2	IHLYG----FWPFLDQK-G---NSVKYHYDLSLRYEFTSSSP-HAMPL
Amical_2	IHLYG----FWPFSRGA-G---NPVKYHYDLSLTYEYTAQSSP-HTMPL
Lepocu_2	IHLYG----FWPFLGPN-G---LPVKYHYDLSLTYEYRAQSSP-HSMPV
Homsap_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Bostau_2	IYLYG----FWPFLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Caraur_2	IHLYG----FWPFAHDPD-G---KPVKYHYDTLTYHYTSSASP-HTMPL
Thythy_2B	IHLYG----FWPFKDSQ-G---KPVKYHYDTLTYEYTSASHP-HTMPL
Onctsh_2B	IHLYG----FWPFQDSQ-G---KPVKYHYDTLTYEYTSASHP-HTMPL
Salsal_2B	IHLYG----FWPFQDSQ-G---KSVKYHYDTLTYEYTSASHP-HTMPL
Oncmyk_2B	IHLYG----FWPFQDSQ-G---KPVKYHYDTLTYEYTSASHP-HTMPL
Onckis_2B	IHLYG----FWPFQDSQ-G---KPVKYHYDTLTYEYTSASHP-HTMPL
Salsal_2A	IHLYG----FWPFRDSQ-G---KPVKYHYDTLTYEYTSASHP-HAMPL
Thythy_2A	IHLYG----FWPFRNSQ-G---KPVKYHYDTLTYEYTSASHP-HTMPL
Salalp_2A	IHLYG----FWPFRDSQ-G---KPVKYHYDTLTYEYTSASHP-HTMPL
Corlav_2A	IHLYG----FWPFRDSQ-G---IPVKYHYDTLTYEYTSASHP-HTMPL
Cormar_2A	IHLYG----FWPFRDSQ-G---IPVKYHYDTLTYEYTSASHP-HTMPL
Onctsh_2A	IHLYG----FWPFRDSQ-G---KPVKYHYDTLTYEYTSASHP-HTMPL
Oncmyk_2A	IHLYG----FWPFQDSQ-G---KPVKYHYDTLTYEYTSASHP-HTMPL
Neobri_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDTLKYEYTSSSSP-HTMPL
Takrub_2	IHLYG----FWPFSDPH-G---RPVKYHYDTLKYEYTSSSSP-HTMPL
Tetnig_2	IHLYG----FWPFPLDPR-G---RPVKYHYDTLKYEYTSSSSP-HTMPL
Orenil_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDTLKYEYTSSSSP-HTMPL
Orylat_2	IHLYG----FWPFVDSH-G---KAVKYHYDLSLKYEYTSSSSP-HTMPL
Krymar_2	IHLYG----FWPFALDPR-G---RPVKYHYDALKYEYTSSSSP-HAMPL
Notfur_2	IHLYG----FWPFPLDPK-G---KTVKYHYDTLKYEYTSSSSP-HTMPL
Poelat_2	IHLYG----FWPFPLGPQ-G---RPVKYHYDTLKYEYTSSSSP-HTMPL
Gadmor_2	IHLYG----FWPFPLDPR-G---RPVKYHYDTLKYDYTSASSP-HTMPL
Xipmac_2	IHLYG----FWPFPLGPQ-G---RPVKYHYDTLKYEYTSSSSP-HTMPL
Poeret_2	IHLYG----FWPFPLGPQ-G---RPVKYHYDTLKYEYTSSSSP-HTMPL
Astcal_2	IHLYG----FWPFLDPQ-G---KPVKYHYDTLKYEYTSSSSP-HTMPL
Hapbur_2	IHLYG----FWPFLDPQ-G---KPVKYHYDTLKYEYTSSSSP-HTMPL
Acapol_2B	IHLYG----FWPFPLDPH-G---KPVKYHYDTLKYEYTSSSSP-HTMPL
Ampoce_2A	IHLYG----FWPFPLDPH-G---NPVKYHYDTLKYEYTSSSSP-HTMPL
Acapol_2A	IHLYG----FWPFPLDPH-G---KPVKYHYDTLKYEYTSSSSP-HTMPL

Mayzeb_2	IHLYG----FWPFSLDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Punnye_2	IHLYG----FWPFSLDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Latcal_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Singra_2	IHLYG----FWPFAHDPD-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Auslim_2	IHLYG----FWPFPLDPR-G---RPVKYHYDYLTKYEYTSSSSP-HTMPL
Monalb2	IHLYG----FWPFPLDLQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Ampoce_2B	IHLYG----FWPFPLDPH-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Chiham_2	IHLYG----FWPFSDHPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Gasacu_2	IHLYG----FWPFRHDPQ-G---RPVKYHYDYLTKYEYTSSSSP-HTMPL
Gymacu_2	IHLYG----FWPFSDHPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Labber_2	IHLYG----FWPFPLDPQ-G---RPVKYHYDYLTKYEYTSSSSP-HTMPL
Cypvar_2	IHLYG----FWPFPLDPQ-G---RPVKYHYDYLTKYEYTSSSSP-HTMPL
Funhet_2	IHLYG----FWPFPLGPH-G---RPVKYHYDYLTKYEYTSSSSP-HTMPL
Larcro_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Paroli_2	IHLYG----FWPFALDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Perflu_2	IHLYG----FWPFPLDPQ-G---RSVKYHYDYLTKYEYTSSSSP-HTMPL
Serdum_2	IHLYG----FWPFALDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Stepar_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Notcor_2	IHLYG----FWPFSDHPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Treber_2	IHLYG----FWPFSDHPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Serlaldor_2	IHLYG----FWPFALDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Plaste_2	IHLYG----FWPFALDPQ-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Clabat_4	IHLYG----FWPFKDNS-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Ictpun_4A	IHLYG----FWPFKDS-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Panhyp_4	IHLYG----FWPFKDS-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Umbpyg_4	IHLYG----FWPFPRDAK-G---NAVKYHYDYLTKYEYTSSSSP-HTMPL
Esoluc_4	IHLYG----FWPFPRDAN-G---NVVKYHYDYLTKYEYTSSSSP-HTMPL
Plealt_4	IHLYG----FWPFPRDAN-G---NLVKYHYDYLTKYEYTSSSSP-HTMPL
Onckis_4B	IHLYG----FWPFPRDAN-G---NMVKYHYDYLTKYEYTSSSSP-HTMPL
Onckis_4A	IHLYG----FWPFPRDAN-G---NMVKYHYDYLTKYEYTSSSSP-HTMPL
Onctsh_4	IHLYG----FWPFPRDAN-G---NMVKYHYDYLTKYEYTSSSSP-HTMPL
Oncmyk_4	IHLYG----FWPFPRDAN-G---NMVKYHYDYLTKYEYTSSSSP-HTMPL
Corlav_4	IHLYG----FWPFPRDSN-G---NVVKYHYDYLTKYEYTSSSSP-HTMPL
Astmex_4A	IHLYG----FWPFKDN-G---IPVKYHYDYLTKYEYTSSSSP-HTMPL
Pygnat_4	IHLYG----FWPFKDA-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Aloalo_4	IHLYG----FWPFKDT-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Cluhar_4	IHLYG----FWPFKDSQ-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Denclu_4	IHLYG----FWPFPRDTQ-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Konpun4	IHLYG----FWPFKDSQ-G---NTVKYHYDYLTKYEYTSSSSP-HTMPL
Sarpil_4	IHLYG----FWPFKDT-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Caraur_4	IHLYG----FWPFPRDGS-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Cteide_4	IYLYG----FWPFKDN-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Petmar_4	IHLYG----FWPFQYNIA-G---KPVRYHYDYLTKYEYTSSSSP-HTMPL
Cypcar_4	IHLYG----FWPFKDG-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Danrer_4	IYLYG----FWPFKDS-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Misang_4	IHLYG----FWPFKDG-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Angjap_4	IHLYG-----
Cypcar_4A	IHLYG----FWPFKDG-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Angang_4	IHLYG----FWPFKDLG-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Cypcar_4B	IHLYG----FWPFKDG-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Sinans_4A	IHLYG----FWPFKDG-R---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Sinans_4B	IYLYG----FWPFKDG-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Singra_4A	IHLYG----FWPFKDG-R---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Aptalb_4	IHLYG----FWPFKDAE-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Eigvir_4	IHLYG----FWPFKDAE-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Eleele_4	IHLYG----FWPFKDAK-G---NLVKYHYDYLTKYEYTSSSSP-HTMPL
Parhas_4	IHLYG----FWPFKDAE-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
ScIfor_4	IHLYG----FWPFKDSK-G---NAVKYHYDYLTKYEYTSSSSP-HTMPL
Gnapet4	IHLYG----FWPFKDS-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Ostbic_4	IHLYG----FWPFKDSK-G---NMVKYHYDYLTKYEYTSSSSP-HTMPL
Parkin_4	IHLYG----FWPFKDS-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Panbuc_4	IHLYG----FWPFKDLQ-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Ercal4	IHLYG----FWPFKDSI-G---KPVKYHYDYLTKYEYTSSSSP-HTMPL
Salsal_4	IHLYG----FWPFPRDAN-G---NMVKYHYDYLTKYEYTSSSSP-HTMPL
Saltru_4	IHLYG----FWPFPRDAN-G---NMVKYHYDYLTKYEYTSSSSP-HTMPL
Salalp_4	IHLYG----FWPFPRDAN-G---KIVKYHYDYLTKYEYTSSSSP-HTMPL
Salfon_4	IHLYG----FWPFPRDAN-G---KIVKYHYDYLTKYEYTSSSSP-HTMPL
Thythy_4	IHLYG----FWPFPRDAN-G---NVVKYHYDYLTKYEYTSSSSP-HTMPL
Calmil_4	IHLYG----FWPFKDN-G---TPVKYHYDYLTKYEYTSSSSP-HTMPL
Hetzeb_4	IHLYG----YWPFKDAK-G---TPVKYHYDYLTKYEYTSSSSP-HTMPL
Rhityp_4	IHLYG----YWPFKDSK-G---VPVKYHYDYLTKYEYTSSSSP-HTMPL
Scytor_4	IHLYG----YWPFKDSK-G---TPVKYHYDYLTKYEYTSSSSP-HTMPL
Squaca_4	IHLYG----YWPFKDAK-G---APVKYHYDYLTKYEYTSSSSP-HTMPL
Amical_4	IHLYG----FWPFKDTK-G---RLVKYHYDYLTKYEYTSSSSP-HTMPL
Lepocu_4	IHLYG----FWPFKDSQ-G---RPVKYHYDYLTKYEYTSSSSP-HTMPL
Agema_4	IHLYG----FWPFKDS-G---NPVKYHYDYLTKYEYTSSSSP-HTMPL
Anocar_4	IHLYG----FWPFPRDIN-G---KTVKYHYDYLTKYEYTSSSSP-HTMPL

Canlupfam_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Crigri_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Galgai_4	IHLYG----FWPFPKDLH-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Mesaur_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Homsap_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Notscuscu_4	IHLYG----FWPFPKDIN-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Psetextex_4	IHLYG----FWPFPKDIN-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Musmus_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Pogvit_4	IHLYG----FWPFPKDMN-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Promuc_4	IHLYG----FWPFPKDIN-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Pantro_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Pytbiv_4	IHLYG----FWPFPKDIN-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Ratnor_2	IYLYG----FWPFPDQDN-Q---NPVKYHYYDSLKYGYTSQASP-HTMPL
Ratnor_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Siltro_2	IYLYG----FWPFPDLH-Q---NPVKYHYYDSLKYGYTSQAGP-HAMPL
Siltro_4	IHLYG----FWPFPKDVY-G---NQVKYHYYDELKYKYFSNAGP-HRMPL
Susscr_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Taegut_4	IHLYG----FWPFPKDLH-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Termextri_4M	IHLYG----FWPFPKDFY-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Thasirsir_4	IHLYG----FWPFPKDIN-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Xenlae_4B	IYLYG----FWPFTKDVY-G---NQVKYHYYDELKYKYFSNAGP-HRMPL
Xenlae_4A	IHLYG----FWPFPKDVH-G---NQVKYHYYDELKYKYFSNAGP-HRMPL
	251
Latcal_3	EFKLLYKMHTEGLLKLTLSHCA---
Perflu_3	EFKLLYKMHTEGLLKLTLSHCA---
Serdum_3	EFKLLYKMHTEGLLKLTLSHCA---
Stepar_3	EFKLLYKMHTEGLLKLTLSHCA---
Tetcal_3	EFKLLFKLHTEGLTKLTLSHCA---
Monalb_3	EFKLLYKMHTEGLLKLTLSRCA---
Molmol_3	EFKLLYRMHTEGLLKLTLSHCA---
Takrub_3	EFKLLYKMHREGLLKLTLSHCA---
Canlupfam_3	EFQLLYRMHGEGLTKLTLSHCA---
Bostau_3	EFQLLYRMHGEGLTKLTLSHCA---
Homsap_3	EFQLLYRMHGEGLTKLTLSHCA---
Siltro_3	EFKLLYKMHREGLTKLTLSQCA---
Anocar_3	EFQQLFRMHSEGLAKLTLSHCA---
Musmus_3	EFQLLYRMHGEGLTKLTLSHCA---
Pantro_3	EFQLLYRMHGEGLTKLTLSHCA---
Ratnor_3	EFQLLYRMHGEGLTKLTLSHCA---
Galgai_3	EFQLLYRMHGEGLAKLTLSRCA---
Lepocu_3	EFKLLYKMHTEGLTKLTLSHCA---
Tetnig_3	EFKLLYKMHREGLKLTLSHCG---
Squaca_3	EFKLLFKLHTDGLTKLTLSHCA---
Perfla_3	EFKLLYKMHTEGLLKLTLSHCA---
Salsal_3	EFKLLYRMHTEGLIKLTLSHCA---
Serlaldor_3	EFRLLYKMHTEGLLKLTLSHCA---
Treber_3	EFKLLYKLHREGVIKLSVTHCS---
Cynsem_3	EFKLLYKMHTEGLLKLTLSHCA---
Paroli_3	EFKLLYKLHREGVTKLSTHCT---
Paroli_3b	EFKLLYKMHTEGXLKLTLSHCA---
Plaste_3	EFKLLYQLHREGVTKLSTHCA---
Plaste_3b	EFKLLYKMHTEGLLKLRLSHCG---
Erpcal3	EFKLLYKMHEEGLTKLTLSHCA---
Calmil_3b	EFKILFKMHTAGLTKLTLSPCV---
Hetzeb_3	EFKLLFKLHTDGLTKLTLSHCA---
Latcha_3	EFKLLYKMHGEGLTKLTLSHCA---
Anates_3	EFKLLYKMHTEGLLKLTLSHCA---
Ampcit3	EFKLLYKMHTEGLLKLTLVSHCA---
Auslim_3	EFKLLYKMHTDGLLKLTLSHCA---
Cypvar_3	EFKLLYKMHTEGLLKLTLSHCA---
Krymar_3	EFKLLYRMHTDGLLKLTLSHCA---
Funhet_3	EFKLLYQMHTEGLLKLTLSHCA---
Gamaff3	EFKLLYKMHTEGLLKLTLSHCA---
Orylat_3	EFKLLHKMHTEGLLKLTLSHCA---
Orenil_3	EFKLLYKMHTEGLLKLTLSHCA---
Mayzeb_3	EFKLLYKMHTEGLLKLTLSHCA---
Punnye_3	EFKLLYKMHTEGLLKLTLSHCA---
Punnye_3a	EFKLLYKMHTEGLLKLTLSHCA---
Neobri_3	EFKLLYKMHTEGLLKLTLSHCA---
Misang_3	EFKLLFKMHTEGLLKLTLSHCT---
Sinrhi3	EFKLLFKMHADGVLKLTLSHCT---
Singra_3	EFKLLFKMHADGVLKLTLSHCA---
Hapbur_3	EFKLLYKMHTEGLLKLTLSHCA---
Astcal_3	EFKLLYKMHTEGLLKLTLSHCA---
Notfur_3	EFKLLYKMHTDGLVKLTLSHCA---
Cypcar_3	-----
Poefor3	EFKLLYKMHTEGLLKLTLSHCA---

Poelat_3	EFKLLYKMHT EGLLKL SL SHCA---
Poeret_3	EFKLLHRMHSEGLLKL SL SHCA---
Angang_3	EFKLLYKMHTDGVIKL SL SHCA---
Xipmac_3	EFKLLYKMHT EGLLKL SL SHCA---
Masarm_3	EFKLLYKMHMEGLLKL TL SHCA---
Permag_3	EFKLLYRMHT EGLLKL SL SHCA---
Gnapet3	EFKQLYKMHAEGLT KL SL SHCI---
Ostbic_3	EFKLLYKMHEEGLT KL SL ARCA---
Gadmor_3	EFKLLYKMHTKGLLKL NL SHCA---
Scifor_3	EFKLLYKMHEQGLAKL SL ARCA---
Acapol3	EFKLLYKMHT EGLLKL SL SHCA---
Ampoce_3	EFKLLYKMHMEGLLKL SL SHCA---
Scifor_3b	EFKLLHSLHMEGVVQL NL SPCA---
Ostbic_3b	EFKLLHSLHMEX-----
Parkin_3	EFKQLYKMHAEGLT KL SL SHCI---
Amppe3	EFKLLYKMHMEGLLKL SL SHCA---
Oncmyk_3	EFKLLYKMHT EGLIKL TL SHCA---
Gasacu_3	EFKLLYKMHTQGLLKL SL SHCA---
Labber_3	EFKLLYKMHT EGLLKL SL SHCA---
Panbuc_3	EFKFLYKMHT EGLIRL TL TPCI---
Parhas3	EFKLLFKMHT EGVL KL SL SHCT---
Cluhar_3	EFKLLFKMHT EGLLKL TL SHCA---
Aloalo_3	EFKLLFKMHT EGLLKL TL SHCA---
Panhyp_3	EFKLLFKMHT EGIL KL SL SHCA---
Eleele_3	EFKLLFRMHT EGVL KL SL SHCT---
Denclu_3	EFKLLFKMHT EGLLKL SL SHCA---
Sarpil_3	EFKLLFKMHT EGLLKL TL THCA---
Eigvir_3	EFKLLFKMHT EGVL KL SL SHCT---
Aptalb_3	EFKLLFKMHT EGVL KL SL SHCT---
Sinans_3	EFKLLFKMHADGVL KL SL SHCA---
Pygnat_3	EFKLLFKMHT EGVL KL SL SHCT---
Astmex_3	EFKLLFKMHT EGVL KL SL SHCA---
Caraur_3	EFKLLFKMHADGVL KL SL SHCA---
Danrer_3	EFKLLFKMHADGVL KL SL SHCA---
Ictpun_3	EFKLLFKMHTDGL KL SL SHCA---
Plealt_3	EFKLLYKMHT EGLLKL TL SHCA---
Plealt_9	EFKLLYKMHGEGVTRMSL SHCT---
Gasacu_9	EFKLLYKLHRDGVIKL SL THCS---
Parkin_9	EFKLLHTLHTEGMVRL SVAPCA---
Acapol_9	EFKLLYKLHREGVIKL GL THCS---
Larcro_9	EFKLLYKLHREGVIKL SL THCT---
Notcor_9	EFKLLYKLHREGVIKL SV THCS---
Latcal_9	EFKLLYKLHREGVT KL SL THCT---
Serlaldor_9	EFKLLYKLHREGVT KL SL THCT---
Monalb_9	EFKLLYKLYKEGVTKL SL THCP---
Serdum_9	EFKLLYKLHREGVT KL SL THCT---
Perflu_9	EFKLLYKLHREGVIKL SL THCS---
Perfla_9	EFKLLYKLHREGVIKL SL THCS---
Stepar_9	EFKLLYKLHRDGVIKL SL THCS---
Molmol_9	EFKLLYKLHREGVIKL SL THCA---
Hipcom_9	EFKLLYRLHRDGVTKL SL THCT---
Takrub_9 B	EFKLLYKLHREGVIRL SL THCT---
Takrub_9	EFKLLYKLHREGVIRL SL THCT---
Cynsem_9	EFKLLYKLHREGVT KL SL THCT---
Scomax_9	EFKLLYKLHREGVT KL SL THCA---
Corlav_9	EFKLLYKMHGEGVT KL SL SHCS---
Oncmyk_9	EFKLLYKMHGEGVT KL SL SHCS---
Salsal_9	EFKLLYRMHT EGLIKL TL SHCA---
Onctsh_9	EFKLLYKMHGEGVT KL SL SHCS---
Salalp_9	EFKLLYKMHGEGVT KL SL SHCS---
Ampoce_9	EFKLLYKLHREGVIKL GL THCS---
Amppe9	EFKLLYKLHREGVIKL GL THCS---
Labber_9	EFKLLYKLHREGVIRL SL THCS---
Umbpyg_3B	EFKLLYKMHT EGLIKL TL SHCA---
Esoluc_3b	EFKLLYKMHT EGLIKL TL SHCA---
Gadmor_9	EFKLLYKMHGEGVT KL SL SHCA---
Umbpyg_9	EFKLLYKMHAEGVTKL SL SHCS---
Esoluc_9	EFKLLYKMHGEGVT KL SL SHCS---
Permag_9	EFKLLYKLHREGAIKL SL THCS---
Bolpec_9	EFKLLYKLHREGAIKL SL THCS---
Poefor9	EFKLLYKLHREGVIKL SL THCT---
Masarm_9	EFKLLYKLHREGVIKL SL THCI---
Angjap_9	EFKLLYKMHTDGVIKL SL SHCA---
Poelat_9	EFKLLYKLHREGVIKL SL THCT---
Poeret_9	EFKLLYKLHREGVIKL SL THCT---
Xipmac_9	EFKLLYKLHREGVIKL SL THCA---
Hapbur_9	EFKLLYKLHREGVIKL SL THCS---

Orylat_9	EFKLLYKLHREGVTKLGLSHCT---
Gamaff_9	EFKLLYKLHREGVIKLSLTHCA---
Neobri_9	EFKLLYKLHREGVIKLSLTHCS---
Funhet_9	EFKLLYKLHREGVTKLSLTHCT---
Punnye_9	EFKLLYKLHREGVIKLSLTHCS---
Cypvar_9	EFKLLYKLHREGVTKLSLTHCT---
Krymar_9	EFKLLYKLHREGVIKLSLTHCI---
Notfur_9	EFKLLYKLHREGVTKLSLTHCS---
Notpie_9	EFKLLYKLHREGVTKLSLTRCS---
Orenil_9	EFKLLYKLHREGVIKLSLTHCS---
Auslim_9	EFKLLYKLHREGVTKLSLTHCT---
Anates_9	EFKLLYKLHREGVTKLSLTHCT---
Astcal_9	EFKLLYKLHREGVIKLSLTHCS---
Mayzeb_9	EFKLLYKLHREGVIKLSLTHCS---
Orymel_9	EFKLLYKLHREGVTKLGLSHCT---
Ampcit9	EFKLLYKLHREGVIKLSLTHCT---
Macfas_2	EFKALKSLHEQGALKLTVGQCD---
Macmul_2	EFKALKSLHEQGALKLTVGQCD---
Macnem_2	EFKALKSLHEQGALKLTVGQCD---
Musmus_2	EFKALKSLHEQGALKLTVGQCD---
Ponabe_2	EFKALKSLHEQGALKLTVGQCD---
Papanu_2	EFKALKSLHEQGALKLTVGQCD---
Nomleu_2	EFKALKSLHEQGALKLTVGQCD---
Pantro_2	EFKALKSLHEQGALKLTVGQCD---
Latcha_2	EFRTLYGLHQQGALKLTVGECA---
Gnapet2	EFKTLRALHRQGALCLHTEACS---
Panbuc_2b	EFQALKVLHERGALQLHTGLCH---
Ostbic_2	EFETLKALHRQGALRLHTGTCN---
Sinrhi2	EFRTLSALHRQGALRLHTGPCQ---
Hetzeb_2	EFKTLRNMHLQGALKLNVGECN---
Hipcom_2	EFRTLRALHHQGALRLHTGNCH---
Prigla_2	EFKTLRNMHLQGALKLNVGECN---
Scytor_2	EFKTLRNMHLQGALKLNVGECN---
Tetcal_2	EFKTLKNNMHLRGALRLNVGECN---
Rhityp_2	EFKTLRNMHLQGALKLNIGACR---
Parkin_2b	EFRTLSRLHALGVLQLHTGSCR---
Angang_2	EFSTLRDLHSQGALRLHIGRCG---
Pygnat_2	EFRTLSMLHRKGALRLHTGTCR---
Parkin_2	EFKTLRALHRQGALCLHTEACS---
Gorgor_2	EFKALKSLHEQGALKLTVGQCD---
Thegel_2	EFKALKSLHEQGALKLTVGQCD---
Tupchi_2	EFKALKSLHEQGALKLTVGQCD---
Galgal_2	EFKALKTLHQQGALKLTVGECE---
Eleele_2	EFRTLSTLHSQGALQLHTGTCE---
Danrer_2	EFRTLSALHRQGALRLHTGPCK---
Canlupfam_2	EFKALKSLHEQGALKLTVGQCD---
Aloalo_2	EFRTLSSLHRQGALRLHTSACS---
Astmex_2	EFRTLSTLHRQGALRLHTETCR---
Sinans_2	EFRTLSALHRQGALQLHTGPCK---
ScIfor_2	EFETLRALHRQGALRLHTGACN---
Ceraty_2	EFKALKSLHEQGALKLTVGQCD---
Anocar_2	EFKALKALHQQGALKLTVGACD---
Anates_2	EFRTLSALHRQGALRLHTGQCD---
Ampbic_2	EFRTLSTLHRQGALRLHTGTCD---
Sarpil_2	EFRTLSSLHRQGALRLHTSACS---
Xenlae_2	EFKALKNLHLQGALKLNVGECN---
Cluhar_2	EFRTLSTLHKQGALRLHTSSCS---
Cypcar_2	EFRTLSALHRQGALRLHTGPCK---
Denclu_2	EFRTLALHRQGALRLHTGTCS---
Notpie_2	EFRTLSSLHRQGALRLHTGTCD---
Erpcal2	EFQALQRLHQQGALKLNIGDCV---
Amical_2	EFKTLKNLHSQGALQLHTGPCN---
Lepocu_2	EFKALKSLHEQGALKLTVGQCD---
Homsap_2	EFKALKSLHEQGALKLTVGQCD---
Bostau_2	EFKALKSLHEQGALKLTVGQCD---
Caraur_2	EFRTLSALHRQGALRLHTGPCK---
Thythy_2B	EFRTLSSLHRQGALRLHTGSCD---
Onctsh_2B	EFRTLSSLHRQGALRLHTGSCD---
Salsal_2B	EFRTLSSLHRQGALRLHTGSCD---
Oncmyk_2B	EFRTLSSLHRQGALRLHTGSCD---
Onckis_2B	EFRTLSSLHRQGALRLHTGSCD---
Salsal_2A	EFRTLSSLHRQGALRLNTGSCD---
Thythy_2A	EFRTLSSLHRQGALQLNTGSCD---
Salalp_2A	EFRTLSSLHRQGALRLNTGSCD---
Corlav_2A	EFRTLSSLHRQGALRLNTGSCD---
Cormar_2A	EFRTLSSLHRQGALRLNTGSCD---
Onctsh_2A	EFRTLSSLHRQGALRLNTGSCD---

Oncmyk_2A	EFRTLSSLHRQGALRLNTGSCD---
Neobri_2	EFRTLSTLHRQGALRLHTGVCG---
Takrub_2	EFRTLSSLHRQGALQLHTGPCD---
Tetnig_2	EFRTLSTLHRQGALRLHSGPCA---
Orenil_2	EFRTLSTLHRQGALRLHTGVCG---
Orylat_2	EFRTLSTLHRQGALRLHTGSCE---
Krymar_2	EFRTLSSLHRQGALRLHTGICH---
Notfur_2	EFRTLSSLHRQGALRLHTGTCD---
Poelat_2	EFRTLSTLHRQGALRLHTGSCD---
Gadmor_2	EFRTLNTLHRKGALRLHTGTCP---
Xipmac_2	EFRTLSTLHRQGALRLHTGSCD---
Poeret_2	EFRTLSTLHRQGALRLHTGSCD---
Astcal_2	EFRTLSTLHRQGALRLHTGVCG---
Hapbur_2	EFRTLSTLHRQGALRLHTGVCG---
Acapol_2B	EFRTLSALHRQGALRLHTGTCD---
Ampoce_2A	EFRTLSTLHRQGALRLHTGTCD---
Acapol_2A	EFRTLSALHRQGALRLHTGTCD---
Mayzeb_2	EFRTLSTLHRQGALRLHTGVCG---
Punnye_2	EFRTLSTLHRQGALRLHTGVCG---
Latcal_2	EFRTLSTLHRQGALRLHTGTCD---
Singra_2	EFRTLSALHRQGALQLHTGPCK---
Auslim_2	EFRTLSSLHRQGALRLHTGTCD---
Monalb2	EFRTLSTLHRQGALRLHTGPCD---
Ampoce_2B	EFRTLSTLHRQGALRLHTGTCD---
Chiham_2	EFRTLSALHRQGALRLHTGTCD---
Gasacu_2	EFRTLSALHRQGALRLHTGTGCG---
Gymacu_2	EFRTLSALHRQGALRLHTGTCD---
Labber_2	EFRTLSALHRQGALRLHTGSCD---
Cypvar_2	EFRTLSTLHRQGALRLHTGSCD---
Funhet_2	EFRTLSTLHRQGALRLHTGHCD---
Larcro_2	EFRTLSALHRQGALQLHTGSCD---
Paroli_2	EFRTLNTLHRQGALRLHTGTCE---
Perflu_2	EFRTLSALHRQGALRLHTGTCD---
Serdum_2	EFRTLSTLHRQGALRLHTGTCD---
Stepar_2	EFRTLSTLHRQGALRLHTGTCD---
Notcor_2	EFRTLSALHRQGALRLHTGTCD---
Treber_2	EFRTLSALHRQGALRLHTGTCD---
Serlaldor_2	EFRTLSTLHRQGALRLHTGTCD---
Plaste_2	EFRTLNALHRQGALRLHTGTCD---
Clabat_4	EFKTLKMLHSGALKLTTSKCR---
Ictpun_4A	EFKTLKMLHSGALKLMTSKCT---
Panhyp_4	EFKTLKMLHSGALKLTTSKCR---
Umbpyg_4	EFKTLKILHSGALKLTTSKCT---
Esoluc_4	EFKTLKMLHSGALKLTTSKCA---
Plealt_4	EFKTLKMLHSGALKLTTSKCI---
Onckis_4B	EFKTLKMLHSGALKLTTSKCE---
Onckis_4A	EFKTLKMLHSGALKLTTSKCE---
Onctsh_4	EFKTLKMLHSGALKLTTSKCE---
Oncmyk_4	EFKTLKMLHSGALKLTTSKCE---
Corlav_4	EFKTLKMLHSGALKLTTSKCE---
Astmex_4A	EFKTLKTLHSGALKLTTSKCR---
Pygnat_4	EFKTLKMLHSGALKLMTSTCR---
Aloalo_4	EFKTLKTLHSGALKLTTSKCV---
Cluhar_4	EFKTLKVLHSGALKLTTSKCM---
Denclu_4	EFKTLKALHYKGALKLTTSKCT---
Konpun4	EFKTLKTLHSGALKLTTSKCT---
Sarpil_4	EFKTLKTLHSGALKLTTSKCV---
Caraur_4	EFKTLKRLHSGALKLTTSKCT---
Cteide_4	EFNTLKSILHNKGAMKLTTSKCT---
Petmar_4	EYRTLHRLHSLGALKLTGKCT---
Cypcar_4	EFKTLKTLHSGALKLTTSKCT---
Danrer_4	EFQTLQRLHSGALKLTTSKCT---
Misang_4	EFRTLRTLHNKGALKLTTSKCE---
Angjap_4	-----
Cypcar_4A	EFKTLKTLHSGALKLTTSKCT---
Angang_4	EFKTLKTLHSGALKLTTSKCA---
Cypcar_4B	EFKTLKTLHSGALKLTTSKCT---
Sinans_4A	EFKTLKTLHSGALKLTTSKCT---
Sinans_4B	EFKTLKRLHSGALKLTTSKCT---
Singra_4A	EFKTLKTLHSGALKLTTSKCT---
Aptalb_4	EFKTLKMLHSGALKLTTSKCT---
Eigvir_4	EFKTLKMLHSGALKLTTSKCP---
Eleele_4	EFKTLKMLHSGALKLTTSKCP---
Parhas_4	EFKTLKMLHSGALKLTTSKCR---
Scifor_4	EFNTLKMHLHKGALKLTTSKCT---
Gnapet4	EFKTLKFLHDRGALKLTTSKCT---
Ostbic_4	EFKTLKMLHSGALKLTTSKCT---

Parkin_4	EFKTLKFLHERGALKLTTSKCT---
Panbuc_4	EFQTLKALHSKGALKLTTSTCT---
Erpcal4	EFKTLKMLHSKGALKLTTSKCL---
Salsal_4	EFKTLKMLHSKGALKLTTSKCE---
Saltru_4	EFKTLKMLHSKGALKLTTSKCE---
Salalp_4	EFKTLKMLHSKGALKLTTSKCE---
Salfon_4	EFKTLKMLHSKGALKLTTSKCE---
Thythy_4	EFKTLKMLHSKGALKLTTSKCE---
Calmil_4	EFKTLKSLHDRGALKLTTGKCG---
Hetzeb_4	EFKTLKSLHDRGALKLTTGKCV---
Rhityp_4	EFKTLKSLHDKGALKLTTGKCV---
Scytot_4	EFKTLKSLHDKGALKLTTGKCV---
Squaca_4	EFKTLKSLHDKGALKLTTGKCV---
Amical_4	EFKTLKTLHNKGALKLTTSTCA---
Lepocu_4	EFKTLKMLHNKGALKLTTTKCT---
Agema_4	EFKTLKMLHSKGALKLTTSKCR---
Anocar_4	EFKTLNMLHNRGALKLTTGKCA---
Canlupfam_4	EFKTLNVLHNRGALKLTTGKCV---
Crigri_4	EFKTLNVLHNRGALKLTTGKCM---
Galgai_4	EFKTLNVLHNRGALKLTTGKCV---
Mesaur_4	EFKTLNVLHNRGALKLTTGKCM---
Homsap_4	EFKTLNVLHNRGALKLTTGKCV---
Notscuscu_4	EFKTLNMLHNKGALKLTTGKCI---
Psetextex_4	EFKTLNMLHNKGALKLTTGKCI---
Musmus_4	EFKTLNVLHNRGALKLTTGKCM---
Pogvit_4	EFKTLNVLHNRGALKLTTGKCV---
Promuc_4	EFKTLNMLHNRGALKLTTGKCI---
Pantro_4	EFKTLNVLHNRGALKLTTGKCV---
Pytbiv_4	EFKTLNMLHNRGALKLTTGKCI---
Ratnor_2	EFKALKSLHEQGALKLTVGQCD---
Ratnor_4	EFKTLNVLHNRGALKLTTGKCM---
Siltro_2	EFKALKNLHLQGALKLNVGECR---
Siltro_4	EFKTLNMLHNRGALKLTTGKCI---
Susscr_4	EFKTLNVLHNRGALKLTTGKCV---
Taegut_4	EFKTLNVLHNRGALKLTTGKCI---
Termextri_4M	EFKTLHMLHNQGALKLTTGKCV---
Thasirsir_4	EFKTLNMLHNRGALKLTTGKCI---
Xenlae_4B	EFKTLNMLHNRGALKLTTGKCI---
Xenlae_4A	EFKTLNMLHNRGALKLTTGTCT---

B) Multiple sequence alignments (ClustalX) of 89 chordate ST8Sia sequences used in figure 2: Minimum Evolution phylogenetic tree of 89 chordates ST8Sia.

CLUSTAL X (1.81) multiple sequence alignment

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Angang_3      LQEKSAKWKFNRATAFIQQRK----EISNYIDVAGNFTLTkSSSVRVGQLMH
Lepocu_3      LQEKTSKWKLNKATAFIQQRK----EILRYIDVANNFSLTKNSVVRVGQLMH
Latcha_3      LQEKPSKWI FNRTAFLKQRE----EILQNV DVVKNFSLTKSSSVRVGQLMH
Squaca_3      AHAKPAKWT FNNTSFLQQRK----DISRYVDVFNFTLVKKNVRVGQLLH
Astmex_3      LQENSSKWKFNR TAYLEQSK----EIAQYIDIPHNFTLTkNSVVRVGQLMH
Orylat_3      -LKNSSKW TYNSTAFIQLRT----EISHHIDMPHNFTLTRDAVKVGQLMH
Hetzeb_3      VRGKPVKWT FNNTSFLKQRK----DISRYVDIYKNFTLVKKNVRVGQLLH
Anates_3      -MQNNSKW TYNSTAF TQLRK----EISQHIDIPHNFTLTRDSVRIGQLMH
Acisin_3      LQDKPSKWKFNR TAF LQQRK----EVLHYIDVAKNFTLTkDGIRVGQLMH
Masarm_3      DLQNSSKWRYNSTAFI QQRK----EISQYIDIPHNFTLTRSVRIGQLMH
Calmil_3      FPGKPSKWAFNK TAYLKQRE----DIRHYIDVIQNFTLTkKNVRVGQLMH
Orymel_9      LQGKPYKWKFNRTAFYQQRK----DIFS YIDIPHNFTLTkNSVVRVGQLMH
Anates_9      LQGKPSKWKFNK TAFYQQRK----DIFS YIDIPNNFSLTKNSVVRVGQLMH
Masarm_9      LQGKPPKWKFNK TAFYQQRK----DIFS YIDIPSNFSLTKGSVVRVGQLMH
Orylat_9      LQGKPYKWKFNRTAFYQQRK----DIFS YIDIPNNFSLTKNSVVRVGQLMH
Eptbur_3/9    NLQELKHWSLNPAAVHHQRT----ELASFVDVSAELSLTRSTLLPGQLLH
Letcam_3/9    -----
Anates_2      ARHSPNSWTFNK TSLNLRK----NILRFFDPERDISILKGTLPKGDIIH
Latcha_2      -KPQLVEWKHNRTLSL KIRK----QILKFLDAERDISVLKGTLPKGDVIH
Amical_2      RTISPSEWRFNSSLRSIRK----NILKFLDAEKDISVLKGNLKP GDTIH
Acisin_2      IVPAASEWRFNKDLSISIRK----NILKFLDAERDISVLKGNVQPGDIIH
Angang_2      LATPSSEWSFNRTLSNSIRK----NILKFLDAERDISMLRGS LRPGEVIH
Astmex_2      FTSPASGWIFNR TLSSIIRK----KVLRF LDAERDISILKSTFKPGDIIH
Orylat_2      NNHSLKTWTFNK TSLNLRK----NILQFLDPERDISILKGTLPKGDIIH
Hetzeb_2      RLIDIPEWKFNATLTARIRK----DILKFLDAEKDISVLK GKLGAGDIIH
Lepocu_2      IESPSSDWRFNRSLSNIIRK----SILKFLDAEKDISVLKGNLKP GDTIH
Latcha_4      -QHSAGWKINSSLVLEIRK----DILRFLDAERDVSAVKSNFKPGDVIH
Astmex_4-A    --LQSEDWKVNATLVAMIRK----DILHFLDAEKDVSVIKSNFKPGDIIH
Angang_4      LQHTAQGWHLNSSLVLMIRK----DVLRF LDAERDVSVVKSSSLKPGDIIH
Lepocu_4      FQHSVEGWKVNSSLVIEIRK----DILRFLDAERDVSVVKSSSFKPGDVIH
Amical_4      FQHSVEGWKVNSSLVIEIRK----DILRFLDAERDVSVVKSSSFKPGDVIH
Calmil_4      FKHSVEGWKSNLSLVIKIRK----DILRFLDAERDISVVKSSSLKPGDIIH
Squaca_4      FEHSVKGWKNNASLVVKIRK----DILRFLDAERDISVVKSSSLKPGDIIH
Acisin_4      FQHSVEGWKINSSLVLEIRK----DILRFLDAEKDVSVVKSSSFKPGDVIH
Hetzeb_4      FEHTVEGWKNNASLVVKIRK----DILRFLDAERDISVVKSSSLKPGDIIH
Petmar_4      -----K-----DILKFLDADRDVSI LQAQVQPGDLVH
Letcam_4      DVHLSIGSRCVHL PCCASSK----DVLKFLDADRDVSI LRAQVQPGDLVH
Eptbur_4      VNDVSSSWHFNATLAESIRK----DVLRF LDPERDMFL LQREVKPGVRIP
Latcha_1      VLQQGSEWRRNQTAVALFRC----FRER-----GKDL-
Angang_1      VLRQGQVWKKNQTRIRLFRH----LLKVC CNPRKMFAVTKENSPPGKVIW
Angang_1b     VLQLGQTWKKNETTVHLYRE----LLMDCCDPREKFAVTRGNTPLGTVLW
Astmex_1      -LRQGQTWSKNQ TGIDLYRK----LLTECCDPKKMFAVTKENSPIGKTLW
Orylat_1      -LRQGDVWRKNQ TGIDLYRD----LLTKCCNPKKMFAVTKENSPIGKVLW
Acisin_1      -LRQRKLWKKNQ TGISIRYK----LVEECCDP RNLFVAVTKQNTPLGKNLW
Lepocu_1      -LRQGKAWKNFTGISMFRK----LLRDCCDP RNLFVSVTKQNAPP GKILW
Hetzeb_1      EILHQAKWKRNQTAITAFRR----LLEQCCDAQRF AVTKLNSPMGKSLW
Squaca_1      EILQQAKWKRNQTAIAAFRR----LLEQCCDAQRLFAVTKLNSPMGKSLW
Calmil_1      DVLHQPVWRNQTA TAFRR----LLENCCE TKRMFAV TQHNSPMGKNLW
Petmar_1      -----RQ-----KIEKCCDPLKSFALTQTNSPVGKKIW
Letcam_1      -----
Eptbur_1      AKIKDSLWTHNETALQNFKK----LLAQSCSADQ-LVV TQRTHPSGSMLW
Latcha_5      RRMQVCRWEINETEAKAFKS----YLSRCCNAPSFLFTTQKNTPLG TKLK
Letcam_5      -----
Lepocu_5      RSLQVCKWELNKTEANAFKT----SLSRCCNAPSFLFTTKRNTPSG TKLR
Squaca_5      KTLQLCKWERNKTAANIFKS----HLTRCCNAPAF LFTTQKNTPKGIK LK
Angang_5      RNLQICKWEQSKAETNAFKS----SLSHCCNAPSFLFTTKRNTPSG TKLR
Acisin_5      KSLQACKWQMNKAEANAFKA----SLSRCCNAPAFMFTTQRNTPF GTKLR
Orylat_5      RNLQVCKWEQSK EETS NFKL----SLSRCCNAPSFLFTTKRNTPAGSK LR
Astmex_5      RNLQACMWGQNKEETANFKM----SLSRCCNAPSFLFTTRRNTPSG TKLR
Angang_5b     KSLQMCRW EQNKVEANAFRN----LLSRCCNAPSFLFTTKKNTPSG TKLR
Anates_5      RNLQVCRWEQNK EETS NFKM----SLSRCCNAPSFLFTTKRNTPAGTK LR
Calmil_5      RTLQLCKWELNKTEANTAR-----LTNCCNAIQNF TTVTQVNTALGANLT
Hetzeb_5      RTLQLCKWERNETAANIFKS----HLTRCCNAPVFLFTTQKNTPKGIK LK
Eptbur_5      -----MLQRC CNAPSLLFVTQSNTPI SSTVH
Latcha_6      NELQKCSWVIRPEEHEKFRS----ELSVCCNAVRNFIVSQNNTP LGTNMS
Latmen_6      NELQKCSWVIRPEEHEKFRS----ELSVCCNAVRNFIVSQNNTP LGTNMS

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Squaca_6	AQLQQCQWHKQELEAEKFRS----	ELKRCCYAAYDGLVTQRNTPVGT
Calmil_6	AKIHQCKWGKQKRAVENFRW----	ELRKCCTLSGSFVTQRNTPVGT
Hetzeb_6	AKLQKCCQWHKQEVAAEELRS----	ELKRCCHAAYNYLVTQKNMPVG
Lepocu_8	AQVHSQTWRKQESRLQTFRA----	QLNMKCGFSRAIITQANTLLGSK
Acisin_8	LQLEAQGWERWEESYQKLRS----	ALSRDCHGVSDAVITQKNTPLG
Angang_8	VELYSYAWKKQANFNKFRS----	QLSSRCRGVSTAIVTQNNTPLD
Orylat_8	LELYSEPWKQEDNYHQFRS----	QLNSKCHGLEKAIITQANTPOG
Astmex_8	LKSYSPRWKRREANFSKFRS----	LLSSSCHAVSKAVVTQSNTPVG
Amical_8	LQTHIVDWEKQEHKFQSFRA----	QLNSRCDGLSKAIIISQTNTPL
Anates_8	IEQYSHTWKRQEDNYREFRS----	QLNSRCHGYDKAIIITQANTPL
Lepocu_8b	LQTHIVDWEKQEHKFQSFRA----	QLNSRCDGLSKAIIISQTNTPL
Lepocu_7	TKLMSCPWTANPTLQERLRS----	VLRSCCDAQQNLSTQKNTRLG
Lepocu_7b	TQLMRCPWTNLNLTLQEQQRT----	ELRLSCNATGRLVVTQDNTPL
Angang_b	KKIMSCPWTSNLTQQIIHKM----	DLHTECNASGTLFVTRENTHL
Latcha_7	NRKRCGELRENLTSQLPKET----	DLNKCSNLTQRLVLTRENAPIG
Angang_7	RALMSCPHESNITQRERHRV----	ELRSCCNATGSLFLTRQNTREG
Eptbur_7	-----RA-----	MLRSCCDARTGLVLTRGDAAER
Petmar_7	-----RA-----	MLRSCCDARTGLVLTRGDAAER
Lecam_7	-----	MLRSCCDARAGLVLTTRGDAAER
Petmar_7b	-----	-----
Lecam_7r	ISVNKNWKANASKKEAYRSVCVCMK	CTDGSSNIVVTQNNSPLG
Petmar_7r	ISVNKNRWKANASKKETYKT----	YMKCFTDGSSNIVVTQNNSPLG
Eptbur_7r	ISVNKNRWKANASKKETYKT----	YMKCFTDGSSNIVVTQNNSPLG

Angang_3	YDYSSHKYVFSIGEN----	LMSLLPES-----	SPIVPE---	RRFNVC
Lepocu_3	YDYSSHKYVFSISNN----	FRSLLPDT-----	SPIL-N---	KQYNVC
Latcha_3	YDYSSHKYVFSISNH----	FKSLLPDV-----	SPIL-N---	KCYNIC
Squaca_3	YDYSSHKYVFSVSNS----	FRSLLPEV-----	PPIL-K---	MHYNTC
Astmex_3	YDYSSHKYVFSIGEN----	FRSLLPDS-----	SPVL-N---	KRYNTC
Orylat_3	FDYSSHKYVFSIGEN----	FRSLLPEV-----	SPIL-N---	RHYNVC
Hetzeb_3	YDYSSHKYVFSVSNS----	FRSLLPDV-----	PPIL-K---	MHYNTC
Anates_3	YDYSSHKYVFSIGEN----	FRSLLPDA-----	SPIL-N---	KHYNVC
Acisin_3	YDYSSHKYVFSISNN----	FKSLLPDA-----	SPVM-N---	KHYNVC
Masarm_3	YDYSSHKYVFSIGEN----	FYSLVPEV-----	SPIL-N---	KHYNIC
Calmil_3	FDYSSHKYVFSISNN----	FRMLLPEV-----	SPLL-K---	MHYNTC
Orymel_9	FDYSSHKYVFSISNN----	FKSLLPDI-----	SPIL-N---	KHYSVC
Anates_9	FDYSSHKYVFSISNN----	FKSLLPDT-----	SPIH-N---	KHYSVC
Masarm_9	FDYSSHKYVFSISNN----	FKSLLPDT-----	SPIL-N---	KHYSVC
Orylat_9	FDYSSHKYVFSISNN----	FKSLLPEI-----	SPIL-N---	KHYSVC
Eptbur_3/9	FDYSPKHVYFVSAA----	LHSLLPIL-----	PPFH-G---	RHFNSC
Lecam_3/9	-----	LPS-----	-----	-----
Anates_2	YVFDRH-STTNISEN----	LYRLLPVT-----	SPMK-N---	QHHRRC
Latcha_2	YVFDRD-STMNISQN----	LYKLLPRV-----	SPLK-N---	RHFQNC
Amical_2	YIFDRD-STMNISET----	LYQLIPKV-----	SPMK-Q---	QHYRKC
Acisin_2	YVFDRD-STMNISEN----	LYRLLPSS-----	PPLK-K---	QHFKRC
Angang_2	YIFDRQ-STVNVSES----	LYRLLPVT-----	SPMK-D---	RHYQRC
Astmex_2	YVFDRQ-STTNISEN----	LYRLLPVT-----	SPMK-N---	QHYERC
Orylat_2	YVFDRH-STTNISEN----	LYRLLPVT-----	SPMK-N---	QHHRRC
Hetzeb_2	YIFDRD-RTLNISHS----	LYELLPRT-----	SPMK-N---	KHFKQC
Lepocu_2	YIFDRD-STMNVSET----	LYQLIPKV-----	SPMK-K---	QHYRQC
Latcha_4	YVLDRR-RTLNISHN----	LYSLLPEV-----	SPMK-N---	RRFKTC
Astmex_4-A	YILDRR-RTLNVSHT----	LHSLLPEV-----	SPLK-N---	KRFKTC
Angang_4	YVLERR-RTLNVSRA----	LHSLLPV-----	SPMK-N---	RRFRTC
Lepocu_4	YVLDRR-RTLNISHN----	LHSLLPEV-----	SPMK-N---	RRFKTC
Amical_4	YVLDRR-RTLNISHN----	LHSLLPEV-----	SPMK-N---	RRFKTC
Calmil_4	YVLDRR-RTLNISR-----	LHSLLPEV-----	SPMK-N---	KRFNAC
Squaca_4	YVLDRR-RTLNISQN----	LHSLLPEV-----	SPMK-N---	KRFSTC
Acisin_4	YVLDRR-RTLNISHN----	LHSLLPEV-----	SPMK-N---	RRFKTC
Hetzeb_4	YVLDRR-RTLNISHN----	LHSLLPEV-----	SPMK-N---	KRFSTC
Petmar_4	YIFDRG-RTTNVSHS----	LHALLPTA-----	PPLR-G---	GRYGSC
Lecam_4	YIFDRG-RTTNVSHS----	LHALLPTA-----	PPLR-G---	GRYGSC
Eptbur_4	YILNRG-HFATVTRT----	VHSLLP-----	PLLH-G---	RRFATC
Latcha_1	-----	TETD-----	TPFQ-----	LPLKCC
Angang_1	YDGELY-HSRTVKND----	TYALFVQE-----	MPLQ-----	APLKRC
Angang_1b	YDGELF-YFHTVSNH----	TYPLFVQE-----	SPIK-----	VPLKCC
Astmex_1	YDGEFY-HYHTVSNE----	TYPFVQD-----	TPLQ-----	LPLKCC
Orylat_1	YDGEIY-HSHTVNSE----	TYQLFIKR-----	RGAA-----	SSCRRC
Acisin_1	YDGELF-HSLTVNND----	TYSLFIKE-----	NPLQ-----	LPLKRC
Lepocu_1	YDGEFY-YSHTVNND----	SYSLFIEE-----	TPFQ-----	QPLKCC
Hetzeb_1	FDGEFL-YSLTVNNE----	IFSMFPQD-----	TPLQ-----	LPLKCC
Squaca_1	FDGEFF-YSLAVNNE----	IFSMFPQD-----	TPFQ-----	LPLKCC
Calmil_1	FDGEFL-HSLSVNNE----	MFAMFPQD-----	TPFQ-----	IPLKCC
Petmar_1	FDGELF-HWITVDNDTFGLFFCLYLQH-----	-----	QPLG-Q---	KLLKRC
Lecam_1	-----	-----	-----	-----
Eptbur_1	YDGEIF-HWLHVDLP----	LSQTFPKE-----	NPLKAD-----	GSC
Latcha_5	YEVDSSTYNINSE----	IFKMFPKD-----	MPYS-R---	TQFKKC
Lecam_5	-----	-----	-----	-----

Lepocu_5	YEVDTSGILHISSE----IFKMFPND-----MPYT-R---SQFKRC
Squaca_5	YEVDTSGILHISSE----VFELFPKE-----MPYS-R---SQFKKC
Angang_5	YEVDTSGILHISSE----IFKMFPDD-----MPYT-K---SQFKKC
Acisin_5	YEVDTSGILHINPA----IFKMFPKD-----MPYS-R---SQFKKC
Orylat_5	YEVDTSGILPITNE----VFKMFPD-----MPYS-K---SQFKKC
Astmex_5	YEVDTSGILHISPE----IYKMLPED-----MPYS-K---SQFKKC
Angang_5b	YEVDTSGILPITSE----IFKMFPDD-----MPYS-K---SQYKRC
Anates_5	YEVDTSGILPITTE----VFKMFPDD-----MPYS-K---SQYKRC
Calmil_5	YDAQPK-KQITITED----IFNLFPQE-----MPYS-R---SQFKKC
Hetzeb_5	YEVDTSGILFIDAE----VFQFPKE-----MPYS-R---SQFKKC
Eptbur_5	YEQEPV-KNVPIESS----IYYMLPKS-----MPYQ-R---QQLARC
Latcha_6	YEVENG-RTFLITQR----IFKMFPQS-----QPFA-G---YPYNQC
Latmen_6	YEVENG-RTFLITQR----IFKMFPQS-----QPFA-G---YPYNQC
Squaca_6	YDAEPK-KKIKITHP----IFTIFPKD-----SAFS-S---RQYRRC
Calmil_6	YDAEPK-KKIKITPS----IFAIFPKD-----SPFR-G---RSIQRC
Hetzeb_6	YDAESK-NKINITPQ----IFSIFPKN-----SFFS-G---RQYRRC
Lepocu_8	YDGERR-KPVEVTPK----LYSTFPKE-----HPFG-N---VSFQSC
Acisin_8	YDGEKR-RHIKINQK----IFSTFPSE-----TPFV-N---VTFASC
Angang_8	YDGEKR-KPLQVTPK----LYSTFAKE-----QPFE-N---VTWKTC
Orylat_8	YDAERK-RTLNVNAE----VFNTFIKE-----NPPF-N---KTWDTC
Astmex_8	YDGEKT-KPLQVTKA----LFSTFAKE-----QPFG-N---ASWDTC
Amical_8	YDGEKR-KPIQVTPK----LFSTFPKE-----HPFG-N---RTFTSC
Anates_8	YDGEKR-KSLQVSPK----LFSTFAKE-----DPFS-N---KTLDTC
Lepocu_8b	YDGEKR-KPIQVTPK----LFSTFPKE-----HPFG-N---RTFTSC
Lepocu_7	YEVNRT-IWRQVDQE----LFEMLPQS-----SLFR-----AGLSRC
Lepocu_7b	YDAEK--WTRQVDTE----IFNMLPQS-----PPWA-GGPGARLRRC
Angang_b	YEVQKR-STKVVDKM----LYNMLPRA-----APWGIS---RVLGRC
Latcha_7	YEVAE--QRVRVEEP----LFKLLPRF-PPPFYQESPFK-K---APYKRC
Angang_7	YETNRK-KNILVDKS----IFKMLPKS-----TPWRND---SRFQRC
Eptbur_7	FEAAT--KTLHVTQP----LLSVLPES-----SPLA-G---ELHGRC
Petmar_7	FEAAT--KTLHVTQP----LLSVLPES-----SPLA-G---ELHGRC
Letcam_7	FEAAA--KTLHVTQP----LLSVLPEVWPTQVCQSSPLA-G---ELHGRC
Petmar_7b	-----PLA-G---ELHGRC
Letcam_7r	YLIGN--AQLTVGTE----LTNIIPMT-----FPGP-E---MKMKTC
Petmar_7r	YVIGN--AQLTVGTE----LTNIIPMT-----FPGP-E---MKMKTC
Eptbur_7r	YVIGN--AQLTVGTE----LTNIIPMT-----FPGP-E---MKMKTC

Angang_3	ALVGNISGVLTSRCGPEIDRSDFVFR-----CNFAPTE-IFHRDVGR
Lepocu_3	AVVGNISGILTSQCQPEIDKSDFVFR-----CNFAPTE-IFHKDVGR
Latcha_3	AVVGNISGILTDSCQGAIEDQSDFVFR-----CNFAPTE-IFHKDVGR
Squaca_3	AVVGNISGILTSQCGAEIDKSDFVFR-----CNFAPTE-TFEKDVGR
Astmex_3	AVVGNISGILTSRCGPTIDKYDFVFR-----CNFAPTE-VFRRDVGR
Orylat_3	AVVGNISGILTSLCGAQIEKYDFVFR-----CNFAPTE-IFKKDVGR
Hetzeb_3	AVVGNISGILTSRCGADIDKSDFVFR-----CNFAPTE-SFEKDVGR
Anates_3	AVVGNISGILTSRCGPQIEKFDFVFR-----CNFAPTE-IFKKDVGR
Acisin_3	AVVGNISGILTSKCGSEIDKADFVFR-----CNFAPTE-VFQKDVGR
Masarm_3	AIIGNSGILSGSRCSQIEKFDFVFR-----CNFAPTE-IFKKDVGR
Calmil_3	AVVGNISGILTSRCGDSIDKSDFVFR-----CNFAPTE-FFEKDVGR
Orymel_9	AVVGNISGILTSCHGPEIDQADFVFR-----CNFAPTD-VYSKDVGR
Anates_9	AVVGNISGILTSCHGPEIDQADFVFR-----CNFAPTD-VYSKDVGR
Masarm_9	AVVGNISGILTSCHGPEIDQADFVFR-----CNFAPTE-VYSKDVGR
Orylat_9	AVVGNISGILTSCHGPEIDQADFVFR-----CNFAPTD-VYSKDVGR
Eptbur_3/9	AVVGNISGVLTSQCGQRIDTADFVIR-----CNFAPTT-GYVHDVGN
Letcam_3/9	-----C-----
Anates_2	AIVGNISGILLNSSCGHEIDSHDFVIR-----CNLAPVE-EYSRDVGR
Latcha_2	AIVGNISGILLNSCGREIDDHQFVIR-----CNLAPVQ-EYASDVGT
Amical_2	AIVGNISGILLNSRCGEEIDSHDFVIR-----CNLAPVE-EYADDVGL
Acisin_2	AIVGNISGILLNSGCGAEIDSHDFVIR-----CNLAPVE-EYSRDVGL
Angang_2	AIVGNISGILLNSSCGRQIDSHDFVIR-----CNLAPVE-EYAADVGL
Astmex_2	AIVGNISGILLNSCGPEIDSHDFVIR-----CNLAPVE-EYAEDVGL
Orylat_2	AIVGNISGILLNSCGSEIDAHDFVIR-----CNLAPVD-EYSQDVGR
Hetzeb_2	AIVGNISGILLNSGCGQEIDAHEFVIR-----CNLAPVE-EYAHDVGL
Lepocu_2	AIVGNISGILLNSRCGAEIDSHDFVIR-----CNLAPVE-EYRADVGR
Latcha_4	AIVGNISGILLGSSCGKEIDSHEFVIR-----CNLAPLV-EFAEDVGI
Astmex_4-A	AVVGNISGVLLKSGCGKEIDGHDFVIR-----CNLAPLA-EFAEDVGL
Angang_4	AVVGNISGVLLNSGCGREIDGHDFVIR-----CNLAPLE-EFAEDVGL
Lepocu_4	AVVGNISGILLNSGCGKEIDNHDFVIR-----CNLAPLA-EFSEDVGL
Amical_4	AVVGNISGILLNSGCGREIDSHDFVIR-----CNLAPLA-EFSEDVGL
Calmil_4	AVVGNISGILLGSGCGKEIDSHEFVIR-----CNLAPLV-EYTDVGS
Squaca_4	AVVGNISGILLGSGCGKEIDSHEFVIR-----CNLAPLV-EYADDVGL
Acisin_4	AVVGNISGILLDSGCGNEIDSHDFVIR-----CNLAPLS-EFAEDVGM
Hetzeb_4	AVVGNISGILLGSGCGKEIDSHEFVIR-----CNLAPLM-EYTDVGL
Petmar_4	AVVGNISGILEGSACGEEIDQHDFVIR-----CNLAPVE-GYERDVGS
Letcam_4	AVVGNISGILEGSACGEEIDQHDFVIR-----CNLAPVE-GYERDVGS
Eptbur_4	ALVGNISGILRSGHCGSEIDRHDIYR-----CNMAPVT-PFKRDVGI
Latcha_1	SVVGNISGILLKSGCGRQIDNADFVIR-----CNLPPLSNEYRNDAGS
Angang_1	AVVGNISGVLLKSGCGRQIDGADFVIR-----CNLPPLSKEYTEDVGT

Angang_1b	AVVGNNGGILKSGCGGHIDRADFVMR-----CNLPPLSEDTQDVGS
Astmex_1	SVVGNNGVLKNSGCGKIDQADFVMR-----CNLPPLSKKYTDDVGT
Orylat_1	AVVGNNGGILKSGKKGKEIDHHHYIFR-----CNLPPLSREYVEDVGT
Acisin_1	SVVGNNGGILKNSGCGKHIDQTDIFMR-----CNLPPLSKQYTEDVGT
Lepocu_1	SVVGNNGGILKHSKCGKEIDRADFIMR-----CNLPPLSEDTYREDVGT
Hetzeb_1	SVVGNNGGILKESGCGSQIDKVDVFMR-----CNLPPLSNEYTKDAGY
Squaca_1	SVVGNNGGILKKSNCGSQIDKADFVMR-----CNLPPLSNEYTKDAGY
Calmil_1	SVVGNNGGILKRSACGDKIDKADFVMR-----CNLPPLSNEYARDVGH
Petmar_1	AIVGNSAIMLGHCCKGKIDDEADVIFRVICFCPLRCNLPPITKQYEPDIGT
Letcam_1	-----DLIVS-----
Eptbur_1	ALVGNNGGILKDSGCGNEIDSVDFIIR-----CNLPPLGEKYSTDVGT
Latcha_5	AVIGNNGGILKSSGCGREIDSMDFVFR-----CNLPPISEKYVLDVGF
Letcam_5	-----
Lepocu_5	AVIGNNGGIKNSKCGKEIDSADFVFR-----CNIPPISEKYAVDVGY
Squaca_5	AVVGNNGGILKNSKCGNEIDATDFVFR-----CNLPPISEKYTMDVGL
Angang_5	AVIGNNGGIKNSKCGKEIDSADFVFR-----CNIPPIISKYAEDVGY
Acisin_5	AVIGNNGGILKNSKCGKAIDSADFVFR-----CNLPPISEEYAADVGY
Orylat_5	AVIGNNGGIKNSKCGKEIDSADFVFR-----CNIPPIKEYSTDVGS
Astmex_5	AVVGNNGGILKNSKCGKEIDSADFVFR-----CNIPPIISKYAADVGT
Angang_5b	AVIGNNGGIKNSKCGKEIDSADFVFR-----CNIPPISEKYAVDVGY
Anates_5	AVIGNNGGILKNSKCGKEIDSADFVFR-----CNIPPISEKYADVGT
Calmil_5	AVVGNNGGILKSECGKEINSADFVFS-----CNLPPLSNEYARDVGH
Hetzeb_5	AVVGNNGGILKNSRCGNEIDSAADFVFR-----CNLPPISEKYTMDVGL
Eptbur_5	AVVGNNGGILHNSRCGSEIDAMEFVFR-----CNLPVSAEFAKDVGS
Latcha_6	AVVGNNGGILKNSACGTEIDQADFVFR-----CNLPPLTGNISIDVGS
Latmen_6	AVVGNNGGILKNSACGTEIDQADFVFR-----CNLPPLTGNISIDVGS
Squaca_6	AVIGNNGGILANSSCGAEIDQADFVFR-----CNLPVGGDFAQDVGT
Calmil_6	AVVGNAGILHNSSCGAEIDQADFVFR-----CNLPPMGGNFTKDVGS
Hetzeb_6	AVIGNNGGILANSSCGAEIDQADFVFR-----CNLPPMGGEFTRDIGT
Lepocu_8	AVVGNNGGILANSSCGEEIDGAQFVIR-----CNLPVDRKYQDDVGN
Acisin_8	AVVGNNGGILLDSDCGEEIDRADFIIR-----CNLPVKGGRYHSDVGN
Angang_8	AVVGNNGGILVNSSCGAEIDSAHFVFR-----CNLPPLDKAYQKDVGN
Orylat_8	AVVGNNGGILANSSCGKTIDSAQFVIR-----CNLPPLSNGFEKDVGI
Astmex_8	AVVGNNGGILVNSSCAEKINSANLVIR-----CNLPPLNGYEKDVGN
Amical_8	AVVGNNGGILMNSSCGGEIDEAQFVIR-----CNLPVVDHGYQRDVGN
Anates_8	AVIGNNGGILTNSSCGNMIDSAQFVIR-----CNLPPLDNGYEKHVGI
Lepocu_8b	AVVGNNGGILMNSSCGGEIDEAQFVIR-----CNLPVVDHGYQRDVGN
Lepocu_7	AVVGNNGGILKNSNCGAEIDRADYIIR-----INLPPLA-QSAADVGL
Lepocu_7b	AVVGNNGGILRNSSCGAHIADRADFVIR-----FNLPL--NYSRDVGV
Angang_b	AVVGNNGGILKNSSCGEEKINSADFVIR-----LNLPPM--NYSRDVGV
Latcha_7	AVVGNAGILLNSGCGRRIDQADFVFR-----CNLPPL--NYSKDVGS
Angang_7	AVVGNNGGILRNSSCGAEIDSADIVFR-----LNMAPI--NNSRDVGV
Eptbur_7	AVVGNNGALLGSRGCRSIDNADFVIR-----VQPPSGVGKLG-AGR
Petmar_7	AVVGNNGALLGSRGCRSIDNADFVIR-----VQPPSGVGKLG-AGR
Letcam_7	AVVGNNGALLGSRGCRSIDNADFVIR-----RCNLPPVSGNFTRDVGN
Petmar_7b	AVVGNNGALLGSRGCRSIDNADFVIR-----RCNLPPVSGNFTRDVGN
Letcam_7r	AVVGNNGGFLNLSKCGKEIDKSDFIMR-----CNLPNISKKYSDMVGE
Petmar_7r	AVVGNNGGFLNLSKCGKEIDKSDFIMR-----CNLPNISKKYSDMVGE
Eptbur_7r	AVVGNNGGFLNLSKCGKEIDKSDFIMR-----CNLPNISKKYSDMVGE
Angang_3	RTN--LTTFNPSILEK--YNNLLTIQDRNNFFLSLKKLD-GVVLWIPAF
Lepocu_3	KTN--LTTFNPSILEK--YNNLLTIQDRNNFFLSLKKLD-GAILWIPAF
Latcha_3	KTN--LTTFNPSILEK--YNNLLTIQDRNNFFLSLKKLD-GAILWIPAF
Squaca_3	KTN--LTTFNPSILEK--YNNLLTIQDRNNFFLSLKKLD-GAILWIPAF
Astmex_3	RTN--LTTFNPSILEK--YNNLLTIQDRNNFFLSLKKLD-RAVLWIPAF
Orylat_3	RTN--LTTFNPSILEK--YNNLLTVQDRNNFFLSLKKLD-GAILWIPAF
Hetzeb_3	KTN--LTTFNPSILEK--YNNLLTIQDRNNFFLSLKKLD-GAILWIPAF
Anates_3	RTN--LTTFNPSILEK--YNNLLTVQDRNNFFLSLKKLD-GAILWIPAF
Acisin_3	KTN--LTTFNPSILEK--YNNLLTIQDRNNFFLSLKKLD-GAILWIPAF
Masarm_3	RTN--MTTFNPSILEK--YNNLLTVQDRNNFFLSLKKLD-GAILWIPAF
Calmil_3	KTN--LTTFNPSILEK--YNNLMAIQDRNNFFLSLKKLD-GAILWIPAF
Orymel_9	KTN--MTTFNPSILER--YNNLLTIQDRNNFFLHLKKLE-GAILWIPAF
Anates_9	KTN--LTTFNPSILER--YNNLLTIQDRNNFFLHLKKLE-GAILWIPAF
Masarm_9	KTN--LTTFNPSILER--YNNLLTIQDRNNFFLHLKKLE-GAILWIPAF
Orylat_9	KTN--MTTFNPSILER--YNNLLTIQDRNNFFLHLKKLE-GAILWIPAF
Eptbur_3/9	RTS--LTTFNPSIIDG--RYGGLLTANDRERFLNRLQELD-GAVLWIPAF
Letcam_3/9	-----
Anates_2	QTN--LVTMNPSVVQR--AFQDLVSEEWRAFRLRLQSLG-GSVLWIPAF
Latcha_2	KTD--FVTMNPSVIQR--AFEDLVNETWKEKFLQRLQSLN-GSIFWIPAF
Amical_2	RTS--LVTMNPSVVQR--AFQDLVSESWRERFLQRLQSLN-GSVLWIPAF
Acisin_2	RTG--LVTMNPSVVQR--AFEDLVSEAWREKLLQRLRGLS-GSVLWIPAF
Angang_2	RTS--LVTMNPSVVER--AFRDLSSSEAWRERFVRRLRALE-GSVLWIPAF
Astmex_2	RSS--LVTMNPSVVQR--AFQDLSSKEWRQRFVRRLQALS-GSVLWIPAF
Orylat_2	QTN--LVTMNPSVVQR--AFQDLVSEEWKQRFQRLQSLG-GSVLWIPAF
Hetzeb_2	KTD--LVTMNPSVVQR--AFEDLKNETWKEKLLHRLKMLD-GGILWIPAF
Lepocu_2	RTS--LVTMNPSVVQR--AFQDLASSHWREERFLERLSSLN-GSVLWIPAF
Latcha_4	ESD--FITMNPSVIQR--AFGGFHNETDREKFVYRLAMLN-DSVLWIPAF

Astmex_4-A KSD--FTTMNPSVIQR--VYGGRLNETQRERFVERLSMLN-DSVLWIPAF
 Angang_4 RSD--FTTMNPSVIQR--AYGGRLNDSRERFVRRLGALN-DSVLWIPAF
 Lepocu_4 RSD--FITMNPSVIQR--AFGGFKNETDRERFVQRLTLN-DSVLWIPAF
 Amical_4 RSD--FITMNPSVIQR--AFGGFKNETDREKFVRRLTMLN-DSVLWIPAF
 Calmil_4 KSD--FVTMNPSVVQR--AFGSLQNETDRENFVRRLAVLN-DSVLWIPAF
 Squaca_4 KSD--FVTMNPSVVQR--AFGSLQSETDREKFVDRDLAVLN-DSVLWIPAF
 Acisin_4 SSD--FITMNPSVIQR--VYGGFKNESDREKFVQRLAMLN-SSVLWIPAF
 Hetzeb_4 KSD--FVTMNPSVVQR--AFGSLRSETDREKFVDRDLAVLN-DSVLWIPAF
 Petmar_4 RVD--FVTMNPSVVER--TYGGLRTKADHDFGRRLRALN-SSILWIPAF
 Letcam_4 RVD--FVTMNPSVVER--TYGGLRTQADHDFGRRLRALN-GSVLWIPAF
 Eptbur_4 RTD--FLTMMNPSILPR--YGGGLRNATLDRDFVARLRALG-KGIFWIPAF
 Latcha_1 KSH--LVTANPSIIEK--RFQNL--WSRKA FVDSVQVYN-HSYIYMPAF
 Angang_1 RTH--LVTANPSIIEK--RFHNLL--WSRKA FVDSMKAYG-PSYVYMPAF
 Angang_1b RTH--LVTANPSIIEK--RFQGLM--WSRKA FVESMRAYG-RSFVYMPAF
 Astmex_1 RTQ--LVTANPSIIEK--SFQNL--WSRKA FVESMKAYG-SSYIYMPAF
 Orylat_1 KTH--LVTANPSIIEK--RFQNLV--WSRKT FVDSMKVYG-SSYIYMPAF
 Acisin_1 KAH--LVTANPSIIEK--RFQNL--WSRRA FVEYVKAYD-SSFIYMPAF
 Lepocu_1 KTH--LVTANPSIIEK--RFQNL--WSRKK FVESVKVYG-SSYIYMPAF
 Hetzeb_1 RTH--LVTANPSIIEK--RFQNL--WSRKS FVESMKVYG-SSYIYMPAF
 Squaca_1 RTH--LVTANPSIIEK--RFQNL--WSRKS FVESMKVYG-RSYVYMPAF
 Calmil_1 RTQ--LVTANPSIIEK--RYQNL--WSRKA FVESMKVYG-RSYIYMPAF
 Petmar_1 KTH--LVTANPSIIEK--RYQNL--WSRRA FSESMLAYG-HSFVYMPAF
 Letcam_1 -----RYQNL--WSRRA FSESMLAYG-HSFVYMPAF
 Eptbur_1 KTS--LVTANPSIIEK--RFSNFI--PSSH SFLDAISAYG-SAQILFPF
 Latcha_5 KTD--IVTINPSIIEK--RFQKLE--KWRP PFYALQAYE-NASVVLPAF
 Letcam_5 -----PFAEALVYVY-NASVVLPAF
 Lepocu_5 KTG--IVTINPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NASIVLPAF
 Squaca_5 KTD--IVTINPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NASVVMPPAF
 Angang_5 KTD--IVTINPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NSSVVLPAF
 Acisin_5 KTD--IVTINPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NSSVVLPAF
 Orylat_5 KTD--IVTINPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NSSVVLPAF
 Astmex_5 KTD--LVTINPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NSSVVLPAF
 Angang_5b KTN--MVTNPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NSSVVLPAF
 Anates_5 KTD--LVTINPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NSSVVLPAF
 Calmil_5 RTQ--LVTANPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NSSVVMPPAF
 Hetzeb_5 KTD--IVTINPSIIEK--RFQKLE--KWRP PFYEVQLQAYE-NASVVMPPAF
 Eptbur_5 KTD--IVTINPSIIEK--RYDSLM--QRHGF LARIRSYG-NASLLLPAF
 Latcha_6 KTS--LVTNPSIIEK--RFQKLE--EKRK PFVETVSHYG-EAFLLLPAF
 Latmen_6 KTS--LVTNPSIIEK--RFQKLE--EKRK PFVETVSHYG-EAFLLLPAF
 Squaca_6 KTN--LVTANPSIIEK--RYAELH--DRRKP FFTNLTVYN-EALLLLPAF
 Calmil_6 KTH--LVTANPSIIEK--RYAELH--KRRKP FANTLVIYN-DALLLPF
 Hetzeb_6 KTN--LVTANPSIIEK--RYAKLQ--DRR SFFTNLAVYD-EALLLLPAF
 Lepocu_8 KTD--LVTANPSIIEK--RFEGLM--ELRRP FVESLGDYG-QPMLALPAF
 Acisin_8 KTD--LVTANPSIIEK--KFAALS--EWRP PFADCVSRYGAGAMLPAF
 Angang_8 KTN--LVTANPSIIEK--KFEGLM--EYRRP FVESLSDYG-EALLLLPAF
 Orylat_8 KSD--IVTANPSIIEK--KYFSLM--RRRPF FAEAMRIY-NSMVLLPAF
 Astmex_8 KTS--LVTANPSIIEK--KFSGLM--ERRRPF FVESLRPYG-DSLLLPAF
 Amical_8 KTS--LVTANPSIIEK--KFNGLM--ELRRP FVDSLGSYG-DPLLVLPF
 Anates_8 KTD--LVTANPSIIEK--KFNGLM--ELRRP FVDSLGSYG-DPLLVLPF
 Lepocu_8b KTS--LVSANPSQINN--VYRRLS--YERRP FVDTVSSFG-LAPLLLPAF
 Lepocu_7b KSS--LVTINPSQITQ--SFMGLC--NARKP FVDKAAAHG-NAYLAMAPF
 Angang_b KTD--LVTANPSIIEK--KYHGLK--ESRRL FVERMKVYK-DALILMAAF
 Latcha_7 KTS--LVTINPSQIRV--GYPDLQ--KRPQ PLVERVSAYG-DAPLLMPAF
 Angang_7 RQPQPHGDAQPHH-Q---YGGHSSSRSRFVSDVTDYG-DALLLVPAL
 Eptbur_7 RQPQPHGDAQPHH-QD---GGLHSSSRSRFVSDVTDYG-DALLLVPAL
 Petmar_7 RSH--MVTNPSIIEK--YGGHSSSRSRFVSDVTDYG-DALLLVPAL
 Letcam_7 RSH--MVTNPSIIEK--YGGHSSSRSRFVSDVTDYG-DALLLVPAL
 Petmar_7b KTN--LVFVKPSLIVN--KYSGLR--DSRIKF VEDMQYGSDFLF-TAFN
 Letcam_7r KTN--LVFVKPSLIVN--KYSGLR--DSRIKF VEDMQYGSDFLF-TAFN
 Petmar_7r KTN--LVFVKPSLIVN--KYSGLR--DSRIKF VEDMQYGSDFLF-TAFN
 Eptbur_7r KTN--LVFVKPSLIVN--KYSGLR--DSRIKF VEDMQYGSDFLF-TAFN

Angang_3 FFHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Lepocu_3 FFHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Latcha_3 FFHTSATVTRT-LVDDFFVEHKG-QLKLQLAWPGNIMQYVNR YWKTQQLSP
 Squaca_3 FFHTSATVTRT-LVDDFFVEHKG-QLKLQLAWPGNIMQYVNR YWKTQQLSP
 Astmex_3 FFHTSATVTRT-LVDDFFVEHKG-QLRVQLAWPGNIMQYVNR YWKTQQLSP
 Orylat_3 FFHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Hetzeb_3 FFHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Anates_3 FFHTSATVTRT-LVDDFFVEHKG-QLNVQLAWPGNIMQYVNR YWKTQQLSP
 Acisin_3 FFHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Masarm_3 FFHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Calmil_3 FFHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Orymel_9 FLHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Anates_9 FLHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP
 Masarm_9 FLHTSATVTRT-LVDDFFVEHKG-QLKVQLAWPGNIMQYVNR YWKTQQLSP

Orylat_9	FLHTSATVTRT-LVDDFFVEHKG-QLKVELAWPGNIMHNVNKYWKTKNLSP
Eptbur_3/9	LFHTSAVITRT-LVDDFFLENKS-RLGVQLAWPGPLVGHITRFWRTRALAP
Letcam_3/9	-----P-----RFWRTKGLSP
Anates_2	MAKGGEERVEW-ALRLILLHTV-DVRTAFPSL-RLHHAVERGYWLTNNVHI
Latcha_2	MAKGGEERVEW-VNDLIKSGI-NVQTAYPSL-RLHHAVERGYWLTNKVLI
Amical_2	MAKGGEERVEW-ANDLIKHHI-NVRTAFPSL-RLHHAVERGYWLTNKVPI
Acisin_2	MSKGGEDRVEC-VNDLILKHHI-DVQTAFPSL-RLHHAVERGYWLTNKVLI
Angang_2	MAKGGEDRVEC-ATRLILRHAI-NVRTAFPSL-RLHHAVERGYWLTNKVLI
Astmex_2	MAKSGEDRVEC-AVHLILSHTV-SVHAAPPSL-RLHHAVERGYWLTNNIQI
Orylat_2	MAKGGEERVEW-ALRLILRHTV-DVRTAFPSL-RLHHAVERGYWLTNNVHI
Hetzeb_2	MAKGGEERVEW-VNNLIKHHI-RVQTAYPSL-RLHHAVERGYWLTNRILI
Lepocu_2	MAKGGEERVQW-ASELILRHGI-NVRTAFPSL-RLHHAVERGYWLTNKVPI
Latcha_4	MAKGGEKHVEC-VNELILKNKL-KVRTAYPSL-RLHHAVERG-----
Astmex_4-A	MVKGGEKHVEC-VNELILKRKL-PLRTAYPSL-RLHHAVERGYWLTNKVNI
Angang_4	MSKGGEDRVEC-VNDLILRHAI-RVRPPTPRS-GLIHAVERGYWLTNKVNI
Lepocu_4	MVKGGEKHVEC-VNELILKNKL-KVRTAYPSL-RLHHAVERGYWLTNKINI
Amical_4	MVKGGEKHVEC-VNELILKNKL-KVRTAYPSL-RLHHAVERGYWLTNKINI
Calmil_4	MVKGGERHVEC-VNELILKNKL-SIQTAYPSL-RLHHAVERGYWLTNKVYI
Squaca_4	MVKGGERHVEC-VNELILKNKL-SIQTAYPSL-RLHHAVERGYWLTNKVYI
Acisin_4	MVKGGEKHVEC-VNELILKNKL-KVRTAYPSL-RLHHAVERGYWLTNKINI
Hetzeb_4	MVKGGEKHVEC-VNELILKNKL-SIQTAYPSL-RLHHAVERGYWLTNKIYI
Petmar_4	MAKGGEQHEI-VNNLLLTGL-PLRAAFPSL-RLMHAVERGYWLTNKVYI
Letcam_4	MAKGGEQHEI-VNNLLLTGL-PLRAAFPSL-RLMHAVERGYWLTNKVYI
Eptbur_4	MVPPERRVDA-VTDLIAHEHL-SLHPAMP-RLMHAVERGYWLTNNHVDI
Latcha_1	SMKTGTSLR-AYYTLSDFA-NQMVLFANP-DFLRHAAGFWKNGVHA
Angang_1	TMKPGTAPSLR-AYHALADAGS-NQTVLFANP-DFLRSVGGFWKGRGIHA
Angang_1b	SSRPGTDPSSLR-AGHALADSGS-EQTVLFASP-DFLRSVERFWKRGVRA
Astmex_1	SMKPGTEPSLR-AYHTLADTAS-NQTVLFANP-DFLKNVGRFWKSRGVHG
Orylat_1	SMAPGTDPSSLR-AYFALTDVPS-NLTMLFANP-DFLLSVSKFWKAHGVHA
Acisin_1	SMKPGTDPSSLR-VYHTLSDVSA-NQTVLFANP-DFLRNVGKFWKSRGIHA
Lepocu_1	SMKPGTDPSSLR-AYHALSDIGA-NQTVVFANP-DFLKNVGKFWKSRGIHA
Hetzeb_1	SMKTGTDPSSLR-TYYTLSDFA-NQTVLFANP-DFLRNVEKFWKSGIHA
Squaca_1	SMKTGTDPSSLR-TYYTLSDFA-NQTVLFANP-DFLRNVEKFWKSGIHA
Calmil_1	SMKAGTEPSLR-TYYTLSDVNA-NQTVIFANP-DFLRNVGKFWKSGVHA
Petmar_1	SMRAATESSLR-VYHTLHDCHQ-NQTVVFANP-GFLHSAAGFWMDNGVRA
Letcam_1	SMRAATESSLR-VYHTLHDCHQ-NQTVVFANP-SFLHSAAGFWTENGVRA
Eptbur_1	STSLGTDPSSLR-AHAVIVRANS-AQSAIFMNP-DFLHNASFFWRARGLHA
Latcha_5	YNTNRTDVSFR-VKYVLDDFES-QQSVYFFHP-QYLLNASRFSWNGQVRA
Letcam_5	YVGRNTDVALR-VRYTVRRQGL-PRPVLFHP-AYLASVGAFFWRARGVRA
Lepocu_5	YNTNRTDVSFR-VKYVLDDFES-QQSVYFFHP-QYLLNVQRFWMMQGVRA
Squaca_5	YNTNRTDVSFR-VKYVLDDFES-QQSMFYFHP-RYLENVSRFWMRQGLRA
Angang_5	YNTNRTDVSFR-VKYMLDDFDS-QKGVYFFHP-QYLLNVQRFWSLQGVRA
Acisin_5	YNTNRTDVSFR-VKYVLDDFDS-PQSVYFFHP-QYLLNVQRFWMMQGVMA
Orylat_5	YNTNRTDVSFR-VKYMLDDFDS-QRSVYFFHP-QYLLNVQRFWAVQGVRA
Astmex_5	YNTNRTDVSFR-VKYMLDDFDS-QRGVYFFHP-QYLLNVQRFWAVQGVRA
Angang_5b	YNTNRTDVSFR-VKYTMDDFDS-RRPVYFFHP-QYLLSVQRFWAIQGVRA
Anates_5	YNTNRTDVSFR-VKYMLDDFDS-QRGVYFFHP-QYLLNVQRFWAVQGVRA
Calmil_5	YNTNRTDVSFR-VRYALDDFSA-PQDLFYFHP-RYLENVARFWGRGLRT
Hetzeb_5	YNTNRTDVSFR-VKYVLDDFES-QQSMFYFHP-RYLENVSRFWMRQGLRA
Eptbur_5	FGGRSMELALR-ARYVLDEAGS-SRPLYFFHP-ITYLAHVGAFFWRHGVQE
Latcha_6	SFRSNTALSFR-VYHTLEAFRG-KQKTIFFHP-KYLKSLALFWRSKGIV
Latmen_6	SFRSNTALSFR-VYHTLEAFRG-KQKTIFFHP-KYLKSLALFWRSKGIV
Squaca_6	SYTKNTVLCFR-ALYTLQDFQA-KQKVFFHP-VYLKHLTEFWLSKGIQV
Calmil_6	YHSKNTALSFR-AHYTLQDFKS-KQRVYFFHP-ITYLKLALFWLSKGMQV
Hetzeb_6	SYSKNTDLCFR-ALYTLQDFQA-KQKVFFHP-VYLKHLALFWLSKGIQV
Lepocu_8	SYGHNTPVSLR-AYYTLQDFNS-PVRVFLNP-EYLQNLARFWKAHGLRT
Acisin_8	SYGRNTPVSLR-ALYTLQDFRS-PVRPIFLNP-RYLGSILARFWRARGLRS
Angang_8	SYAHNTPVSLR-AFYTLRDFGG-RARPAFLSP-AYLQSLAHFWRAQGLRT
Orylat_8	SFGHNTALSMR-AFYTLEDFA-SARAVYFNP-EYLKHLALFWRSEGLKS
Astmex_8	SYSHNTPVSLR-ALYALEDFNAVGRPVFFNP-EYLSLARFWRGRGLRT
Amical_8	SYSRNTPVSLR-ALYTLQDFDS-PVRPVFLNP-EYLHNLARFWKAQGLQA
Anates_8	SYGHNTPVSLR-AFYTIEDFDS-PTRPVFFNP-EYLQSLALFWRSQGLRA
Lepocu_8b	SYSRNTPVSLR-ALYTLQDFDS-PVRPVFLNP-EYLHNLARFWKAQGLQA
Lepocu_7	VFPCHTEPCVR-AFYSLLELRP-QQALFFSP-QYLRQLALYWRQGLHP
Lepocu_7b	AFSCTDPCFR-VYYTLQDNRP-HQALFYHP-DYLRQLATYWQEKGLRE
Angang_b	SYVVGTELSFR-VFHTMKDMRP-QQEVYFFHP-DYLFRLARYWQKGLTG
Latcha_7	SQSFAEISLA-VAYALEDFGS-KQKAIFFFHP-AYLRQLGSLRWSGWVRA
Angang_7	AYTCTDISFK-VHKVVQKMRP-NQKVFFNP-EYLLELFQYWKHGLEE
Eptbur_7	AYVHNLPLALR-AHRALEAAGA-RQKAVFFHP-DYLRRLARLWAARGLRP
Petmar_7	AYVHNLPLALR-AHRALEAAGA-RQKAVFFHP-DYLRRLARLWAARGLRP
Letcam_7	AYVHNLPLALR-AHRALEAAGA-RQKAVFFHP-DYLRRLARLWAARGLRP
Petmar_7b	AYVHNLPLALR-AHRALEAAGA-RQKAVFFHP-DYLRRLARLWAARGLRP
Letcam_7r	HLTHNTLA-YKQAFYTMDDFAT-GQSILFLNP-NYSRGLRALWNHQQGLAS
Petmar_7r	HLTHNTLA-YK-AFYTMDDFAT-GQSILFLNP-NYSRGLRALWNHQQGLAS
Eptbur_7r	HLTHNTLA-YK-AFYTMDDFAT-GQSILFLNP-NYSRGLRALWNHQQGLAS
Angang_3	KRLSTGILMYTLASAMCEEIHLYGFWPFGWDPN---TGK-----

Lepocu_3	KRLSTGILMYTTLASAMCEEIHLYGFWPFGWDPN---TGK-----
Latcha_3	KRLSTGILMYTTLASAMQCEIHLYGFWPFGWDPN---SGK-----
Squaca_3	KRLSTGILMYTTLASAICEEIHLYGFWPFAWDPN---TGK-----
Astmex_3	KRLSTGILMFTTLASSLCEQIHLYGFWPFGWDPN---TGK-----
Orylat_3	KRLSTGILMYTTLASSMCDQIHLYGFWPFGWDPN---TGK-----
Hetzeb_3	KRLSTGILMYTTLASAICEEIHLYGFWPFAWDPN---TGK-----
Anates_3	KRLSTGILMYTTLASSMCDQIHLYGFWPFGWDPN---TGK-----
Acisin_3	KRLSTGILMYTTLASSMCEEIHLYGFWPFGWDPN---TGK-----
Masarm_3	KRLSTGILMYTTLASSMCDQIHLYGFWPFGWDPN---TGK-----
Calmil_3	KRLSTGILMYTTLASSVCEEIHLYGFWPFAWDPN---TGR-----
Orymel_9	KRLSTGILMYTTLAFAMCDEIHLYGFWPFGWDPN---TGK-----
Anates_9	KRLSTGILMYTTLAYAMCDEIHLYGFWPFGWDPN---TGK-----
Masarm_9	KRLSTGILMYTTLASAMCDEIHLYGFWPFGWDPN---TGK-----
Orylat_9	KRLSTGILMYTTLAFSMCDEIHLYGFWPFGWDPN---TGK-----
Eptbur_3/9	KRLSTGILMYTTLASAFCEISLYGFWPFAWEPI---SGR-----
Letcam_3/9	KRLSTGLLMASLCSLDRDLYGFWPFAWDPR---TGS-----
Anates_2	KRPSTGLLMYTLMATRFCEEIHLYGFWPFLDPQ---G-K-----
Latcha_2	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPDRHS---E-R-----
Amical_2	KRPSTGLLMYTTLATRFCEEIHLYGFWPFSRGA---G-N-----
Acisin_2	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPQDQD---G-N-----
Angang_2	KRPSTGLLMYTLMATRFCEEIHLYGFWPFPQDPQ---G-N-----
Astmex_2	KRPSTGLLMYTLMATRFCEEIHLYGFWPFPDRSE---G-K-----
Orylat_2	KRPSTGLLMYTLMATRFCEEIHLYGFWPFPVDSH---G-K-----
Hetzeb_2	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPKDQK---G-N-----
Lepocu_2	KRPSTGLLMYTTLATRFCEEIHLYGFWPFSLGPV---G-L-----
Latcha_4	-----
Astmex_4-A	KRPSTGLLMYTLMATRFCEEIHLYGFWPFPKDAN---G-I-----
Angang_4	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPKDLG---G-N-----
Lepocu_4	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPKDSQ---G-R-----
Amical_4	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPKDTK---G-R-----
Calmil_4	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPKDAN---G-T-----
Squaca_4	KRPSTGLLMYTTLATRFCEEIHLYGYWFPFPKDAK---G-A-----
Acisin_4	KRPSTGLLMYTLMATRFCEEIHLYGFWPFPKDSH---G-K-----
Hetzeb_4	KRPSTGLLMYTTLATRFCEEIHLYGYWFPFPKDAK---G-T-----
Petmar_4	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPQYNIA---G-K-----
Letcam_4	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPQYNIA---G-Q-----
Eptbur_4	KRPSTGLLMYTTLATRFCEEIHLYGFWPFPHSDTE---G-R-----
Latcha_1	KRLSTGFLVSAALGLCEEVTLYGFWPFSVDLH---G-V-----
Angang_1	KRLSTGFLVSAALGLCEEVTLYGFWPFSVDLE---E-R-----
Angang_1b	KRLSTGFLVSAALGLCEEVTLYGFWPFSVDPR---G-R-----
Astmex_1	KRLSTGFLVSLALGLCEEVTLYGFWPFSVGLD---E-R-----
Orylat_1	KRLSTGFLVSLAMGLCEEVTLYGFWPFSVDLD---E-Q-----
Acisin_1	KRLSTGFLVSLALGLCEEVTLYGFWPFSVDLQ---E-R-----
Lepocu_1	KRLSTGFLVSLALGLCEEVTLYGFWPFSVDLN---E-R-----
Hetzeb_1	KRLSTGFLVSVLALGLCEEVTLYGFWPFSMDLQ---G-T-----
Squaca_1	KRLSTGFLVSVLALGLCEEVTLYGFWPFSMDLQ---G-R-----
Calmil_1	KRLSTGFLVSVLALGLCEEVTLYGFWPFSSTDLE---E-R-----
Petmar_1	KRLSTGFLVSAALGMCEEVTLYGFWPFSSEDLS---G-R-----
Letcam_1	KRLSTGFLVSAALGMCEEVTLYGFWPFSSEDLS---G-R-----
Eptbur_1	KRLSTGFLVSAALGMCEEVTLYGFWPFSSEDLS---G-R-----
Latcha_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-I-----
Letcam_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-D-----
Lepocu_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-I-----
Squaca_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-L-----
Angang_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPA---G-I-----
Acisin_5	KRLSTGMLVTAALCCEVHLYGFWGFPMDPN---G-I-----
Orylat_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-V-----
Astmex_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-I-----
Angang_5b	KRLTSGMLVTAALCCEVHLYGFWAFPMNPS---G-I-----
Anates_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-I-----
Calmil_5	KRPSSGLMLVTAALCCEVHLYGFWGFPMDPS---G-I-----
Hetzeb_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-L-----
Eptbur_5	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-A-----
Latcha_6	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-K-----
Latmen_6	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-K-----
Squaca_6	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-R-----
Calmil_6	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-E-----
Hetzeb_6	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-K-----
Lepocu_8	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---SKQ-----
Acisin_8	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---G-S-----
Angang_8	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---DRR-----
Orylat_8	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---SHQ-----
Astmex_8	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---GRQ-----
Amical_8	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---SKH-----
Anates_8	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---DLH-----
Lepocu_8b	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---SKH-----
Lepocu_7	KRLSSGLMLVTAALCCEVHLYGFWAFPMNPS---R-R-----

Lepocu_7b	TRLSTGLMMVSAALELCDRVELYGFWPFSDLS---E-R-----
Angang_b	LRLSSGFMVLSVALELCVKDIYGFWPFPTDLI---Q-K-----
Latcha_7	RRLSSGMLVSAALELCDSVALYGFWPFSTGLD---G-E-----
Angang_7	LRLTTGLMLASVAMELCDSVHLYGFWPFELDLF---Q-C-----
Eptbur_7	QRLSTGLMLASASLTLCRQVHLYGFWPLERGPD---G-A-----
Petmar_7	QRLSTGLMLASASLTLCRQVHLYGFWPLERGPD---G-A-----
Letcam_7	QRLSTGLMLASASLTLCRQVHLYGFWPFERGPD---G-A-----
Petmar_7b	QRLSTGLMLASASLTLCRQVHLYGFWPLERGPD---G-A-----
Letcam_7r	KYLSAGLHMTSAALEACEEVHLFGFWPMEIASVSRRGRRGRRRSRTSI
Petmar_7r	KYLSAGLHMTSAALEACEEVHLFGFWPMEIASVSRRGRRGRRSR--TSI
Eptbur_7r	KYLSAGLHMTSAALEACEEVHLFGFWPMEM-----
Angang_3	-ELPYHHYDKKGTKFTTKWQESHQLPSEFKLLYKMHTDG-----VIKLSLSHCA--
Lepocu_3	-ELPYHHYDKKGTKFTTKWQESHQLPTEFKLLYKMHTEG-----LTKLSLSHCA--
Latcha_3	-DLPHYHYDKKGTKFTTKWQESHQLPAEFKLLYKMHGEG-----LTKLTLSHCA--
Squaca_3	-ELPYHHYDKKGTKFTTKWQESHQLPAEFKLLFKLHTDG-----LTKLTLSHCAS--
Astmex_3	-ELPYHHYDKKGTKFTTKWQESHQLPTEFKLLFKMHTEG-----VLKLSLSHCA--
Orylat_3	-ELPYHHYDRKGTKFTTKWQESHQLPAEFKLLHKMHTEG-----LLKLTLSHCA--
Hetzeb_3	-ELPYHHYDKKGTKFTTKWQESHQLPAEFKLLFKLHTDG-----LTKLTLSHCAS--
Anates_3	-ELPYHHYDKKGTKFTTKWQESHQLPAEFKLLYKMHMEG-----LLKLTLSHCA--
Acisin_3	-DLPHYHYDKKGTKFTTKWQESHQLPTEFKLLYKMHGEG-----LTKLTLSHCA--
Masarm_3	-ELPYHHYDKKGTKFTTKWQESHQLPAEFKLLYKMHMEG-----LLKLTLSHCA--
Calmil_3	-ELPYHHYDKKGTKFNTNWQETHQLPAEFKILFKMHTAG-----LTKLSLSPCVS--
Orymel_9	-ELPYHHYDKKGTKFTTKWQETHQLPSEFKLLYKLHREG-----VTKLGLSHCT--
Anates_9	-DLPHYHYDKKGTKFTTKWQETHQLPSEFKLLYKLHREG-----VTKLSLTHCT--
Masarm_9	-ELPYHHYDKKGTKFTTKWQETHQLPSEFKLLYKLHREG-----VIKLSLTHCIA--
Orylat_9	-DLPHYHYDKKGTKFTTKWQETHQLPSEFKLLYKLHREG-----VTKLGLSHCT--
Eptbur_3/9	-PLPHYHYARRGARFTTAWQEAHQLPAEFRLFQQHLHGQG-----ALRLHLGSCT--
Letcam_3/9	-PIPHYHYDAPGAKFSTRWQESHQLPLEFQLLRSLHAHG-----ALRLLEACA--
Anates_2	-PVKYHHYDALKYEYTS--SSPHTMPLEFRTLALHRQG-----ALRLHTGQCD--
Latcha_2	-PVKYHHYDSLTYEYTSQ--ASPHTMPLEFRTLGLHQQG-----ALKLTVGECA--
Amical_2	-PVKYHHYDSLTYEYTAQ--SSPHTMPLEFKTLKNLHSQG-----ALQLHTGPCN--
Acisin_2	-PVKYHHYDSLTYEYTSQ--SSPHTMPL-----
Angang_2	-PMKYHHYDTLTYEYDSH--SSPHTMPLEFSTLRLDLSQG-----ALRLHIGRCGAD
Astmex_2	-PVKYHHYDTLKYQYTSS--SSPHTMPLEFRTLSTLHRQG-----ALRLHTETCR--
Orylat_2	-AVKYHHYDSLKYEYTS--SSPHTMPLEFRTLSTLHRQG-----ALRLHTGSCE--
Hetzeb_2	-VVKYHHYDSLTYEYNSR--ATPHTMPLEFKTLRNMHLQG-----ALKLVGECNLT
Lepocu_2	-PVKYHHYDSLTYEYRAQ--SSPHSMPVEFRALKRLHSQG-----ALKLHTGECN--
Latcha_4	-----
Astmex_4-A	-PVKYHHYDCLKYRYFSS--AGPHRMPLEFKTLKTLHSGK-----ALKLTTSKCR--
Angang_4	-PVKYHHYDALKYRYFSK--ASPHRMPLEFKTLKTLHSGK-----ALKLTTSKCARP
Lepocu_4	-PVKYHHYDELKYRYFSN--ASPHRMPLEFKTLKMLHNKG-----ALKLTTTCKT--
Amical_4	-LVKYHHYDELKYRYFSN--ASPHRMPLEFKTLKTLHNKG-----ALKLTTSTCA--
Calmil_4	-PVKYHHYDNLKYRYFSN--AGPHRMPLEFKTLKSLHDRG-----ALKLTTGKCGQP
Squaca_4	-PVKYHHYDNLKYRYFSN--AGPHRMPLEFKTLKSLHDKG-----ALKLTTGKCV--
Acisin_4	-SVKYHHYDELKYRYFSN--ASPHRMPLEFKTLKMLHNKG-----ALKLTTSKCA--
Hetzeb_4	-PVKYHHYDNLKYRYFSN--VGPHRMPLEFKTLKSLHDRG-----ALKLTTGKCV--
Petmar_4	-PVRYHHYEGRLRYRYSR--AGPHTMPLEYRTLHRLHSLG-----ALKLTTGKCT--
Letcam_4	-PVRYHHYEGRLRYRYSR--AGPHAMPEYRTLHRLHSLG-----ALKLTTGKCT--
Eptbur_4	-PVPYHHYEVMSYSYYSR--SSPHAMPEFQALHRLHELG-----ALRMRTQACT--
Latcha_1	-SISHHHYDNVLPY----TGPHAMPEEFQLWLLHKIG-----ILRMQIGQCK--
Angang_1	-PISHHHYDNVLPY----SGFHAMPEEFQLWHLHKTG-----TLRMHIGQCPDA
Angang_1b	-PVGHHYNDVPPL----WGVHAMPEEFRLWLHKGK-----ALRMVDSQPRE
Astmex_1	-PVSHHHYDNILPS----SGFHAMPEEFQLWHLHKS-----TLRLRVGSCV--
Orylat_1	-PISHHHYDNILPY----KWFHAMPEEFVQLWHLHKS-----ILRMKVGHCS--
Acisin_1	-FISHHHYDNVMPF----SGFHAMPEEFQLWHLHQSG-----TLRMQVGRCD--
Lepocu_1	-FISHHHYDNILPF----SGFHAMPEEFQLWVLHKTG-----TLRMVVGQCE--
Hetzeb_1	-IISHHHYDNVMPY----SGYHAMPEEFQLWLLHKS-----ILKMQIGKCEEN
Squaca_1	-IISHHHYDNVMPY----SGYHAMPEEFQLWLLHKS-----ILKMQIGKCEEN
Calmil_1	-TISHHHYDNVMPD----TSYHAMPEEFQLWLLHKS-----ILKIHVKGCGQI
Petmar_1	-AISHHHYDDVPPL----WYYHAMPEEFQLWMLHQRG-----ILRMHLEQCD--
Letcam_1	-AISHHHYDDVPPL----WYYHAMPEEFQLWMLHQRG-----ILRMHLEQCD--
Eptbur_1	-HLQHHYDLSHLPL----PVYHSMQEFSLWELHEQGLQDRREKVHKRYRSLCRL
Latcha_5	-FITHHHYDNVKPR----PGFHAMPSEIFKFLHMHSKG-----VLRVHTGTCS--
Letcam_5	-SLAHHHYDDAKPR----PGFHAMPAETVHLMHLHARG-----TLHLHTEPCP--
Lepocu_5	-FITHHHYDNVKPR----PGFHSMPNEIFSFLHLHSG-----ILQVHTSPCR--
Squaca_5	-YITHHHYDNVKPR----PGFHKMTTEIFNFLHMHSKG-----ILQVHTGTCS--
Angang_5	-FITHHHYDNVKPR----PGFHAMPHEIFNFLHLHSG-----ILHVHTNPCR--
Acisin_5	-FMTHHHYDNVKPR----PGFHAMPHEIFNFLHLHSG-----ILQVHTRACS--
Orylat_5	-YITHHHYDNVKPR----PGFHAMPHEIFNFIMHTRG-----IINVHTDQCM--
Astmex_5	-FITHHHYDNVKPR----PGFHAMPHEIFNFLHMHARG-----IVHVHTGVCR--
Angang_5b	-FIMHHYDNIKPR----PGFHAMPSEIFSFLHLHSG-----ILHVHTNHCR--
Anates_5	-FITHHHYDNVKPR----PGFHAMPHEIFNFIMHSG-----IINVHTGQCT--
Calmil_5	-HITHHHYDNVKPR----PGFHSMPNEIFTFLHMHSRG-----VLQVHTTPCR--
Hetzeb_5	-YITHHHYDNVKPR----PGFHKMTTEIFNFLHMHSRG-----ILQVHTGICS--
Eptbur_5	-HLSHHHYDDQRP--PGIHVMPIENFHFLQLHSG-----ILRVHTQRC--
Latcha_6	-NISHHHYDNQLPK----PGIHSMKPEFYHFLKLNKG-----IIKLQFGRCD--

Latmen_6	-NISHHYDNLQPK-----PGIHSMPEFYHFLKLHNKG-----I IKLQFGRCD--
Squaca_6	-VMSHHYFDNLLPK-----PDVHSMPEFHQLLQMHSKG-----I IKLQTAQCQAD
Calmil_6	-LMSHHYFDSLAE-----PDLHSTSNEFYQLLRMHSG-----IVKLQMGQCEAE
Hetzeb_6	-VVSHHYFDNLLPK-----PDTHSMPLFHHLLQMHSKG-----MIKLQMTQCQAD
Lepocu_8	-HLTNHYDDQQSK-----KSFHAMPAEFEQLRLHSQG-----VIRVHLGSC---
Acisin_8	-PLLHHYYDDRRSP-----SSIHAMPAEFSQLLGLHRQG-----VLRIQLGRCQ--
Angang_8	-PLTNHYDDRQ GK-----KKVHAMPAEFGHLLRLHRQG-----VVRVHLGQCEDR
Orylat_8	-GLTNHYDDRKAK-----NKFHAMPTFENLLLQLHRKG-----VLRHLGLDCT--
Astmex_8	-TITNHYDNRQSK-----KNVHSMPEFEHLLRLHVSQ-----VIQLHLGECs--
Amical_8	-PLTNHYDDQQAK-----KTIHAMSTEFSHLLMLHNQG-----I IRVQLGKCQ--
Anates_8	-VLTNHYDDRKT-----TKFHAMPAEFELLLRLHSQG-----VLRHLGLGEC--
Lepocu_8b	-PLTNHYDDQQAK-----KTIHAMSTEFSHLLMLHNQG-----I IRVQLGKCQ--
Lepocu_7	-PLSHHYFDDVGP-----PGAHMMAEEFLKLLQLHSQG-----ALQLHLGPCP--
Lepocu_7b	-PLSNHYDDVPPN-----RGMHAMPEEFRLLRMHSG-----VLRRLRVGQCP--
Angang_b	-PVTHHYDNNVAK-----QGVHAMPEEFLTLHMHSG-----VLQLHVGKCQ--
Latcha_7	-AVLHHYDNPPE-----PGVHAMSEFVHYLQMHSKG-----VLQLHVGKC---
Angang_7	-PVTHHYDNVGPS-----RRMHAMPKEFLQLLKMHCQG-----SIHLQLTRCH--
Eptbur_7	-SLPHHYFDDRPPR-----GAHDMPQEFSHYLLLSHG-----AIRLHMGACT--
Petmar_7	-SLPHHYFDDRPPR-----GAHDMPQEFSHYLLLSHG-----AIRLHMGACT--
Letcam_7	-SLPHHYFDDRPPR-----GAHDMPQEFSHYLLLSHG-----AIRLHMGACT--
Petmar_7b	-SLPHHYFDDRPPR-----GAHDMPQEFSHYLLLSHG-----AIRLHMGACT--
Letcam_7r	VTVRHSYFEQSDQE--SKGKEVFDLKMEFAHLLRLHTNG-----I IRLQLGACAV-
Petmar_7r	VTVQSYFEQSSQE--SKVKEVFDLKMEFAHLLRLHTNG-----I IRLQLGACAV-
Eptbur_7r	-TVQSYFEQSSQE--SKVKEVFDLKMEFAHLLRLHTNG-----I IRLQLGACAV-

C) Multiple sequence alignments (ClustalX) of ST8Sia sequences used in figure 5:
Substitution rate analysis of the impact of *st8sia* gene duplications and losses

Figure 5A

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CLUSTAL X (1.81) multiple sequence alignment
1
Cluhar2      MSFEFRALLFGIVTMLVIFLIIADISVVE-EEIANIGESQKYYLHSSAPK
Denclu_2     MPFEFRALMFGIVTVLVAFILILADISEVE-EEIANTGIYQKFHSQNFIPK
Danrer_2     MSFEFRILMFGIGTALVIFVIIADISEVE-EEIANIEDSRKFHLKSVALQ
Hipcom_2     MTPTSRTLLFLFVTLVILIIADDISQVENEEQEALKSSQSTMKRLFPK
Cormar_2A    MQLEFRTVMFGIVTLLVIFLIIADIAEIE-EEIANIGGSRTLYLHSLIPK
Oncmyk_2A    MQLELRTL MFGIVTLLVIFLIIADIAEVQ-EEIGNIGGSRTLYLHSLIPK
Onctsh_2A    MQLEFRTL MFGIVTLLVIFLIIADIAEVQ-EEIGNIGGSRTLYLHSLIPK
Thythy_2A    MQLEFRTVMFAVVTLLVIFMIIADIAEVE-EEIANIGGSRTFYFLNLNLK
Salsal_2A    MHLEFRTL MFGIVTLLVVFLIIADIAEVQ-EEIGNIGGSRTLYLHSLIPK
Salalp_2A    MQLEFRTLIFGIVTLLVIFLIIADIAEVQ-EEIG-----
Oncmyk_2B    MQLELRTL MFGIVTVLVFLIIADIAEVE-KEIANLGGSRLYLQTLIPK
Onckis_2B    MQLELRTL MFGIVTVLVFLIIADIAEVE-KEIANLGGSRLYLHSLIPK
Salalp_2B    MQLELRTL MFGIVTVLVFLIIADIAEVE-KEIANLGGSRLYLHSLIPK
Salsal_2B    MQLELRTL MFGIVTVLVFLIIADIAEVE-KEIANFGGSRLCLHSLIPK
Thythy_2B    MQLEFRTL MFGIVTVLVFLIIADIAEVE-EEVANVGGSRK--LHSLIPK
Onctsh_2B    MQLELRTL MFGIVTVLVFLIIADIAEVE-KEIA-----
Cormar_2B    -----SLLILLKSKKKLR-----
Corclu_4     MRLSRKRWTICTISILVIFYKTKEITRSE-----
Corlav_4     MRLSRKRWTICTISILVIFYKTKEITRSE-----
Onckis_4     MRLSRKRWTICTISILVIFYKTKEITRSE-----
Oncmyk_4     MRLSRKRWTICTISILVIFYKTKEITRSE-----
Salsal_4     MRLSRKRWTICTISILVIFYKTKEITRSE-----
Salalp_4     MRLSRKRWTICTISILVIFYKTKEITRSE-----
Salfon_4     MRLSRKRWTICTISILVIFYKTKEITRSE-----
Thythy_4     MRLSRKRWTICTISILVIFYKTKEITRSE-----

51
Cluhar2      LNRSTVLVPSSAPVVKs-KGDNSSLAQ---FARNGTsASPAEWTfNRTLs
Denclu_2     SNRMPLKTSPLSLDSSKDLGSKAIKNCSSSHASKNKSVSDWSfNRTLs
Danrer_2     SNRSSDLNAAPTSLVTRYRSKVSSLASPSDIKRKTSNssSEWTFNRTLs
Hipcom_2     PRKRTSRRVGSTSLPRP--AAINHLEPG---DNSSGKLASSGWTfNKTLS
Cormar_2A    PNRNVAVKANPTPLISE--GEDKSPASP-SGLNNTRLSSDNWTFNRTLs
Oncmyk_2A    PNRNVAVKANPTPLGNE--GEEKSPASP-SGLKNATRLSSDNWTFNRTLs
Onctsh_2A    PNRNVAVKANPTPLGNE--GEEKSPASP-SGLKNATRLSSDNWTFNRTLs
Thythy_2A    PNRNTAVKANPTSLVSE--GEDKSPSP--SDSNNTRLSSDNWTFNRTLs
Salsal_2A    PNRNVAVKANPTPLVNE--GEDKSPASP-SGSKNSTRLSSDNWTFNRTLs
Salalp_2A    ---NVAVKANPTPLVNE--GEDKSPASP-SGSKNATRLSSDNWTFNRTLs
Oncmyk_2B    PNRNVAVKANPKPLVSE--GEDKSPASP-SYSNNTTKLSTDNWMFNRTLs
Onckis_2B    PNRNVAVKANPKPLVSE--GEDKSPASP-SYSNNTIKLSTDNWMFNRTLs
Salalp_2B    PNRNVAVKANPKPLVSE--GEDKRPASP-SYLNNTTKLSTDNWTFNRTLs
Salsal_2B    PNRNVAVKANPKPLVSE--GEDKSPAST-SYSNNTTKLSTDNWTFNRTLs
Thythy_2B    PNRNVAVKANPKPLVSE--GEDKSPASP-SGSNNTTKLSSDNWTFNRTLs
Onctsh_2B    ---NVAVKANPKPLVSE--GEDKSPDSP-SYSNNTTKLSTDNWMFNRTLs
Cormar_2B    ---NVAVKANPKPLVSE--GEDKSPASP-SYSNNTTKLSSDNWTFNRSLS
Corclu_4     -EHQEAQVTGDSELDTSRLMVNSSEKSSRSRG-PSFFQHsVEGWRLNSSLV
Corlav_4     -EHQEAQVTGDSELDTSRLMVNSSEKSSRSRG-PSFFQHsVEGWRLNSSLV
Onckis_4     -EHQEAQVTG--ELGTSRLMVNSSEKSSRSRGVPSFFQHsVEGWVRVNSSLV
Oncmyk_4     -EHQEAQVTG--ELGTSRLMVNSSEKSSRSRGVSSFLQHsVEGWVRVNSSLV
Salsal_4     -EHQEAQVTGDSELGTSRLMVNSSEKSSRSRGVPSFFQHsVEGWVRVNSSLV
Salalp_4     -EHQEAQVTGDSELGTSRLMVNSSEKSSRSRGVPSFFQHsVEGWVRVNSSLV
Salfon_4     -EHQEAQVTGDSELGTSRLMVNSSEKSSRSRGVPSFFQHsVEGWVRVNSSLV
Thythy_4     -EHQEAQVTGDSELGTSRLMVNSSDKSSRSRGVPSFFQHsVKGWRVNSSLV

101
Cluhar2      NMIRKNILKFLDPERDISILKGTLPKGDIIHYVfDRQSTMNvSENLYRLL
Denclu_2     SLIRKNILRFLDAERDISILKGTLPKGDVVHYIFDRQSTMNISENLYRLL
Danrer_2     NLIRKNILKFLDPERDISILKSTFKPGDVIHYIFDRQSTTNISENRYHLL
Hipcom_2     KLIRKNVLRFLDPERDISILKGLRPGDVVHYVfDRHSTTNISENLHRL
Cormar_2A    SLIRKNILRFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYRLL
Oncmyk_2A    SLIRKNILGFFDPERDISILKGTLPKGDVIHYVfDRQSTTNISENLYQLL
Onctsh_2A    SLIRKNILGFFDPERDISILKGTLPKGDVIHYVfDRQSTTNISENLYRLL
Thythy_2A    SLIRKNILRFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYRLL
Salsal_2A    SLIRKNILGFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYRLL
Salalp_2A    SLIRKNILRFFDPERDISILKGTLPKGDVIHYVfDRQSTTNISENLYRLL
Oncmyk_2B    NLIRKNILRFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYQLL

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Onckis_2B	NLIRKNILRFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYQLL
Salalp_2B	NLIRKNILRFFDPERDISILKGTLPKGDIIHYIFDRQSTTNISENLYQLL
Salsal_2B	NLIRKNILRFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYQLL
Thythy_2B	NLIRKNILRFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYRLL
Onctsh_2B	NLIRKNILRFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYQLL
Cormar_2B	NFYRKNILRFFDPERDISILKGTLPKGDVIHYIFDRQSTTNISENLYRLL
Corclu_4	LMIRKDVLRFLDAERDVSVVKSSFKPGDTIHYVLDRRRTLNI SHTLHSL
Corlav_4	LMIRKDVLRFLDAERDVSVVKSSFKPGDTIHYVLDRRRTLNI SHTLHSL
Onckis_4	LMIRKDVLRFLDAERDVSVVKSSFKPGDTIHYVLDRRRTLNI SHTLHSL
Oncmky_4	LMIRKDVLRFLDAERDVSVVKSSFKPGDTIHYVLDRRRTLNI SHTLHSL
Salsal_4	LMIRKDVLRFLDAERDVSVVKSSFKPGDTIHYVLDRRRTLNI SHTLHSL
Salalp_4	LMIRKDVLRFLDAERDVSVVKSSFKPGDTIHYVLDRRRTLNI SHTLHSL
Salfon_4	LMIRKDVLRFLDAERDVSVVKSSFKPGDTIHYVLDRRRTLNI SHTLHSL
Thythy_4	LMIRKDVLRFLDAERDVSVVKSSFKPGDTIHYVLDRRRTLNI SHTLHSL
	151
Cluhar2	PTASPMKNQHKKSCAIVGNSGILLNSSCGPEIDAHDFVIRC NLAPVNEFS
Denclu_2	PTASPMKNQHRLCAIVGNSGILLNSSCGPEIDSHDFVIRC NLAPVEEYA
Danrer_2	PTVSPMKNQHYRKCAIVGNSGILLNSSCGREIDSHDFVIRC NLAPVEEYA
Hipcom_2	PSVSPLKNRHYRLCAIVGNSGILLNSSCGSQIDSHDFVIRC NLAPVEEYA
Cormar_2A	PTASPMKNQHRRCAIVGNSGILLNSSCGPEIDSHDFVIRC NLAPVEEYA
Oncmky_2A	PTASPMKNQHRRCAIVGNSGIQLNSSCGPEIDSHDFVIRC NLAPVEEYA
Onctsh_2A	PTASPMKNQHRRCAIVGNSGILLNSSCGPEIDSHDFVIRC NLAPVEEYA
Thythy_2A	PTASPMKNQHRRCAIVGNSGILLNSSCGPEIDSHDFVIRC NLAPVEEYA
Salsal_2A	PTASPMKNQHRRCAIVGNSGILLNSSCGPEIDSHDFVIRC NLAPVEEYA
Salalp_2A	PTASPMKNQHRRCAIVGNSGILLNSSCGPEIDSHDFVIRC NLAPVEEYA
Oncmky_2B	PTASPMKNQHRRCAIIGNSGILLNSSCGPEIDSYDFVIRC NLAPVEEYA
Onckis_2B	PTASPMKNQHRRCAIIGNSGILLNSSCGPEIDSYDFVIRC NLAPVEEYA
Salalp_2B	PTASPMKNQHRRCAIIGNSGILLNSSCGPEIDSYDFVIRC NLAPVEEYA
Salsal_2B	PTVSPMKNQYHRRCAIIGNSGILLNSSCGPEIDSYDFVIRC NLAPVEEYA
Thythy_2B	PTTSPMKNQYHRRCAIVGNSGVLLNSSCGPEIDSHDFVIRC NLAPVEEYA
Onctsh_2B	PTASPMKNQHRRCAIIGNSGILLNSSCGPEIDSYDFVIRC NLAPVEEYA
Cormar_2B	PTVSPMKNQHRRCAIVGNSGILLNSSCGPEIDSYDFVIRGNQAPVEEYA
Corclu_4	PDVSPLKKNRKFCTCAVVGNSGVLLNSGCGKEIDRHDFVIRC NLAPLAEFA
Corlav_4	PDVSPLKKNRKFCTCAVVGNSGVLLNSGCGKEIDRHDFVIRC NLAPLAEFA
Onckis_4	PDVSPLKKNRFRCTCAVVGNSGVLLNSGCGKEIDSHDFVIRC NLPLSEFA
Oncmky_4	PDVSPLKKNRFRCTCAVVGNSGVLLNSGCGKEIDSHDFVIRC NLPLSEFA
Salsal_4	PDVSPLKKNRFRCTCAVVGNSGVLLNSGCGKEIDSHDFVIRC NLPLSEFA
Salalp_4	PDVSPLKKNRFRCTCAVVGNSGVLLNSGCGKEIDSHDFVIRC NLPLSEFA
Salfon_4	PDVSPLKKNRFRCTCAVVGNSGVLLNSGCGKEIDSHDFVIRC NLPLSEFA
Thythy_4	PDVSPLKKNRKFCTCAVVGNSGVLLHSGCGKEIDSHDFVIRC NLAPLADFA
	201
Cluhar2	ADVGHRTNLVTMNP SVVQRAFDLSSEEWRFVRRLQDLSG SVLWIPAF
Denclu_2	ADVGHRTDLVTMNP SVVQRAFDLANEEWRERFVQRLRALSG SVLWIPAF
Danrer_2	ADVGLRTSLVTMNP SVVQRAFDLNEEWWRFVQRLQLSLSG SVLWIPAF
Hipcom_2	DDVGHRTDLVTMNP SVVQRAFRDLVDDEWRRRFARRLASLSG SVLWIPAF
Cormar_2A	GDVGRRTNLVTMNP SVVQRAFDLASEQWRERFLQRLRGLSG SVLWIPAF
Oncmky_2A	GDVGRRTNLVTMNP SVVQRAFDLASEQWRERFLQRLRGLSG SVLWIPAF
Onctsh_2A	GDVGRRTNLVTMNP SVVQRAFDLASEQWRERFLQRLRGLSG SVLWIPAF
Thythy_2A	GDVGRRTNLVTMNP SVVQRAFDLASEQWRERFLQRLRGLSG SVLWIPAF
Salsal_2A	GDVQRTNLVTMNP SVVQRAFDLASEQWRERFLQRLRGLSG SVLWIPAF
Salalp_2A	GDVGRRTNLVTMNP SVVQRAFDLASEQWRERFLQRLRGLSG SVLWIPAF
Oncmky_2B	GDVGRRTNLVTMNP SVVQRAFDLASEEWRERFLQRLRSLSG SVLWIPAF
Onckis_2B	GDVGRRTNLVTMNP SVVQRAFDLASEEWRERFLQRLQSLSG SVLWIPAF
Salalp_2B	GDVQRTNLVTMNP SVVQRAFDLASEEWRERFLQRLRSLSG SVLWIPAF
Salsal_2B	GDVGRRTNLVTMNP SVVQRAFDLASEEWRERFLQRLRGLSG SVLWIPAF
Thythy_2B	GDVGRRTNLVTMNP SVVQRAFDLASEEWRERFLQRLRGLSG SVLWIPAF
Onctsh_2B	GDVGRRTNLVTMNP SVVQRAFDLASEEWRERFLQRLRSLSG SVLWIPAF
Cormar_2B	GDVGRRTNLVTMNP SVVQRAFDLASEEWRERFLQRLRGLSG SVLWIPAF
Corclu_4	EDVGLRSDFTTMNP SVIQRVYGSGLKNATDTERFVQRLRMLNDS VLWIPAF
Corlav_4	EDVGLRSDFTTMNP SVIQRVYGGGLKNATDTERFVQRLRMLNDS VLWIPAF
Onckis_4	EDVGLRSDFTTMNP SVIQRAYGGLKNATDTERFVQRLRGLNDS VLWIPAF
Oncmky_4	EDVGLRSDFTTMNP SVIQRAYGGLKNATDTERFVQRLRGLNDS VLWIPAF
Salsal_4	EDVGLRSDFTTMNP SVIQRAYGGLKNATDTERFVQRLRGLNDS VLWIPAF
Salalp_4	EDVGLRSDFTTMNP SVIQRVYGGGLKNATDTERFVERLRGLNDS VLWIPAF
Salfon_4	EDVGLRSDFTTMNP SVIQRAYGGLKNATDTERFVERLRGLNDS VLWIPAF
Thythy_4	EDVGLRSDFTTMNP SVIQRAYGGLKNATDTERFVHRLQVLNDS VLWIPAF
	251
Cluhar2	MAKGGEERVEWAIRLIIMHTVNVRTAFPSLRLLHAVRGYWL TNQVQIKRP
Denclu_2	MAKGGEERVEWAIRLILLHTVNVRTAFPSLRLLHAVRGYWL TNQVLIKRP
Danrer_2	MAKGGEERVEWAIRLILLHTVNVRTAFPSLRLLHAVRGYWL TNHVQIKRP
Hipcom_2	MAKGGEERVEWALRLILRHAADVRTAFPSLRLLHAVRGYWL TNKVHIKRP
Cormar_2A	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWL TNNVQIKRP
Oncmky_2A	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWL TNNVQIKRP
Onctsh_2A	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWL TNNVQIKRP
Thythy_2A	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWL TNNVQIKRP
Salsal_2A	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWL TNNVQIKRP
Salalp_2A	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWL TNNVQIKRP

Oncmyk_2B	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWLTNNVQIKRP
Onckis_2B	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWLTNNVQIKRP
Salalp_2B	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWLTNNI QIKRP
Salsal_2B	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWLTNNVQIKRP
Thythy_2B	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWLTNNVQIKRP
Onctsh_2B	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRGYWLTNNVQIKRP
Cormar_2B	MAKGGEERVEWAIRLILLHTVDVHTAFPSLRLLHAVRRYWLTNNVQIKRP
Corclu_4	MVKGGERHVESVNELIVKRKLRVRTAYPSLRLIHAVRGYWLTNKINIKRP
Corlav_4	MVKGGERHVESVNELIVKRKLRVRTAYPSLRLIHAVRGYWLTNKINIKRP
Onckis_4	MVKGGERHVESVNELIVKRKLRVRTAYPSLRLIHVVRGYWLTNKINIKRP
Oncmyk_4	MVKGGERHVESVNELIVKRKLRVRTAYPSLRLIHVVRGYWLTNKINIKRP
Salsal_4	MVKGGERHVESVNELIVKRKLRVRTAYPSLRLIHVVRGYWLTNKINIKRP
Salalp_4	MVKGGERHVESVNELIVKRKLRVRTAYPSLRLIHVVRGYWLTNKINIKRP
Salfon_4	MVKGGERHVESVNELIVKRKLRVRTAYPSLRLIHVVRGYWLTNKINIKRP
Thythy_4	MVKGGERHVESVNELIVKRKLSVRTAYPSLRLIHAVRGYWLTNKINIKRP
	301
Cluhar2	TTGLLMYTMATRFCEIHLYGFWPFHRDHQGNVVKYHYD TLTYEFTSRA
Denclu_2	TTGLLMYTMATRFCEEIHLYGFWPFHRDAQGKPKVKYHYDALT YEYTSHS
Danrer_2	TTGLLMYTMATRFCEIHLYGFWPFADPDGKPKVKYHYD TLTYHYTSSA
Hipcom_2	TTGLLMYTMATRFCEEIHLYGFWPFSDAAGKAVKYHYD TLKYEYTSSS
Cormar_2A	TTGLLMYTMATRFCEEIHLYGFWPFPRDSQGIPVKYHYD TLTYEYTS HA
Oncmyk_2A	TTGLLMYTMATRFCEEIHLYGFWPFQDSQGKPKVKYHYD TLTYEYTS HA
Onctsh_2A	TTGLLMYTMATRFCEEIHLYGFWPFPRDSQGKPKVKYHYD TLTYEYTS HA
Thythy_2A	TTGLLMYTMATRFCEEIHLYGFWPFPRNSQGKPKVKYHYD TLTYEYTS HA
Salsal_2A	TTGLLMYTMATRFCEEIHLYGFWPFPRDSQGKPKVKYHYD TLTYEYTS HA
Salalp_2A	TTGLLMYTMATRFCEEIHLYGFWPFPRDSQGKPKVKYHYD TLTYEYTS HA
Oncmyk_2B	TTGLLMYTMATRFCEEIHLYGFWPFQDSQGKPKVKYHYD TLTYEYTS HA
Onckis_2B	TTGLLMYTMATRFCEEIHLYGFWPFQDSQGKPKVKYHYD TLTYEYTS HA
Salalp_2B	TTGLLMYTMATRFCEEIHLYGFWPFQDSQGKPKVKYHYD TLTYEYTS HA
Salsal_2B	TTGLLMYTMATRFCEEIHLYGFWPFQDSQGKSVKYHYD TLTYEYTS HA
Thythy_2B	TTGLLMYTMATRFCEEIHLYGFWPFKDSQGKPKVKYHYD TLTYEYTS HA
Onctsh_2B	TTGLLMYTMATRFCEEIHLYGFWPFQDSQGKPKVKYHYD TLTYEYTS HA
Cormar_2B	TTGLLMYTMATRFCEEIHLYGFWPFQDSQGKPKVKYHYD TLTYTYTSHA
Corclu_4	STGLLMYTLATRFCEIHLYGFWPFPRDSNGNVVKYHYD LLKYRYFSNA
Corlav_4	STGLLMYTLATRFCEIHLYGFWPFPRDSNGNVVKYHYD LLKYRYFSNA
Onckis_4	STGLLMYTLATRFCEIHLYGFWPFPRDANGNMVKYHYD DMLKYRYFSNA
Oncmyk_4	STGLLMYTLATRFCEIHLYGFWPFPRDANGNMVKYHYD DMLKYRYFSNA
Salsal_4	STGLLMYTLATRFCEIHLYGFWPFPRDANGNMVKYHYD DMLKYRYFSNA
Salalp_4	STGLLMYTLATRFCEIHLYGFWPFPRDANGKIVKYHYD DMLKYRYFSNA
Salfon_4	STGLLMYTLATRFCEIHLYGFWPFPRDANGKIVKYHYD DMLKYRYFSNA
Thythy_4	STGLLMYTLATRFCEIHLYGFWPFPRDANGNVVKYHYD DMLKYRYFSNA
	351
Cluhar2	SPHTMPLEFRTLSTLHKQ GALRLHTSSCSSPAA
Denclu_2	SPHTMPLEFRTLRLALHRQ GALRLHTGTCS PAA-
Danrer_2	SPHTMPLEFRTL SALHRQ GALRLHTGPKPPT-
Hipcom_2	SPHSMPLEFRTLRLALHHQ GALRLHTGNCHAQPE
Cormar_2A	SPHTMPLEFRTLSSLHRQ GALRLNTGSCDAGM-
Oncmyk_2A	SPHTMPLEFRTLSSLHRQ GALRLNTGSCDVGT-
Onctsh_2A	SPHTMPLEFRTLSSLHRQ GALRLNTGSCDTGM-
Thythy_2A	SPHTMPLEFRTLSSLHRQ GALQLNTGSCDARM-
Salsal_2A	SPHAMPLEFRTLSSLHRQ GALRLNTGSCDAGM-
Salalp_2A	SPHTMPLEFRTLSSLHRQ GALRLNTGSCDAGM-
Oncmyk_2B	SPHTMPLEFRTLSSLHRQ GALRLHTGSCDVGT-
Onckis_2B	SPHTMPLEFRTLSSLHRQ GALRLHTGSCDVGT-
Salalp_2B	SPHTMPLEFRTLSSLHRQ GALRLHTGSCGVGT-
Salsal_2B	SPHTMPLEFRTLSSLHRQ GALRLHTGSCDVGT-
Thythy_2B	SPHTMPLEFRTLSSLHRQ GALRLHTGSCDAGI-
Onctsh_2B	SPHTMPLEFRTLSSLHRQ GALRLHTGSCDVGT-
Cormar_2B	SPHTMPLEFRTLSSLHRQ GALRLHTGSCDAGT-
Corclu_4	GPHRMPLEFKTLKMLHSGALKLTTSKCES---
Corlav_4	GPHRMPLEFKTLKMLHSGALKLTTSKCES---
Onckis_4	GPHRMPLEFKTLKMLHSGALKLTTSKCES---
Oncmyk_4	GPHRMPLEFKTLKMLHSGALKLTTSKCES---
Salsal_4	GPHRMPLEFKTLKMLHSGALKLTTSKCES---
Salalp_4	GPHRMPLEFKTLKMLHSGALKLTTSKCES---
Salfon_4	GPHRMPLEFKTLKMLHSGALKLTTSKCES---
Thythy_4	GPHRMPLEFKTLKMLHSGALKLTTSKCES---

Figure 5B and C

CLUSTAL X (1.81) multiple sequence alignment

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1
Latcal_3      IVFSIGENFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Perflu_3      IVFSIGENFHSLLPA----VSPILN---KHYNCAVVGNSGILTGSHCGA
Serdum_3      IVFSIGENFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Stepar_3      IVFSIGENFRSLLPE----ASPILN---KHYNCAVVGNSGILTGSRGCP
Tetcal_3      VVFSVSNFSRSLLE----VPPILK---MHYNTCAVVGNSGILTGSSCGA
Monalb_3      IVFSISENFRSLLPK----VSPVLN---KHYNCAVVGNSGILTGSRGCP
Molmol_3      IVFSIGENFRSLLPE----TSPILN---KHFNVCAVVGNSGILTGSRGCA
Takrub_3      VVFSIGENFRSLLPE----TSPILQ---KHYNCAVVGNSGILTGSRGCG
Canlupfam_3   VVFSISNNFRSLLPD----VSPIVN---KHFNICAVVGNSGILTGSRGCG
Bostau_3      VVFSISNNFRSLLPD----VSPIVN---KRYNICAVVGNSGILTGSRGCP
Homsap_3      VVFSISNNFRSLLPD----VSPIMN---KHYNICAVVGNSGILTFIQCGR
Siltro_3      VVFSISNNFRSLLPD----TSPVMN---KRYNCAVVGNSGILTGSQCGA
Anocar_3      VVFSISNSFRMLLPD----VSPIQN---KHYNICAVVGNSGILVGSQCGQ
Musmus_3      VVFSISNNFRSLLPD----VSPIMN---KRYNCAVVGNSGILTGSRGCG
Pantro_3      VVFSISNNFRSLLPD----VSPIMN---KHYNICAVVGNSGILTGSRGCG
Ratnor_3      VVFSISNNFRSLLPD----VSPILN---KRYNICAVVGNSGILTGSRGCG
Galgal_3      VVFSISNNFRSLLPD----VSPILN---KHYNCAVVGNSGILTGSRGCG
Lepocu_3      VVFSISNNFRSLLPD----TSPILN---KQYNCAVVGNSGILTGSRGCP
Tetnig_3      IVFSIGENFRSLLPE----VSPIRQ---KHYNCAVVGNSGILTGSRGCG
Squaca_3      VVFSVSNFSRSLLE----VPPILK---MHYNTCAVVGNSGILTGSGCGA
Perfla_3      IVFSIGENFHSLLPA----VSPILN---KHYNCAVVGNSGILTGSRGCA
Salsal_3      IVFSIGENFRSLLPE----ASPIVN---KHYNCAVVGNSGILTGSRGCP
Serlaldor_3   IVFSIGENFRSLLPE----ASPILN---KHYNCAVVGNSGILTGSRGCP
Treber_3      IVFSISNNLKSLLPD----TSPIRN---KHYSMCAVVGNSGILTGSHCGP
Cynsem_3      IVFSIGENFRSLLPE----VSPIVN---KHYNCAVVGNSGILTGSRGCP
Paroli_3      IVFSISNNFRSLLPD----ASPVLN---KHYSVCAVVGNSGILTGSHCGP
Paroli_3b     IVFSIGENFRSLLPD----ASPILN---KHYNCAVVGNSGILTGSRGCP
Plaste_3      IVFSISNNFRSLLPD----ASPLLN---KHYSVCAVVGNSGILTGSHCGP
Plaste_3b     IVFSIGENFRSLLPE----ASPILN---KHYNCAVVGNSGILTGSRGCP
Erpcal3       VVFSISNNFRSLLPD----ASPVLN---KHYNCAVVGNSGILTGSRGCP
Calmil_3b     VVFSISNNFRMLLPE----VSPLLK---MHYNTCAVVGNSGILRGSRGCD
Hetzeb_3      IVFSVSNFSRSLLE----VPPILK---MHYNTCAVVGNSGILIGSRGCA
Latcha_3      VVFSISNHFKSLLPD----VSPILN---KCYNICAVVGNSGILTDSQCGA
Anates_3      IVFSIGENFRSLLPE----ASPILN---KHYNCAVVGNSGILTGSRGCP
Ampcit3       IVFSISENFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Auslim_3      IVFSIGENFRSLLPE----ASPILN---KRYNCAVVGNSGILTGSRGCA
Cypvar_3      IVFSIGENFRSLLPE----VSPILN---KQYNCAVVGNSGILTGSRGCA
Krymar_3      IVFSIGENFRSLLPE----VSPILD---KHYNCAVVGNSGILTGSRGCA
Funhet_3      IVFSIGENFRSLLPE----ASPVLN---KRYNCAVVGNSGILTGSRGCA
Gamaff3       IVFSIGDNFRSLLPD----VSPILN---MRYNCAVVGNSGILTGSRGCA
Orylat_3      MVFSIGENFRSLLPE----VSPILN---RHYNCAVVGNSGILTGLCGA
Orenil_3      IVFSIGENFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Mayzeb_3      IVFSISDNFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Punnye_3      IVFSISDNFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Punnye_3a     IVFSISDNFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Neobri_3      IVFSIGENFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Misang_3      VVFSIGENLRSLLPD----SSPIIN---KRYNTCAVVGNSGILTGSRGCP
Sinrhi3       IVFSIGENLRSLLPD----SSPVLN---KHFNTCAVVGNSGILTGSRGCA
Singra_3      VVFSIGENLRSLLPD----SSPVLN---KRFNSCAVVGNSGILTGSRGCT
Hapbur_3      IVFSISDNFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Astcal_3      IVFSISDNFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP
Notfur_3      IVFSIGENFRSLLPN----VSPILN---KHYNCAVVGNSGILTGSRGCT
Cypcar_3      YVFSIGENLRSLLPD----SSPVLN---KRFNSCAVVGNSGILTGSRGCA
Poefor3       IVFSIGENFRSLLPE----VSPVLN---KRYNICAVVGNSGILTGSRGCA
Poelat_3      IVFSIGENFRSLLPE----VSPVLN---KRYNICAVVGNSGILTGSRGCA
Poeret_3      IVFSIGENFRSLLPE----VSPVLN---KRYNCAVVGNSGILTGSRGCA
Angang_3      VVFSIGENLMSLLPE----SSPIVPE---RRFNVCALVGNISGILTGSRGCP
Xipmac_3      IVFSIGENFRSLLPE----VSPVLN---KRYNCAVVGNSGILTGSRGCA
Masarm_3      IVFSIGENFYSLVPE----VSPILN---KHYNICAIIGNSGILSGSRGCS
Permag_3      VVYSIGENFYSLLE----ASPILH---RHYKRCVVGNSGILTGSKCGT
Gnapet3       VVFSISSNFKSLLPE----SSPIQN---KHYNCAVVGNSGILTGSSCGP
Ostbic_3      VVFSVSSFRSLLPD----SSPIEK---KHYNCAVVGNSGILTGSSCGP
Gadmor_3      IVFSIGQNFHSLLE----ASPILN---KHYNCAVVGNSGILTGSKCGP
ScIfor_3      VVFSVSGSFRSLLPD----SSPVEK---KHYNCAVVGNGGILTGSSCGP
Acapol3       IVFSIGENFRSLLPD----VSPILN---KHYNCAVVGNSGILTGSRGCP
Ampoce_3      IVFSIGENFRSLLPD----VSPILN---KHYNCAVVGNSGILTGSRGCP
ScIfor_3b     VVFAISNNFKSLLPV----TSPIQN---KHYNTCAVVGNSGILTSSHCHG
Ostbic_3b     VVFAISNNFKSLLPE----TSPIQN---KHYNTCAVVGNSGILTSSHCHG
Parkin_3      VVFSISSNFKSLLPE----SSPIQN---KHYNCAVVGNSGILTGSSCHG
Ampper3       IVFSIGENFRSLLPD----VSPILN---KHYNCAVVGNSGILTGSRGCP
Oncmyk_3      IVFSIGENFKSLLPE----ASPIVN---KHYNCAVVGNSGILTGSRGCP
Gasacu_3      IVFSIGENFRSLLPE----VSPILN---KHYNCAVVGNSGILTGSRGCP

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Labber_3	IVFSIGENFRSLLPE----VSPILN---KHYNVCavgvngsgiltgsrcgp
Panbuc_3	VVFSISSFRSLLPD----HSPILN---KHYNTCAVVGNSGILIGSRCGP
Parhas3	VVFSIGENFRSLLPD----SSPVLN---KRYNTCAVVGNSGILTGSRCGA
Cluhar_3	VVFSIGENFRSLLPE----LSPILN---KRYNTCAVVGNSGILTGSRCP
Aloalo_3	VVFSIGENFRSLLPE----ISPILN---KRYNTCAVVGNSGILTGSRCP
Panhyp_3	VVFSIGENFRSLLPD----SSPILN---KRYNTCAVVGNSGILTGSRCGA
Eleele_3	VVFSIGENFRSLLPD----SSPILN---KLYNTCAVVGNSGILTGSRCGA
Denclu_3	IVFSIGENFKSLLPE----TSPVMN---KLYNTCAVVGNSGILMGSRCP
Sarpil_3	VVFSIGENLRSLLPE----ISPILN---KRYNTCAVVGNSGILTGSRCP
Eigvir_3	VVFSIGENFRSLLPD----SSPILN---KRYNTCAVVGNSGILTDSRCGS
Aptalb_3	VVFSIGENFRSLLPD----SSPVLN---KRYNTCAVVGNSGILTGSRCGA
Sinans_3	VVFSIGENLRSLLPD----SSPVLN---RRFNTCAVVGNSGILTGSRCGA
Pygnat_3	VVFSIGENFRSLLPD----SSPILN---KRYNTCAVIGNSGILTGSRCP
Astmex_3	IVFSIGENFRSLLPD----SSPVLN---KRYNTCAVVGNSGILTGSRCP
Caraur_3	VVFSIGENFRSLLPD----SSPVLN---KRFNSCAVVGNSGILTGSRCGA
Danrer_3	VVFSIGENLRSLLPD----ASPVLN---KRYNTCAVVGNSGILTGSRCP
Ictpun_3	YVFSIGENFRSLLPD----SSPILN---KRYNTCAVVGNSGILTGSRCGA
Plealt_3	YVFSIGENFKSLLPE----ASPVVN---KHYNVCavgvngsgiltgsrcga
Plealt_9	YVFSISNFKSLLPE----TSPILN---KHYNVCavgvngsgiltgshcgs
Gasacu_9	IVFSISNNLKSLLPD----ASPIRN---KHYSVCAVVGNSGILTGSHCGP
Parkin_9	VVFAISGNFKSLLPD----SSPILN---KHYNMCavgvngsgiltgsrcgp
Acapol_9	IVFSISNFKSLLPE----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Larcro_9	IVFSISNFKSLLPE----TSPIHN---KHYSICSVVGNSGILTGSHCGP
Notcor_9	IVFSISNNLKSLLPD----TSPIRN---KHYSMCAVVGNSGILTGSHCGP
Latcal_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Serlaldor_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Monalb_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Serdum_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Perflu_9	IVFSISNNLKSLLPD----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Perfla_9	IVFSISNNLKSLLPD----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Stepar_9	IVFSISNFKSLLPE----TSPIHN---KHYSVCAVVGNSGILTGSHCGP
Molmol_9	IVFSISNFKSLLPD----TSPIRN---KHYSICSVVGNSGILTGSHCGP
Hipcom_9	IVFSISNFKSLLPD----ASPILD---KHGTCavgvngsgiltgshcgs
Takrub_9 B	IVFSISNFKSLLPD----TSPIHN---KHYSLCSVVGNSGILTGSHCGD
Takrub_9	IVFSISNFKSLLPD----TSPIHN---KHYSLCSVVGNSGILTGSHCGA
Cynsem_9	IVFSISNFKSLLPD----ISPILN---KHYSMCAVVGNSGILTGSHCGP
Scomax_9	IVFSISNNLKSLLPD----ISPILN---KHYSVCAVVGNSGILTGSHCGP
Corlav_9	VVFSISNNLKSLLPD----ASPIQN---KHYNVCavgvngsgiltgshcgp
Oncmky_9	VVFSISNFKSLLPD----ASPIQN---KHYNVCavgvngsgiltgshcgp
Salsal_9	VVFSISNNLKSLLPD----ASPIQN---KHYNVCavgvngsgiltgshcgp
Onctsh_9	VVFSISNNLKSLLPD----ASPIQN---KHYNVCavgvngsgiltgshcgp
Salalp_9	VVFSISNNLKSLLPD----ASPIQN---KHYNVCavgvngsgiltgshcgp
Ampoce_9	IVFSISNFKSLLPE----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Amppe9	IVFSISNFKSLLPE----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Labber_9	IVFSISNFKSLLPD----TSPIRN---KHYSICSVVGNSGILTGSHCGP
Umbpyg_3B	IVFSIGENFQSLLE----VSPIVD---KHYNVCavgvngsgiltgsrcgp
Esoluc_3b	VVFSIGENFKSLLPE----ASPIAN---KHYNVCavgvngsgiltgsrcgp
Gadmor_9	IVFSISNNFKSLLPD----MSPIYN---KHYNVCavgvngsgiltgsrcgn
Umbpyg_9	VVFSISNNLKSLLPD----ASPIQN---KHYNVCavgvngsgiltgshcgp
Esoluc_9	VVFSISNNLKSLLPD----ASPIQN---KHYNVCavgvngsgiltgshcgp
Permag_9	IVFSISNFKSLLPD----TSPILN---KHYSVCSVVGNSGILTDSHCGP
Bolpec_9	IVFSISNNFKSLLPD----TSPILN---KHYSVCSVVGNSGILTDSHCGP
Poefor9	IVFSISNFKSLLPE----ASPILN---KHYSTCAVVGNSGILTGSHCGP
Masarm_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Angjap_9	VVFSIGENFMSLLPE----SSPIVPE---RRFNVCALVNGSGVLTGSRCP
Poelat_9	IVFSISNFKSLLPE----ASPILN---KHYSTCAVVGNSGILTGSHCGP
Poeret_9	IVFSISNFKSLLPE----ASPILN---KHYSTCAVVGNSGILTGSHCGP
Xipmac_9	IVFSISNFKSLLPD----ASPIRN---KHYSTCAVVGNSGILTGSHCGP
Hapbur_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Orylat_9	IVFSISNFKSLLPE----ISPILN---KHYSVCAVVGNSGILTGSHCGP
Gamaff_9	IVFSISNFKSLLPD----ASPIRN---KHYSTCAVVGNSGILTGSHCGP
Neobri_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Funhet_9	IVFSISNFKSLLPE----TSPILN---KHYSTCAVVGNSGILTGSHCGP
Punnye_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Cypvar_9	IVFSISNFKSLLPE----TSPILN---KHYSTCAVVGNSGILTGSHCGP
Krymar_9	IVFSISNFKSLLPD----ISPILN---KHYSMCAVVGNSGILTGSHCGP
Notfur_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Notpie_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Orenil_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Auslim_9	IVFSISNFKSLLPE----TSPITN---RHYSVCAVVGNSGILTGSHCGP
Anates_9	IVFSISNFKSLLPD----TSPIHN---KHYSMCAVVGNSGILTGSHCGP
Astcal_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Mayzeb_9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Orymel_9	IVFSISNFKSLLPD----ISPILN---KHYSVCAVVGNSGILTGSHCGP
Ampcit9	IVFSISNFKSLLPD----TSPILN---KHYSMCAVVGNSGILTGSHCGP
Macfas_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Macmul_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ

Macnem_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Musmus_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Ponabe_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Papanu_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Nomleu_2	ATMNVSQNLYELLPR----TSPLKN---KHFRCAIVGNSGVLLNSGCGQ
Pantro_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Latcha_2	ATMNISQNLKYLLPR----VSPLKN---RHFQCAIVGNSGILLNSNCGR
Gnapet2	ATMNISDSLYQLLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGP
Panbuc_2b	ATTNVSENLYQLLPS----VSPLKH---QHYGRCAIVGNSGILLNSSCGQ
Ostbic_2	ATMNVSNELYELLPK----VSPLKN---QFHKRCAIVGNSGILLNSSCGK
Sinrhi2	ATTNISENLYHLLPT----VSPMKN---QHYKQCAIVGNSGILLNSSCGR
Hetzeb_2	ATLNISHSLYELLPR----TSPMKN---KHFKQCAIVGNSGILLNSGCGQ
Hipcom_2	PTTNISENLHRLLPs----VSPLKN---RHYRLCAIVGNSGILLNSSCGS
Prigla_2	ATLNVSHSLYELLPR----ISPMKN---KHYKQCAIVGNSGILLNSGCGQ
Scytor_2	ATLNISHSLYELLPR----TSPMKN---KHFKQCAIVGNSGILLNSGCGQ
Tetcal_2	ATLNISYSLYELLPR----TSPMKN---KHFKQCAIVGNSGILLNSGCGQ
Rhityp_2	ATLNISHSLYELLPR----TSPMKN---KHFKCAIVGNSGILLKSGCGQ
Parkin_2b	ATTNVSENHALLPT----TSPMKN---RHYQRCAIVGNSGILLNSSCGK
Angang_2	ATNVNISELYRLLPT----VSPMKD---RHYQRCAIVGNSGILLNSSCGR
Pygnat_2	ATTNISENLYRLLPT----ASPMKN---QHYEQCAIVGNSGILLNSSCGA
Parkin_2	ATMNVASLYQLLPT----VSPMKN---QHHKCAIVGNSGILLNSSCGP
Gorgor_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Thegel_2	ATMNISQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Tupchi_2	ATMNVSQNLYELLPR----TSPLKN---KHFRCAIVGNSGVLLNSGCGQ
Galgai_2	ATMNVSQNLYELLPR----TSPLKG---KQFPSCAIVGNSGVLLGSGCGP
Eleele_2	ATTNISENLYRLLPT----VSPMKN---QHYKCAIVGNSGILLNSSCGP
Danre_2	ATTNISENLYHLLPT----VSPMKN---QHYKCAIVGNSGILLNSSCGR
CanlupFam_2	ATMNVSQNLYDLLPR----TSPLKN---KHFRCAIVGNSGVLLNSGCGQ
Aloalo_2	PTMNVSENLYRLLPT----ASPMKN---QRHKCAIVGNSGILLNSSCGS
Astmex_2	ATTNISENLYRLLPT----VSPMKN---QHYERCAIVGNSGILLNSSCGP
Sinans_2	ATTNISENLYHLLPT----VSPMKN---QHYKQCAIVGNSGILLNSSCGR
Scifor_2	ATLNVPNELYELLPR----VSPLKN---QFYKCAIVGNSGILLNSSCGQ
Ceraty_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Anocar_2	ATMNVSQNLYALLPR----TSPLKG---KHFRCAIVGNSGILLNSGCGE
Anates_2	PTTNISENLYRLLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGH
Ampbic_2	PTTNISENLYRLLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGL
Sarpil_2	PTMNVSENLYSLPT----ASPMKN---QHHKCAIVGNSGILLNSSCGS
Xenlae_2	ATMNISKNLYELLPR----TSPLKN---KHFKTCAIVGNSGILLNSGCGK
Cluhar_2	PTMNVSENLYRLLPT----ASPMKN---QHHKCAIVGNSGILLNSSCGP
Cypcar_2	ATTNISENLYNLLPT----VSPMKN---QHYKQCAIVGNSGILLNSSCGR
Denclu_2	ATTNISENLYRLLPT----ASPMKN---QHRLCAIVGNSGILLNSSCGP
Notpie_2	PTTNISENLYRLLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Ercal2	ATMNISKSLYQLIPK----QSPLKG---QHFQKCAIVGNSGVLLNSGCGK
Amical_2	ATTNISETLYQLIPK----VSPMKQ---QHYRCAIVGNSGILLNSRCGE
Lepocu_2	ATMNVSETLYQLIPK----VSPMKK---QHYRQCAIVGNSGILLKSRCGA
Homsap_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Bostau_2	ATMNVSQNLYELLPR----TSPLKN---KHFGTCAIVGNSGVLLNSGCGQ
Caraur_2	ATTNISENLYNLLPT----VSPMKN---RHYKQCAIVGNSGILLNSSCGR
Thythy_2B	PTTNISENLYRLLPT----TSPMKN---QYHRRCAIVGNSGVLLNSSCGP
Onctsh_2B	PTTNISENLYQLLPT----ASPMKN---QHRRCAIIGNSGILLNSSCGP
Salsal_2B	PTTNISENLYQLLPT----VSPMKN---QYHRRCAIIGNSGILLNSSCGP
Oncmyk_2B	PTTNISENLYQLLPT----ASPMKN---QHRRCAIIGNSGILLNSSCGP
Onckis_2B	PTTNISENLYQLLPT----ASPMKN---QHRRCAIIGNSGILLNSSCGP
Salsal_2A	PTTNISENLYRLLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Thythy_2A	PTTNISENLYRLLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Salalp_2A	PTTNISENLYRLLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Corlav_2A	PTTNISENLYRLLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Cormar_2A	PTTNISENLYRLLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Onctsh_2A	PTTNISENLYRLLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Oncmyk_2A	PTTNISENLYQLLPT----ASPMKN---QHRRCAIVGNSGIQLNSSCGP
Neobri_2	PTTNISENLYRLLPT----VSPMKN---QHYRCAIVGNSGILLNSSCGP
Takrub_2	PTTNVSETLYHFLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGP
Tetnig_2	PTTNISETLYHFLPS----VSPMKN---QHRRCAIVGNSGVLLNSSCGP
Orenil_2	PTTNISENLYRLLPT----ISPMKN---QHYRCAIVGNSGILLNSSCGP
Orylat_2	PTTNISENLYRLLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGS
Krymar_2	PTTNISENLYRLLPT----ASPMRR---QHRRCAIVGNSGVLLNSSCGP
Notfur_2	PTTNISENLYRLLPT----ASPMKN---QHRRCAIVGNSGILLNSSCGP
Poelat_2	PTTNISENLYRLLPT----ASPMKN---QYHRRCAIVGNSGILLNSSCGP
Gadmor_2	PTTNISENLYRLLPT----VSPMRN---QHRRCAIVGNSGILLNSSCGQ
Xipmac_2	PTTNISENLYRLLPT----ASPMKN---QYHRRCAIVGNSGILLNSSCGP
Poeret_2	PTTNISENLYRLLPT----ASPMKN---QYHRRCAIVGNSGILLNSSCGS
Astcal_2	PTTNISENLYRLLPT----VSPMKN---QHYRCAIVGNSGILLNSSCGP
Hapbur_2	PTTNISENLYRLLPT----VSPMKN---QHYRCAIVGNSGILLNSSCGP
Acapol_2B	PTTNISENLYRLLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGL
Ampoce_2A	PTTNISENLYRLLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGL
Acapol_2A	PTTNISENLYRLLPT----VSPMKN---QHRRCAIVGNSGILLNSSCGL
Mayzeb_2	PTTNISENLYRLLPT----VSPMKN---QHYRCAIVGNSGILLNSSCGP

Punnye_2	PTTNISENLYRLLPT----VSPMKN---QHYRRCaIVGNSGILLNSSCGP
Latcal_2	PTTNISENLYRLLPT----VSPMKN---QHRRRCaIVGNSGILLNSSCGP
Singra_2	ATTNISENLYHLLPT----VSPMKN---QHYKQCaIVGNSGILLNSSCGR
Auslim_2	PTTNVSENLYRLLPT----VSPLKH---QHRRSCaIVGNSGVLLNSSCGP
Monalb2	PTTNISENLYRLLPT----VSPMKN---QHX-----TGKK----NSSCGP
Ampoce_2B	PTTNISENLYRLLPT----VSPMKN---QHRRRCaIVGNSGILLNSSCGL
Chiham_2	PTTNISENLYRLLPT----VSPMKN---QHHKRCaIVGNSGILLNSSCGP
Gasacu_2	PTTNVSENLYRLLPT----ASPMKN---QHRRRCaIVGNSGILLNSSCGP
Gymacu_2	PTTNISENLYRLLPT----VSPMKN---QHHKRCaIVGNSGILLNSSCGP
Labber_2	PTTNISENLYRLLPT----ASPLKN---QHRRRCaIVGNSGILLNSSCGP
Cypvar_2	PTTNISENLYRLLPT----ASPLKN---QYHKRCaIVGNSGILLNSSCGP
Funhet_2	PTTNISEDLYRLLPT----ASPMKN---QYHRRCaIVGNSGILLNSSCGP
Larcro_2	PTTNISQNLyRLLPT----VSPMKN---QHRRRCaIVGNSGILLNSSCGS
Paroli_2	PTTNISENLYRLLPT----VSPMKN---QHRRRCaIVGNSGILLNSSCGH
Perflu_2	PTTNISENLYRLLPT----VSPMKN---QHRRRCaIVGNSGILLNSSCGP
Serdum_2	PTTNISENLYRLLPT----VSPMKN---QHRRRCaIVGNSGILLNSSCGP
Stepar_2	PTTNISENLYRLLPT----VSPMKN---QHRRRCaIVGNSGILLNSSCGL
Notcor_2	PTTNISENLYRLLPT----VSPMKN---QHHKRCaIVGNSGILLNSSCGP
Treber_2	PTTNISENLYRLLPT----VSPMKN---QHHKRCaIVGNSGILLNSSCGP
Serlaldor_2	PTTNISENLYRLLPT----ISPMKN---QHRRRCaIVGNSGILLNSSCGP
Plaste_2	PTTNISENLYRLLPT----VSPMKN---QHRRRCaIVGNSGVLLNSSCGQ
Clabat_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLKSGCGK
Ictpun_4A	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLKSGCGK
Panhyp_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLKSGCGK
Umbpyg_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLRSGCGR
Esoluc_4	ATLNVSRTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGR
Plealt_4	ATLNVSQTLHSLLPD----VSPLKN---KRFNTCaVVGNSGVLLNSSCGK
Onckis_4B	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Onckis_4A	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Onctsh_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Oncmk_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Corlav_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Astmex_4A	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLKSGCGK
Pygnat_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGILLKSGCGK
Aloalo_4	ATLNVSQTLHKLLPE----VSPLKN---RRFKTCaVVGNSGVLLSSGCGQ
Cluhar_4	ATLNVSQTLHKLLPE----VSPLKN---RRFKTCaVVGNSGVLLSSGCGH
Denclu_4	ATLNVSRTLHNLPE----VSPLKN---RRFKTCaVVGNSGILLNSGCGR
Konpun4	ATLNVSQTLHKLLPE----VSPLKN---RRFKTCaVVGNSGVLLNSGCGQ
Sarpil_4	ATLNVSQTLHKLLPE----VSPLKN---RRFKTCaVVGNSGVLLSSGCGQ
Caraur_4	ATFNISQTLHSLLPD----VSPMKN---KTFKTCaVVGNSGVLLKSGCGK
Cteide_4	ATFNVSHTLHSLLPD----VSPLKN---KMFKTCaVVGNSGILLKSGCGK
Petmar_4	ATTNVSHSLHALLPT----APPLRG---GRYGSCaVVGNSGILEGSACGE
Cypcar_4	ATFNISQTLHSLLPD----VSPLKN---KTFKTCaVVGNSGVLLKSRGCGK
Danrer_4	ATFSVSQTLHSLLPD----VSPLKN---KTFKTCaVVGNSGILLKSGCGK
Misang_4	ATFNVTHTLHSLLPD----VSPLKN---KFKTCaVVGNSGILLKSRGCGK
Angjap_4	ATLNVSRALHSLLPD----VSPMKN---RRFKTCaVVGNSGVLLNSGCGP
Cypcar_4A	ATFNISQTLHSLLPD----VSPLKN---KTFKTCaVVGNSGVLLKSRGCGK
Angang_4	ATLNVSRALHSLLPD----VSPMKN---RRFKTCaVVGNSGVLLNSGCGR
Cypcar_4B	ATFNVSQTLHSLLPD----VSPLKN---KTFKTCaVVGNSGVLLKSGCGK
Sinans_4A	VTFNISQTLHSLLPD----VSPLKN---KTFKTCaIVGNSGILLKSRGCGK
Sinans_4B	ATFNVSQTLHSLLPD----VSPLKN---KTFKTCaVVGNSGVLLKSGCGK
Singra_4A	ATFNISQTLHSLLPD----VSPLKN---KTFKTCaVVGNSGILLKSRGCGK
Aptalb_4	AKLSVSHTLHSLLPD----VSPLKN---RRFKTCaVVGNSGVLLKSGCGK
Elgvir_4	ATLNVSHTLHSLLPD----VSPLKN---KRFGTCaVVGNSGVLLKSGCGK
Eleele_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLKSGCGK
Parhas_4	AKLNVSHTLHSLLPD----VSPLKN---RRFKTCaVVGNSGVLLKSGCGK
Scifor_4	ATLSISQSLHSLLPD----VSPMKN---RRFKTCaVVGNSGILLKSGCGK
Gnapet4	ATLNVSHTLHSLLPD----TSPMKN---RRFKTCaVVGNSGVLLNSGCGK
Ostbic_4	ATLTISQTLHSLLPD----VSPLKN---KRFKTCaVVGNSGILLNSGCGK
Parkin_4	ATLNVSHTLHSLLPD----ASPMKN---RRFKTCaVVGNSGVLLNSGCGK
Panbuc_4	ATFNVSHTLHSLLPD----VSPMKN---KRFKTCaVVGNSGVLLNSGCGR
Erpcal4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Salsal_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Saltru_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Salalp_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Salfon_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLNSGCGK
Thythy_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLHSGCGK
Calmil_4	ATLNVSRNLHSLLPD----VSPMKN---KRFNACaVVGNSGILLGSGCGK
Hetzeb_4	ATLNVSRNLHSLLPD----VSPMKN---KRFSTCaVVGNSGILLGSGCGK
Rhityp_4	ATLNVSRNLHSLLPD----VSPMKN---KRFSSCaVVGNSGILLGSGCGK
Scytor_4	ATLNVSRNLHSLLPD----VSPMKN---KRFSTCaVVGNSGILLGSGCGK
Squaca_4	ATLNVSRNLHSLLPD----VSPMKN---KRFSTCaVVGNSGILLGSGCGK
Amical_4	ATLNVSRNLHSLLPD----VSPMKN---RRFKTCaVVGNSGILLNSGCGR
Lepocu_4	ATLNVSRNLHSLLPD----VSPMKN---RRFKTCaVVGNSGILLNSGCGK
Agema_4	ATLNVSHTLHSLLPD----VSPLKN---KRFKTCaVVGNSGVLLKSGCGK
Anocar_4	ATLNVSRNLHSLLPD----VSPMKN---RRFKMCAVVGNSGILLDSGCGK
Canlupfam_4	ATLNVSRNLHSLLPD----VSPMKN---RRFKTCaVVGNSGILLDSECGK

Crigri_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Galgai_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Mesaur_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Homsap_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Notscuscu_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Psetextex_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Musmus_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Pogvit_4	ATLNISQDLHRLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Promuc_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Pantro_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Pytbiv_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Ratnor_2	ATMNVSQNLLEYLLPR----TSPLKN---KHFKTCAIVGNSGVLLNSGCGQ
Ratnor_4	ATLNISHDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSGCGK
Siltro_2	ATMNIKSNLEYLLPR----TSPLKN---KHFKTCAIVGNSGILLNSGCGK
Siltro_4	ATLNISQNLHSLLEPE----VSPMKS---RRFRTCAVVGNSGILLNSGCGK
Susscr_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSECGK
Taegut_4	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLNSGCGK
Termextri_4M	ATLNISQDLHSLLEPE----VSPMKN---RRFKTCAVVGNSGILLDSACGK
Thasirsir_4	ATLNISQDLHRLLEPE----VSPMKN---RRFKACAVVGNSGILLDSGCGK
Xenlae_4B	ATLNISQNLHSLLEPE----VSPMKS---RRFRTCAVVGNSGILLNSGCGN
Xenlae_4A	ATLNISQNLHSLLEPE----VSPMKS---RRFRTCAVVGNSGILLSSGCGK
	51
Latcal_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Perflu_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Serdum_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Stepar_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Tetcal_3	DIDKSDFVFR--CNFAP-TETTFENDVGRKTNLTFN-PSILEKYNNLLT
Monalb_3	QIEKFDFVFR--CNFAP-TEVFKKDVGRRTNMETFN-PSILEKYNNLLT
Molmol_3	QIEKFDFVLR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Takrub_3	QIDRFDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Canlupfam_3	EIDKSDFVFR--CNFAP-TEAFQRDVGRKTNLTFN-PSILEKYNNLLT
Bostau_3	QIDKSDFVFR--CNFAP-TEAFQRDVGRKTNLTFN-PSILEKYNNLLT
Homsap_3	EIDKSDFVFR--CNFAP-SEAFQRDVGRKTNLTFN-PSILEKYNNLLT
Siltro_3	EIDKADFVFR--CNFAP-TEGFQKDVGRKTNLTFN-PSILEKYNNLLT
Anocar_3	EIDKYDFVFR--CNFAP-TEAFHKDVGRKTNLTFN-PSILEKYNNLLT
Musmus_3	EIDKSDFVSR--CNFAP-TEAFHKDVGRKTNLTFN-PSILEKYNNLLT
Pantro_3	EIDKSDFVFR--CNFAP-TEAFQRDVGRKTNLTFN-PSILEKYNNLLT
Ratnor_3	EIDKSDFVFR--CNFAP-TEAFHKDVGRKTNLTFN-PSILEKYNNLLT
Galgai_3	EIDKSDFVFR--CNFAP-TEAFQKDVGRKTNLTFN-PSILEKYNNLLT
Lepocu_3	EIDKSDFIFR--CNFAP-TEIFHKDVGRKTNLTFN-PSILEKYNNLLT
Tetnig_3	EIDSLDFVFR--CNFAP-TELFKKDVGRRTNMETFN-PSILEKYNNLLT
Squaca_3	EIDKSDFVFR--CNFAP-TETFEKDVGRKTNLTFN-PSILEKYNNLLT
Perfla_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Salsal_3	EIEKFDFVFR--CNFAP-TEIFRRDVGRRTNLTFN-PSILEKYNNLLT
Serlaldor_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Treber_3	EIDQADFVFR--CNFAP-TEIYSKDVGRKTNLTFN-PSILERYNNLLT
Cynsem_3	QIEKFDFVFR--CNFAP-TEVFKKDVGRRTNMETFN-PSILEKYNNLLT
Paroli_3	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNLTFN-PSILERYNNLLT
Paroli_3b	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Plaste_3	EIDQADFVFR--CNFAP-TEVYSKDVGRKTNLTFN-PSILERYNNLLT
Plaste_3b	QIEKFDFVFR--CNFAP-TELFKKDVGRQTNMETFN-PSILEKYNNLLT
Erpcal3	EIDKSDFIFR--CNFAP-TEIFQKDVGRKTNLTFN-PSILEKYNNLLT
Calmil_3b	SIDKSDFVFR--CNFAP-TEFFEKDVGRKTNLTFN-PSILEKYNNLMA
Hetzeb_3	DIDKSDFVFR--CNFAP-TESEFEKDVGRKTNLTFN-PSILEKYNNLLT
Latcha_3	EIDQSDFVFR--CNFAP-TEIFHKDVGRKTNLTFN-PSILEKYNNLLT
Anates_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNLTFN-PSILEKYNNLLT
Ampcit3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Auslim_3	HIERDYVFR--CNFAP-TEIFRKDVGRRTNMETFN-PSILEKYNNLLT
Cypvar_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Krymar_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Funhet_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Gamaff3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Orylat_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Orenil_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Mayzeb_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Punnye_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Punnye_3a	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Neobri_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Misang_3	EIDKYDFVFR--CNFAP-TEVFRKDVGRRTNLTFN-PSILEKYNNLLT
Sinrhi3	QIDSYDFVFR--CNFAP-TEVFRDVGRRTNLTFN-PSILEKYNNLLT
Singra_3	QIDSYDFVFR--CNFAP-TEAFRRDVGRRTNLTFN-PSILEKYNNLLT
Hapbur_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Astcal_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Notfur_3	QIEKYDFVFR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Cypcar_3	QIDSYDYVFR--CNFAP-TEVFRDVGRRTNLTFN-PSILEKYNNLLT
Poefor3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT
Poelat_3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMETFN-PSILEKYNNLLT

Poeret_3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Angang_3	EIDRSDFVFR--CNFAP-TEIFHRDVGRRTNLTTFN-PSILEKYNNLLT
Xipmac_3	QIEKYDFVLR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Masarm_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Permag_3	QIDSDFVFR--CNFAP-TEVFKKDVGRRTNMTTFN-PSILEKYNNLLT
Gnapet_3	QIDKSDVFR--CNFAP-TEVFHKDVGHTNLTTFN-PSILEKYNNLLT
Ostbic_3	RIDSSDFVFR--CNFAP-TELFKKDVGRRTNLTTFN-PSILEKYNNLLT
Gadmor_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
ScIfor_3	RIDGSDVFR--CNFAP-TELFHRDVGRRTNLTTFN-PSILEKYNNLLT
Acapol_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Ampoce_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
ScIfor_3b	EIDRFDFVFR--CNFAP-TELFHKDVGHTNITTFN-PSILEKYNNLLT
Ostbic_3b	EIDRFDFVFR--CNFAP-TELFHKDVGHTNITTFN-PSILEKYNNLLT
Parkin_3	QIDESDFVFR--CNFAP-TEVFHKDVGHTNLTTFN-PSILEKYNNLLT
Amppe_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Oncmyk_3	EIEKFDFVFR--CNFAP-TEIFHRDVGRRTNLTTFN-PSILEKYNNLLT
Gasacu_3	QIEKFDFVFR--CNFAP-TEIFKKDVGRRTNMTTFN-PSILEKYNNLLT
Labber_3	QIEKFDFVFR--CNFAP-TEVFKKDVGRRTNMTTFN-PSILEKYNNLLT
Panbuc_3	EIDRYDFVFR--CNFAP-TEAFKKDVGRRTNLTTFN-PSILEKYNNLLT
Parhas_3	AIDKYDFVFR--CNFAP-TEAFKKDVGRRTNLTTFN-PSILEKYNNLLT
Cluhar_3	EIDKFDFVFR--CNFAP-TEVFRKDVGRHTNLTTFN-PSILEKYNNLLT
Aloalo_3	EIDKFDFVFR--CNFAP-TEVFRKDVGRHTNLTTFN-PSILEKYNNLLT
Panhyp_3	AIDAYDFVFR--CNFAP-TEVFRKDVGRHTNLTTFN-PSILEKYNNLLT
Eleele_3	TIDQYDFVFR--CNFAP-TEVFRKDVGRHTNLTTFN-PSILEKYNNLLT
Denclu_3	DIDKYDFVFR--CNFAP-TELFKKDVGRRTNLTTFN-PSILEKYNNLLT
Sarpil_3	EIDKFDFVFR--CNFAP-TEVFRKDVGRHTNLTTFN-PSILEKYNNLLT
Eigvir_3	AIDKYDFVFR--CNFAP-TEVFRKDVGRHTNLTTFN-PSILEKYNNLLT
Aptalb_3	AIDRYDFVFR--CNFAP-TEAFKKDVGRRTNLTTFN-PSILEKYNNLLT
Sinans_3	QIDSDFVFR--CNFAP-TEVFRDVGRRTNLTTFN-PSILEKYNNLLT
Pygnat_3	TIDKYDFVFR--CNFAP-TEVFRDVGRRTNLTTFN-PSILEKYNNLLT
Astmex_3	TIDKYDFVFR--CNFAP-TEVFRDVGRRTNLTTFN-PSILEKYNNLLT
Caraur_3	QIDSDFVFR--CNFAP-TEIFRRDVGRRTNLTTFN-PSILEKYNNLLT
Danrer_3	EIDKYDFVFR--CNFAP-TEVFRDVGRRTNLTTFN-PSILEKYNNLLT
Ictpun_3	AIDAYDFVFR--CNFAP-TEVFRDVGRRTNLTTFN-PSILEKYNNLLT
Plealt_3	EIEKFDFVFR--CNFAP-TEIFRRDVGRRTNMTTFN-PSILEKYNNLLT
Plealt_9	EIDKADFVFR--CNFAP-TEVFYKDVGRKTNMTTFN-PSILEHYNNLLT
Gasacu_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Parkin_9	EIDKFNIFR--CNFAP-TEIYHRDVGRRTNMTTFN-PSILERYNNLLT
Acapol_9	EIDEADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Larcro_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Notcor_9	EIDQADFVFR--CNFAP-TEIYSKDVGKTNLTTFN-PSILERYNNLLT
Latcal_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Serlaldor_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Monalb_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Serdum_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Perflu_9	EIDQADFVFR--CNFAP-TEFYSKDVGKTNLTTFN-PSILERYNNLLT
Perfla_9	EIDQADFVFR--CNFAP-TEFYSKDVGKTNLTTFN-PSILERYNNLLT
Stepar_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Molmol_9	EIDQADFVFR--CNFAP-TDIYSKDVGKTNLTTFN-PSILERYNNLLT
Hipcom_9	EIDRADFVFR--CNFAP-TEVYAKDVGKTNLTTFN-PSILERYNNLLT
Takrub_9 B	NIDQADFVFR--CNFAP-TEVYSKDVGKTNMTTFN-PSILERYNNLLT
Takrub_9	NIDQADFVFR--CNFAP-TEVYSKDVGKTNMTTFN-PSILERYNNLLT
Cynsem_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Scomax_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Corlav_9	EIDSADFVFR--CNFAP-TDSYKDVGKTNLTTFN-PSILERYNNLLT
Oncmyk_9	EIDSADFVFR--CNFAP-TDSYKDVGKTNLTTFN-PSILERYNNLLT
Salsal_9	EIDSSDFVFR--CNFAP-TDSYKDVGKTNLTTFN-PSILERYNNLLT
Onctsh_9	EIDSADFVFR--CNFAP-TDSYKDVGKTNLTTFN-PSILERYNNLLT
Salalp_9	EIDSADFVFR--CNFAP-TDSYKDVGKTNLTTFN-PSILERYNNLLT
Ampoce_9	EIDEADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Amppe_9	EIDEADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Labber_9	EIDQADFVFR--CNFAP-TDVYSKDVGKTNLTTFN-PSILERYNNLLT
Umbpyg_3B	EIEKFDFVFR--CNFAP-TEIFRRDVGRRTNLTTFN-PSILEKYNNLLT
Esoluc_3b	EIEKFDFVFR--CNFAP-TEVFRDVGRRTNLTTFN-PSILEKYNNLLT
Gadmor_9	EIDQADFVFR--CNFAP-TEVYKDVGRRTNMTTFN-PSILERYNNLLT
Umbpyg_9	EIDSADFVFR--CNFAP-IDSYKDVGRRTNLTTFN-PSILERYNNLLT
Esoluc_9	EIDSADFVFR--CNFAP-IESYKDVGRRTNLTTFN-PSILERYNNLLT
Permag_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Bolpec_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Poefor_9	EIDQADFVFR--CNFAP-TEVYKDVGKTNLTTFN-PSILERYNNLLT
Masarm_9	EIDQADFVFR--CNFAP-TEVYSKDVGKTNLTTFN-PSILERYNNLLT
Anjap_9	EIDRSDFVFR--CNFAP-TEVFHRDVGRRTNLTTFN-PSILEKYNNLLT
Poelat_9	EIDQADFVFR--CNFAP-TEVYKDVGKTNLTTFN-PSILERYNNLLT
Poeret_9	VIDQADFVFR--CNFAP-TEFYKDVGKTNLTTFN-PSILERYNNLLT
Xipmac_9	EIDQADFVFR--CNFAP-TEIYKDVGKTNLTTFN-PSILERYNNLLT
Hapbur_9	EIDQADFVFR--CNFAP-TDIYSKDVGKTNLTTFN-PSILERYNNLLT
Orylat_9	EIDQADFVFR--CNFAP-TDVYSKDVGRRTNMTTFN-PSILERYNNLLT

Gamaff_9	EIDQADFVFR--CNFAP-TEVYFKDVGKKTNLTTFN-PSILERYNNLLT
Neobri_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Funhet_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Punnye_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Cypvar_9	EIDQADFVFR--CNFAP-TDVYSKDVGKKTNLTTFN-PSILERYNNLLT
Krymar_9	EIDQADFVFR--CNFAP-TEVYSKDVGKKTNLTTFN-PSILERYNNLLT
Notfur_9	EIDQADFVFR--CNFAP-TEIYSKDVGKKTNMFTFN-PSILERYNNLLT
Notpie_9	EIDQADFVFR--CNFAP-TEIYSKDVGKKTNMFTFN-PSILERYNNLLT
Orenil_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Auslim_9	EIDQADFVFR--CNFAP-TEIYSKDVGRKTNLTTFN-PSILERYNNLLT
Anates_9	EIDQADFVFR--CNFAP-TDVYSKDVGKKTNLTTFN-PSILERYNNLLT
Astcal_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Mayzeb_9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Orymel_9	EIDQADFVFR--CNFAP-TDVYSKDVGRKTNMFTFN-PSILERYNNLLT
Ampcit9	EIDQADFVFR--CNFAP-TDIYSKDVGKKTNLTTFN-PSILERYNNLLT
Macfas_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Macmul_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Macnem_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Musmus_2	EIDTHSFVIR--CNRAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Ponabe_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Papanu_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Nomleu_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Pantro_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Latcha_2	EIDDHQFVIR--CNLAP-VQEYASDVGTCTDFVTMN-PSVIQRAFEDLVN
Gnapet2	EIDSHDFVIR--CNLAP-VEEYERDVGLRSSLVTMN-PSVVQRAFEDLAS
Panbuc_2b	EIDACDYVIR--CNLAP-VQEYVTDVQGRTSMVTMN-PSVVQRAFQDLAS
Ostbic_2	EIDSNDFVIR--CNLAP-VDEYEQDVGRRTSLVTMN-PSVVQRAFQDLAS
Sinrhi2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Hetzeb_2	EIDAHEFVIR--CNLAP-VEEYAHDVGLKTDLVTMN-PSVVQRAFEDLKN
Hipcom_2	QIDSHDFVIR--CNLAP-VEEYADDVGHRTDLVTMN-PSVVQRAFEDLVD
Prigla_2	EIDTHEFVIR--CNLAP-VEEYAQDVGLKTDLVTMN-PSVVQRAFEDLKN
Scytor_2	EIDTHEFVIR--CNLAP-VEEYAQDVGLKTDLVTMN-PSVVQRAFEDLKN
Tetcal_2	EIDAHEFVIR--CNLAP-VEEYVQDVGMKTDLVTMN-PSVVQRAFEDLKN
Rhityp_2	EIDDHQFVIR--CNLAP-VEEYAQDVGLKTDLVTMN-PSVVQRAFEDLKN
Parkin_2b	EIDSHDFVIR--CNLAP-VQEFELDVGLRTGLVTMN-PSVVQRAFQDLGS
Angang_2	QIDSHDFVIR--CNLAP-VEEYAADVQGRTSLVTMN-PSVVERAFEDLSS
Pygnat_2	EIDSHDFVIR--CNLAP-VEEYTNVGLRTSLVTMN-PSVVQRAFQDLNS
Parkin_2	EIDSHDFVIR--CNLAP-VEEYEHVGLRSSLVTMN-PSVVQRAFEDLAS
Gorgor_2	EIDAHSFVIR--CNLAP-VQEYARDVGPKTDLVTMN-PSVIQRAFEDLVN
Thegel_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Tupchi_2	EIDTHSFVIR--CNLAP-VQEYAQDVGLKTDLVTMN-PSVIQRAFEDLVN
Galgal_2	EIDTHSFVIR--CNLAP-VQEYSQDVGTCTDLVTMN-PSVIQRAFEDLMN
Eleele_2	EIDSHDFIIR--CNLAP-IEHYVKDVGVRTGLVTMN-PSVVERVFQDLSS
Danrer_2	EIDSHDFVIR--CNLAP-VEEYAADVGLRTSLVTMN-PSVVQRAFQDLNS
Canlupfam_2	EIDTHSFVIR--CNLAP-VQEYGRDVGLKTDLVTMN-PSVIQRAFEDLVN
Aloalo_2	EIDSYDFVIR--CNLAP-VDEFTADVGHRTNLVTMN-PSVVQRAFQDLSS
Astmex_2	EIDSHDFVIR--CNLAP-VEEYAEVGLRSSLVTMN-PSVVQRAFQDLSS
Sinans_2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Scifor_2	EIDSNDFVIR--CNLAP-VEEYEQDVGHRTSLVTMN-PSVVQRAFQDLAS
Ceraty_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Anocar_2	EIDAHSFVIR--CNLAP-VQEYSRDVGTMDLVTMN-PSVIQRAFEDLVN
Anates_2	EIDSHDFIIR--CNLAP-VEEYSRDVGVQTNLVTMN-PSVVQRAFQDLVS
Ampbic_2	EIDSHDFVIR--CNLAP-VEDYSRDVGRQTDLVTMN-PSVVQRAFQDLVS
Sarpil_2	EIDSYDFVIR--CNLAP-VDEFADVGHRTSLVTMN-PSVVQRAFQDLSS
Xenlae_2	EIDSHDFVIR--CNLAP-VEEYAKDVGTCTNLVTMN-PSVVQRAFEDLVN
Cluhar_2	EIDAHDFVIR--CNLAP-VNEFSADVGHRTNLVTMN-PSVVQRAFQDLSS
Cypcar_2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Denclu_2	EIDSHDFVIR--CNLAP-VEEYAADVGHRTDLVTMN-PSVVQRAFQDLAN
Notpie_2	EIDSHDFVIR--CNLAP-VEEYSQDVGWRTNLVTMN-PSVVQRAFQDLVT
Erpcal2	EIDTHEFVIR--CNLAP-VQEFASDVGIRTNLVTMN-PSVVQRAFEDLAN
Amical_2	EIDSHDFVIR--CNLAP-VEEYADDVGLRTSLVTMN-PSVVQRAFQDLVS
Lepocu_2	EIDSHDFVIR--CNLAP-VEEYRADVGRRTSLVTMN-PSVVQRAFQDLAS
Homsap_2	EIDAHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Bostau_2	EIDTHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVVQRAFEDLVN
Caraur_2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Thythy_2B	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS
Onctsh_2B	EIDSYDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS
Salsal_2B	EIDSYDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS
Oncmyk_2B	EIDSYDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS
Onckis_2B	EIDSYDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFQDLAS
Salsal_2A	EIDSHDFVIR--CNLAP-VEEYAGDVQRTNLVTMN-PSVVQRAFHDLAS
Thythy_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Salalp_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Corlav_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Cormar_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Onctsh_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS
Oncmyk_2A	EIDSHDFVIR--CNLAP-VEEYAGDVGRRTNLVTMN-PSVVQRAFHDLAS

Neobri_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Takrub_2	EIDSHDFVIR--CNLAP-VEDYYKDVGWRTNLVTMN-PSVVQRAFRDLAS
Tetnig_2	EIDSHDFVIR--CNLAP-VEDFHNDVGWRTNLVTMN-PSVVQRAFRDLAS
Orenil_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Orylat_2	EIDAHDFVIR--CNLAP-VDEYSQDVGRTNLVTMN-PSVVQRAFQDLVS
Krymar_2	EIDSHDFVIR--CNLAP-VEEYSRDVGRRTNLVTMN-PSVVQRAFQDLVT
Notfur_2	EIDSHDFVIR--CNLAP-VEEYSQDVGWRTNLVTMN-PSVVQRAFQDLVT
Poelat_2	EIDSHDFVIR--CNLAP-VEEYSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Gadmor_2	EIDSYDFVIR--CNLAP-VKEYSVDVGRRTNLVTMN-PSVVQRAFQDLAS
Xipmac_2	EIDSHDFVIR--CNLAP-VEEYSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Poeret_2	EIDSHDFVIR--CNLAP-VEEYSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Astcal_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Hapbur_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Acapol_2B	EIDSHDFVIR--CNLAP-VDDYSRDVGRRTNLVTMN-PSVVQRAFQDLVS
Ampoce_2A	EIDSHDFVIR--CNLAP-VEDYSRDVGRTNLVTMN-PSVVQRAFQDLVN
Acapol_2A	EIDSHDFVIR--CNLAP-VDDYSRDVGRRTNLVTMN-PSVVQRAFQDLVS
Mayzeb_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Punnye_2	EIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVT
Latcal_2	EIDSHDFVIR--CNLAP-VEEYSRDVGWRTNLVTMN-PSVVQRAFQDLVS
Singra_2	EIDSHDFVIR--CNLAP-VEEYATDVGLRTSLVTMN-PSVVQRAFQDLNS
Auslim_2	EIDSHDFVIR--CNLAP-VEEYSEDVGRRTNLVTMN-PSVVQRAFQDLVT
Monalb_2	EIDSHDFVIR--CNLAP-VEEYSRDVGRRTNLVTMN-PSVVQRAFQDLVT
Ampoce_2B	EIDSHDFVIR--CNLAP-VEDYSRDVGRTNLVTMN-PSVVQRAFQDLVN
Chiham_2	DIDSHDFVIR--CNLAP-VDEFSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Gasacu_2	DIDSHDFVIR--CNLAP-VEDYSLDVGRRTNLVTMN-PSVVQRAFQDLVS
Gymacu_2	DIDSHDFVIR--CNLAP-VDEFSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Labber_2	EIDSHDFVIR--CNLAP-VADYYQDVGWRTNLVTMN-PSVVQRAFQDLVS
Cypvar_2	EIDSHDFVIR--CNLAP-VEEYSQDVGLRTNLVTMN-PSVVQRAFQDLIS
Funhet_2	EIDSHDFVIR--CNLAP-VEEYSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Larcro_2	EIDSHDFVIR--CNLAP-VEEYRDVGWRTNLVTMN-PSVVQRAFQDLVS
Paroli_2	EIDSHDFVIR--CNLAP-VEEFSDVGRRTNLVTMN-PSVVQRAFQDLVS
Perflu_2	DIDSHDFVIR--CNLAP-VEEYFQDVGWRTNLVTMN-PSVVQRAFQDLVS
Serdum_2	EIDSHDFVIR--CNLAP-VEEYSRDVGRRTNLVTMN-PSVVQRAFMDLVS
Stepar_2	EIDSHDFVIR--CNLAP-VEDYSRDVGRRTNLVTMN-PSVVQRAFQDLVS
Notcor_2	DIDSHDFVIR--CNLAP-VDEFSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Treber_2	DIDSHDFVIR--CNLAP-VDEFSQDVGRRTNLVTMN-PSVVQRAFQDLVS
Serlaldor_2	EIDSHDFVIR--CNLAP-VEEYSRDVGRRTNLVTMN-PSVVQRAFMDLVS
Plaste_2	EIDSHDFVIR--CNLAP-VEEYSWDVGTRTSLVTMN-PSVVQRAFQDLVS
Clabat_4	EIDSHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRAYGGLSN
Ictpun_4A	EIDSHDFVIR--CNLAP-LAEFADDVGLRSDFTTMN-PSVIQRAYGGLLN
Panhyp_4	EIDSHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRAYGGLLN
Umbpyg_4	EIDSHDFVIR--CNLAP-LAEFSEDVGLRSDFTTMN-PSVIQRAYGGLKN
Esoluc_4	EIDSHDFVIR--CNLAP-LAQFAEDVGLRSDFTTMN-PSVIQRAYGGLRN
Plealt_4	EIDSHDFVIR--CNLAP-LSEYADDVGLRSDFTTMN-PSVIQRAYGGLKN
Onckis_4B	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Onckis_4A	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Onctsh_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Oncmyk_4	EIDSHGFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Corlav_4	EIDRHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Astmex_4A	EIDGHDFVIR--CNLAP-LAEFAEDVGLKSDFTTMN-PSVIQRAYGGLRN
Pygnat_4	EIDSHDFVIR--CNLAP-LVEFAEDVGLKSDFTTMN-PSVIQRAYGGLRN
Aloalo_4	EIDSHGFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRAYGGLRN
Cluhar_4	EIDSHDFVIR--CNLAP-QAEFAADVGLRSDFTTMN-PSVIQRAYGGLRN
Denclu_4	EIDSHDFVIR--CNLAP-LKEFAEDVGLRSDFTTMN-PSVIHRVYGGLOK
Konpun_4	EIDSHDFVIR--CNLAP-LVEFAADVGLRSDFTTMN-PSVIQRAYSGGLRN
Sarpil_4	EIDSHDFVIR--CNLAP-LAEFAEDVGLRSDFTTMN-PSVIQRAYGGLRN
Caraur_4	EIDSHGFVIR--CNLAP-LVEFADDVGLRSDFTTMN-PSVIQRAYGGLRD
Cteide_4	EIDNHDFVIR--CNLAP-LKDFADDVGLRSDFTTMN-PSVIQRAYGGLRD
Petmar_4	EIDQHDFVIR--CNLAP-VEGYERDVGSRVDFVTMN-PSVVERTYGGRLT
Cypcar_4	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLQD
Danrer_4	EIDNHDFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLRE
Misang_4	EIDNHDFVIR--CNLAP-LEEFADDVGLKSDFTTMN-PSVIQRAYGGLHN
Angjap_4	EIDGHDFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLRN
Cypcar_4A	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLQD
Angang_4	EIDGHDFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLRN
Cypcar_4B	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLRD
Sinans_4A	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLRD
Sinans_4B	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLRD
Singra_4A	EIDSHGFVIR--CNLAP-LEEFADDVGLRSDFTTMN-PSVIQRAYGGLQD
Aptalb_4	EIDSHDFVIR--CNLAP-LAEFIKDVGLKSDFTTMN-PSVIQRAYGGLRN
Eigvir_4	EIDHDHDFVIR--CNLAP-LAEFIKDVGLKSDFTTMN-PSVIQRAYHGLRN
Eleele_4	EIDSHDFVIR--CNLAP-LAKFAEDVGLKSDFTTMN-PSVIQRAYGGLRN
Parhas_4	EIDSHDFVIR--CNLAP-LAEFIKDVGLKSDFTTMN-PSVIQRAYGGLRN
ScIfor_4	EIDNHDFVIR--CNLAP-LVEFSEDVGLKSDFTTMN-PSVIQRAYGGLKN
Gnapet_4	EIDSNDFVIR--CNLAP-LANFSEDVGLRSDFTTMN-PSVIQRAYGGLRN
Ostbic_4	EIDSHDFVIR--CNLAP-LVEFSEDVGLRSDFTTMN-PSVIQRAYGGLKN
Parkin_4	EIDSNDFVIR--CNLAP-LANFSEDVGLRSDFTTMN-PSVIQRAYGGLRN

Panbuc_4	EIDSHDFIIR--CNLAP-VTEFAVDVGQRSHFITMN-PSVIQRAYGSLRN
Erpcal4	EIDNHDFVIR--CNLAP-VVEFAEDVGNRSDFITMN-PSVIQRAFGGFQN
Salsal_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Saltru_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Salalp_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Salfon_4	EIDSHDFVIR--CNLPP-LSEFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Thythy_4	EIDSHDFVIR--CNLAP-LADFAEDVGLRSDFTTMN-PSVIQRAYGGLKN
Calmil_4	EIDSHEFVIR--CNLAP-LVEYTDVVGSKSDFVTMN-PSVVQRAFGSLQN
Hetzeb_4	EIDSHEFVIR--CNLAP-LMEYTDVVGSKSDFVTMN-PSVVQRAFGSLRS
Rhityp_4	EIDSHEFVIR--CNLAP-LVEYADDVGLKSDFVTMN-PSVVQRAFGSLRS
Scytor_4	EIDSHEFVIR--CNLAP-LVEYADDVGLKSDFVTMN-PSVVQRAFGSLRS
Squaca_4	EIDSHEFVIR--CNLAP-LVEYADDVGLKSDFVTMN-PSVVQRAFGSLQS
Amical_4	EIDSHDFVIR--CNLAP-LAEFSEDVGLRSDFITMN-PSVIQRAFGGFKN
Lepocu_4	EIDNHDFVIR--CNLAP-LAEFSEDVGLRSDFITMN-PSVIQRAFGGFKN
Agema_4	EIDSHDFVIR--CNLAP-LSEFAEDVGLRSDFTTMN-PSVIQRAYSGLLN
Anocar_4	EIDSHEFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Canlupfam_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Crigri_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Galgai_4	EIDSHDFVIR--CNLAP-VVEFAADVGNKSDFITMN-PSVVQRAFGGFNR
Mesaur_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Homsap_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Notscuscu_4	EIDSHEFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Psetextex_4	EIDSHEFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Musmus_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Pogvit_4	EIDNHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Promuc_4	EIDNHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQKAFGGFRN
Pantro_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Pytbiv_4	EIDNHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Ratnor_2	EIDTHSFVIR--CNLAP-VQEYARDVGLKTDLVTMN-PSVIQRAFEDLVN
Ratnor_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Siltro_2	EIDSHDFVIR--CNLAP-VVEYATDVGTKNLVTMN-PSVVQRAFEDLVN
Siltro_4	EIDSHDFVIR--CNLAP-VVEFAAHVGTKSDFITMN-PSVVQRAFGGFNR
Susscr_4	EIDSHNFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Taegut_4	EIDSHDFVIR--CNLAP-VVEYAADVGTKSDFITMN-PSVVQRAFGGFNR
Termextri_4M	EIDNHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Thasirsir_4	EIDSHEFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Xenlae_4B	EIDSHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
Xenlae_4A	EIDSHDFVIR--CNLAP-VVEFAADVGTKSDFITMN-PSVVQRAFGGFNR
101	
Latcal_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Perflu_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Serdum_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Stepar_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Tetcal_3	IQDR-NKFFLNKRLDGAAILWIPAFFFHSTAPVTRTLVDFFVEHRAQ---
Monalb_3	VQDR-NNFFLSLKKLDGAAILWIPAFFFHSTATVTRTLVDFFVEHQGQ---
Molmol_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Takrub_3	VQDR-NNFFLSLKKLDTTILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Canlupfam_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Bostau_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Homsap_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Siltro_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTASVTRTLVDFFVEHRDQ---
Anocar_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRAQ---
Musmus_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Pantro_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Ratnor_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Galgai_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Lepocu_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHKGQ---
Tetnig_3	VQDR-NNFFLSLKKLDPAAILWIPAFFFHSTATVTRTLVDFFVEPRGQ---
Squaca_3	IQDR-NKFFLNKLLDGAAILWIPAFFFHSTAPVTRTLVDFFMEHRAQ---
Perfla_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Salsal_3	IQDR-NNFFLSLKKLDRAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Serlaldor_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Treber_3	IQDR-NNFFLNKLLKLEGAILWIPAFFLHSTATVTRTLVDFFVEHKGQ---
Cynsem_3	VQDR-NNFFLSLKKLDNAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Paroli_3	IQDR-NNFFLNKLLKLEGAILWIPAFFLHSTATVTRTLVDFFVEHKGQ---
Paroli_3b	VQDR-NNFFLSLKKLDNAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Plaste_3	IQDR-NNFFLNKLLKLESAILWIPAFFLHSTATVTRTLVDFFVEHKGQ---
Plaste_3b	VQDR-NNFFLSLKKLDSAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Erpcal3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHKGQ---
Calmil_3b	IQDR-NKFFLNKLLDGAAILWIPAFFFHSSALVTRTLVDFFVEHRRQ---
Hetzeb_3	IQDR-NKFFLNKLLDGAAILWIPAFFFHSTAPVTRTLVDFFVEHRAQ---
Latcha_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHKGQ---
Anates_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Ampcit3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRDQ---
Auslim_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Cypvar_3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---
Krymar_3	VQDR-NNFFLSLKKLDSAILWIPAFFFHSTATVTRTLVDFFVEHRGQ---

Funhet_3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Gamaff3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Orylat_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Orenil_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Mayzeb_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Punnye_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Punnye_3a	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Neobri_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Misang_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Sinrhi3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Singra_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Hapbur_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Astcal_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Notfur_3	VQDR-NNFFLSLKKLDGAVLWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Cypcar_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Poefor3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Poelat_3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Poeret_3	VQDR-NNFFLSLKKLDTAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Angang_3	IQDR-NNFFLSLKKLDGVLWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Xipmac_3	VQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Masarm_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Permag_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGK---
Gnapet3	IQDR-NNFFLSLKKLDSAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Ostbic_3	IQDR-NNFFLSLKKLDDAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Gadmor_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Scifor_3	IQDR-NNFFLSLKKLDDAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Acapol3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Ampoce_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Scifor_3b	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Ostbic_3b	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Parkin_3	IQDR-NNFFLSLKKLDSAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Amppe3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Oncmyk_3	LQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Gasacu_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Labber_3	VQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Panbuc_3	IQDR-NNFFLSLKKLDGAVLWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Parhas3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Cluhar_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Aloalo_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Panhyp_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Eleele_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Denclu_3	IQDR-NNFFLSLKKLDGAVLWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Sarpil_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Eigvir_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Aptalb_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Sinans_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Pygnat_3	IQDR-NNFFLSLKKLDRAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Astmex_3	IQDR-NNFFLSLKKLDRAVLWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Caraur_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Danrer_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHKGQ---
Ictpun_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Plealt_3	IQDR-NNFFLSLKKLDGAILWIPAFFFHSTSATVTRTLVDFFVEHRGQ---
Plealt_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Gasacu_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Parkin_9	IQDR-NNFFLNKKKLEGAILWIPAFFFHSTSAPVTRTLIDFFIEHKGQ---
Acapol_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Larcro_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Notcor_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Latcal_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Serlaldor_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Monalb_9	IQDR-NNFFLSLKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Serdum_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Perflu_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Perfla_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Stepar_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Molmol_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Hipcom_9	IQDR-NNFFLHLKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Takrub_9 B	IQDR-NNFFLNKKLGGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Takrub_9	IQDR-NNFFLNKKLGGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Cynsem_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKSQ---
Scomax_9	IQDR-NNFFLSLKKLEAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Corlav_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Oncmyk_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Salsal_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Onctsh_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Salalp_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---
Ampoce_9	IQDR-NNFFLNKKKLEGAILWIPAFFLHSTSATVTRTLVDFFVEHKGQ---

Ampper9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Labber_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Umbpyg_3B	IQDR-NNFFLSLKKLDGAILWI-AFFFHTSATVTRTLVDFFVEHRGQ----
Esoluc_3b	IQDR-NNFFLSLKKLDGAILWIPAFFHTSATVTRTLVDFFVEHRGQ----
Gadmor_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Umbpyg_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Esoluc_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Permag_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Bolpec_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Poefor9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Masarm_9	IQDR-NNFFLSLKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Angjap_9	IQDR-NNFFLSLKKLDGVVLWIPAFFHTSATVTRTLVDFFVEHRGQ----
Poelat_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Poeret_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Xipmac_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Hapbur_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Orylat_9	IQDR-NNFFLHLKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Gamaff_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Neobri_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Funhet_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Punnye_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Cypvar_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Krymar_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Notfur_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Notpie_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Orenil_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Auslim_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Anates_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Astcal_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Mayzeb_9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Orymel_9	IQDR-NNFFLHLKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Ampcit9	IQDR-NNFFLNKKLEGAILWIPAFFLHTSATVTRTLVDFFVEHKGQ----
Macfas_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Macmul_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Macnem_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Musmus_2	ATWR-EKLLQRLHGLNGSILWIPAFMARGGKERVEWVNALILKHH-----
Ponabe_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Papanu_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Nomleu_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Pantro_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Latcha_2	ETWK-EKFLQRLQSLNGSIFWIPAFMAKGGEERVEWVNDLIIKSG-----
Gnapet2	QQWR-DHFLQRLRSIAGVLWIPAFMAKGGEERVELAARLILRHG-----
Panbuc_2b	ESWQ-ERFLQRLDQLGSSVLWIPAFMAKGGEERVEWALDLIRQHA-----
Ostbic_2	KQWK-GRFLQRLQGLNGSVLWIPAFMAKGGEERVAWAVRLILQHA-----
Sinrhi2	EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Hetzeb_2	ETWK-EKLLHRLKMLDGGILWIPAFMAKGGEERVEWVNLI IKHK-----
Hipcom_2	DEWR-RRFARRLASLSGSVLWIPAFMAKGGEERVEWALRLILRHA-----
Prigla_2	ETWK-EKLLHRLKMLDDGILWIPAFMAKGGEERVEWVNKLII EHK-----
Scytor_2	DTWK-EKLLHRLKMLDGGILWIPAFMAKGGEERVEWVNRLII EHK-----
Tetcal_2	ETWK-EKLLHRLTMLDGA ILWIPAFMAKGGEERVEWVNLI IEHK-----
Rhityp_2	ETWK-EKLLHRLKMLDGGILWIPAFMAKGGEERVEWVNLI IKHK-----
Parkin_2b	ARWR-EHFLQRLRGLGDAVLWIPAFMAKGGERVELALDVIRRRQ-----
Angang_2	EAWR-ERFVRRRLALEGSVLWIPAFMAKGGEDRVEWATRLILRHA-----
Pygnat_2	EEWR-QRFVQRLQALSGSVLWIPAFMAKGGEERVEWAVRLILSHT-----
Parkin_2	QLWR-DHFLQRLRSIAGVLWIPAFMAKGGEERVEWALRLILRHS-----
Gorgor_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Thegel_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Tupchi_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Galgai_2	ETWR-EKLLQRLHSLNGSILWIPAFMAKGGERVEWVNELILKHH-----
Eleele_2	EEWR-QQFVQRLRELGS SVLWIPAFMAKGGEERVEWAIIRLILSHT-----
Danrer_2	EEWV-QRFVQRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Canlupfam_2	ATWR-EKLLQRLRSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Aloalo_2	EEWR-QRFIRRLQDLSGSVLWIPAFMAKGGEERVEWAIIRLILHT-----
Astmex_2	KEWR-QRFVRRRLQALSGSVLWIPAFMAKSGEDRVEWAVHLILSHT-----
Sinans_2	EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Scifor_2	EQWK-GRFLRRLQGLNGSVLWIPAFMAKGGEERVAWAVRLILQHA-----
Ceraty_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Anocar_2	DTWR-EKLLQRLHSLNGSILWIPAFMAKGGERVEWVNELILKNH-----
Anates_2	EEWR-ARFLRRLQSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Ambic_2	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRLILLHT-----
Sarpil_2	EEWR-QRFIRRLQDLSGSVLWIPAFMAKGGEERVEWAIIRLILHT-----
Xenlae_2	DTWK-DKFLQRLKSLNESILWIPAFMAKGGEERVEWVNDLII KHH-----
Cluhar_2	EEWR-QRFVRRRLQDLSGSVLWIPAFMAKGGEERVEWAIIRLIIMHT-----
Cypcar_2	EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Denclu_2	EEWR-ERFVQRLRALSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Notpie_2	EEWK-ERFLQRLRNLSGSVLWIPAFMAKRGEDRVEWVLRILLHT-----
Erpcal2	DTWK-DRLLQRLQNLNGSILWIPAFMAKGGEQVELVNSLILKHQ-----

Amical_2	ESWR-ERFLQRLQSLNGSVLWIPAFMAKGGEERVEWANDLILKHH-----
Lepocu_2	SHWR-ERFLERLSSLNGSVLWIPSFMAKGGEERVQWASELILRHG-----
Homsap_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKERVEWVNELILKHH-----
Bostau_2	ATWR-EKLLQRLHSLNGSILWIPAFMARGGKQERVEWVNELILKHH-----
Caraur_2	EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Thythy_2B	EEWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Onctsh_2B	EEWR-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Salsal_2B	EEWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Oncmyk_2B	EEWR-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Onckis_2B	EEWR-ERFLQRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Salsal_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Thythy_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Salalp_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Corlav_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Cormar_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Onctsh_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Oncmyk_2A	EQWR-ERFLQRLRGLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Neobri_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Takrub_2	EEWR-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWTLRILLHT-----
Tetnig_2	EEWR-DRFLRRLQSLSGSILWIPAFMAKGGEERVDWTLRILLHT-----
Orenil_2	DEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Orylat_2	EEWK-QRFQRLQSLGGSVLWIPAFMAKGGEERVEWALRILRHT-----
Krymar_2	EEWR-ERFLQRLRDLRGGVLWVPAFMAKGGEERVEWALRILLHA-----
Notfur_2	EEWK-ERFLQRLRNLSGSVLWIPAFMAKRGEDRVEWVLRILLHT-----
Poelat_2	DEWK-DRFLQRLQNLSGSVLWIPAFMAKGGEERVEWALRILVHT-----
Gadmor_2	PEWR-ARFVARLQSLRGSVLWIPAFMAKGGEERVEWAARLILLHT-----
Xipmac_2	DEWK-DRFLQRLQNLSGSVLWIPAFMAKGGEERVEWALRILVHT-----
Poeret_2	DEWK-DRFLRRLQNLSGSVLWIPAFMAKGGEERVEWALRILVHT-----
Astcal_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Hapbur_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Acapol_2B	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Ampoce_2A	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Acapol_2A	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Mayzeb_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Punnye_2	NEWK-ERFLRRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Latcal_2	EEWR-DRFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Singra_2	EEWV-QRFVHRLQSLSGSVLWIPAFMAKGGEERVEWAIIRLILLHT-----
Auslim_2	EEWK-ERFLRRLRDLGGSVLWIPAFMAKGGEERVEWALRILLHA-----
Monalb2	DEWR-ERFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Ampoce_2B	EEWT-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Chiham_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILSHT-----
Gasacu_2	DEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILSHT-----
Gymacu_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILSHT-----
Labber_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Cypvar_2	EEWK-DRFLQRLRDLSGSVLWIPAFMAKGGEERVEWALRILVHT-----
Funhet_2	DEWK-ERFLQRLRNLSGSVLWIPAFMAKGGEERVEWALRIRVHT-----
Larcro_2	EEWR-DRFLKRLQSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Paroli_2	DEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Perflu_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Serdum_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Stepar_2	EEWK-ERFLQRLRSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Notcor_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILSHT-----
Treber_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILSHT-----
Serlaldor_2	EEWR-DRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Plaste_2	DEWR-NRFLQRLQSLSGSVLWIPAFMAKGGEERVEWALRILLHT-----
Clabat_4	ETTR-ERFVQRLRLNDSVLWIPAFMVKGGEKHVEGVNELILKHK-----
Ictpun_4A	ETVR-ENFVQRLRLNDSVLWIPAFMVKGGEKHVEGVNELILKHK-----
Panhyp_4	ETVR-ELFVQRLSLNDSVLWIPAFMVKGGEKHVEGVNELILKHK-----
Umbpyg_4	ATDT-ERFVQRLRMLKDSVLWIPAFMVKGGEQHVERVNELIVKHK-----
Esoluc_4	ASDM-ERFVQRLRMLNDSVLWIPAFMVKGGERHVESVNELIVKHK-----
Plealt_4	VSDA-ERFVRLRMLNDSVLWIPAFMVKGGEKHVECVNELIVKHK-----
Onckis_4B	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKHK-----
Onckis_4A	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKHK-----
Onctsh_4	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKHK-----
Oncmyk_4	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKHK-----
Corlav_4	ATDT-ERFVQRLRMLNDSVLWIPAFMVKGGERHVESVNELIVKHK-----
Astmex_4A	ETQR-ERFVERLSMLNDSVLWIPAFMVKGGEKHVEGVNELILKHK-----
Pygnat_4	ETVR-EHFVERLGLNDSVLWIPAFMVKGGEKHVEGVNELILKHK-----
Aloalo_4	ATDR-ERFVERLRALNDSVLWIPAFMVKGGEKHVEGVNELILQRS-----
Cluhar_4	ATDR-ERFVERLQALNDSVLWIPAFMVKGGEKHVEGVNELILQRC-----
Denclu_4	ESDR-EKFVHRLIALNDSVLWIPAFMVKGGEKHVEVVNNFILKQG-----
Konpun4	STDR-ERFVERLRALNDSVLWIPAFMVKGGEKHVEGVNELILQRC-----
Sarpil_4	ATDR-ERFVERLRALNDSVLWIPAFMVKGGEKHVEGVNELILQRC-----
Caraur_4	ERQQ-ERFIRRLQQLNNSVLWIPAFMVKGGERHVEIVNQLILKHK-----
Cteide_4	ETEQ-ENFILRLQQLNNSVLWIPAFMVKGGERHVEIVNELILKHK-----
Petmar_4	KADH-DRFGRRRLNSSLWIPAFMAKGGEQHVEIVNNLLTLG-----
Cypcar_4	ERQR-ERFIQRLQQLNNSVLWIPAFMVKGGERHVEIVNELILKHK-----

Danrer_4	ETQQ-ENLIQRLRLNDSVLWIPAFMVKGGMKHVDTVNELILKHK-----
Misang_4	KTAQ-EHFIQRLRLNDSVLWIPAFMVKGSEKHVEGVNELILKNK-----
Angjap_4	DSDR-ERFVRRLLGALNDSVLWIPAFMVKGGERHVECVNDLILRHR-----
Cypcar_4A	ERQR-ERFIQRLQLNNSVLWIPAFMVKGGERHVEIVNELILKHK-----
Angang_4	DSDR-ERFVRRLLGALNDSVLWIPAFMVKGGERHVECVNDLILRHR-----
Cypcar_4B	ERQR-ERFIRRLQLNNSVLWIPAFMVKGGERHVEIVNQLILKHK-----
Sinans_4A	ERQR-ESFILRLQLNNSVLWIPAFMVKGGERHVEIVNELILKHK-----
Sinans_4B	ERQR-VQFIRRLQLNNSVLWIPAFMVKGGERHVEIVNQLILKHR-----
Singra_4A	ERQQ-ESFIRRLQLNNSVFWIPAFMVKGGERHVETVNELILKHK-----
Aptalb_4	ETVR-EGFLRRLAALNDSVLWIPAFMVKGGEKHVEGVNELILRRK-----
Eigvir_4	ETAR-ESFLRRLAALNDSILWIPAFMVKGGEKHVEGVNELILRRK-----
Eleele_4	ETAR-DCFLLRLAVLNDSVLWIPAFMVKGGEKHVEGVNELILQRK-----
Parhas_4	VTVR-EGFLRRLAALNDSVLWIPAFMVKGGEKHVEGVNELILRRK-----
Scifor_4	ESDR-VRFVQRLTMLNESVLWIPAFMVKGGEQHVVERVNELILKNK-----
Gnapet4	ESDR-ERFVQRLIMLNDSILWIPAFMVKGGEKHVEGVNELILNRK-----
Ostbic_4	ESDR-EKFVQRLIMLNDSILWIPAFMVKGGEQHVHVSELILKNR-----
Parkin_4	ESDR-ERFVQRLIMLNDSILWIPAFMVKGGEKHVEGVNELILNRK-----
Panbuc_4	ATDR-QRFVQRLVALNDSVLWIPAFMVKGGEKHVESVNELILKNG-----
Erpcal4	ETDR-EKFVQRLAMLNDSVLWIPAFMVKGGEKHVEWVNELILKNK-----
Salsal_4	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKRK-----
Saltru_4	ATDT-ERFVQRLRGLNDSVLWIPAFMVKGGERHVESVNELIVKRK-----
Salalp_4	ATDT-ERFVERLRGLNDSVLWIPAFMVKGGERHVESVNELIVKRK-----
Salfon_4	ATDT-ERFVERLRGLNDSVLWIPAFMVKGGERHVESVNELIVKRK-----
Thythy_4	ATDT-ERFVHRLQVLNDSVLWIPAFMVKGGERHVESVNELIVKRK-----
Calmil_4	ETDR-ENFVRRLLAVLNDSVLWIPAFMVKGGERHVEWVNELILKNK-----
Hetzeb_4	ETDR-EKFVDRLLAVLNDSVLWIPAFMVKGGEKHVEYVNELILKNR-----
Rhityp_4	ETDR-EKFVDRLLAVLNDSVLWIPAFMVKGGEKHVEYVNELILKNR-----
Scytor_4	ETDR-EKFVDRLLAVLNDSVLWIPAFMVKGGEKHVEYVNELILKNR-----
Squaca_4	ETDR-EKFVDRLLAVLNDSVLWIPAFMVKGGEKHVEYVNELILKNR-----
Amical_4	ETDR-EKFVRRLLTMLNDSVLWIPAFMVKGGEKHVECVNELILKNK-----
Lepocu_4	ETDR-ERFVQRLTLLNDSVLWIPAFMVKGGEKHVECVNELILKNK-----
Agema_4	ETVR-ERFVQRLSLNDSVLWIPAFMVKGGEKHVEGVNELILKRK-----
Anocar_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Canlupfam_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Crigri_4	ESDR-AKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Galgai_4	ESDR-EKFGHRLSMLNDSVLWIPAFMVKGGEKHLEWVNALILKNK-----
Mesaur_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Homsap_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Notscuscu_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVQWVNALILKNK-----
Psetextex_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVQWVNALILKNK-----
Musmus_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Pogvit_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Promuc_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Pantro_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Pytbiv_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Ratnor_2	ATWR-EKLLQRLHGLNGSILWIPAFMARGGKERVEWVNALILKHH-----
Ratnor_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Siltro_2	DTWK-DKFLQRLKSLNESILWIPAFMAKGGEERVEWVNDLIKHH-----
Siltro_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNQ-----
Susscr_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Taegut_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Termextri_4M	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Thasirsir_4	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNK-----
Xenlae_4B	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNQ-----
Xenlae_4A	ESDR-EKFVHRLSMLNDSVLWIPAFMVKGGEKHVEWVNALILKNQ-----
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Latcal_3	LKVQLAWPGN-IMQYINNYWKTQKLSPKRLSTGILMYT----LASSMCDQ
Perflu_3	LKVQLAWPGN-IMQYVNSYWKTQKLSPKRLSTGILMYT----LASSMCDQ
Serdu_3	LKVQLAWPGN-IMQYINNYWKTQKLSPKRLSTGILMYT----LASSMCDQ
Stepar_3	LKVQLAWPGN-IMQYINNYWKTQKLSPKRLSTGILMYT----LASSMCDQ
Tetcal_3	LKVQLAWPGN-IMQHINKYWKTQKLSPKRLSTGILMYT----LASAICEE
Monalb_3	LKVQLAWPGN-IMQYINNYWKTQKLSPKRLSTGILMYT----LASSMCDQ
Molmol_3	LKVQLAWPGN-IMQYINNYWKTQKLSPKRLSTGILMYT----LASSMCDQ
Takrub_3	LKVQLAWPGN-IMQYINNYWKTQKLSPKRLSTGILMYT----LASSMCDQ
Canlupfam_3	LKVQLAWPGN-IMQHVNRWYWKNHLSPKRLSTGILMYT----LASAICEE
Bostau_3	LKQLAWPGN-IMQHVNRWYWKNHLSPKRLSTGILMYT----LASAVCEE
Homsap_3	LKVQLAWPGN-IMQHVNRWYWKNHLSPKRLSTGILMYT----LASAICEE
Siltro_3	LKVQLDWPNG-IMQHVNRWYWKNHLSPKRLSTGILMYT----LASSVCEE
Anocar_3	LKVQLAWPGN-IMQHVNRWYWKNHLSPKRLSTGILMYT----LASAICDE
Musmus_3	LKVQLAWPGN-IMQHVNRWYWKNHLSPKRLSTGILMYT----LASAICEE
Pantro_3	LKVQLAWPGN-IMQHVNRWYWKNHLSPKRLSTGILMYT----LASAICEE
Ratnor_3	LKVQLAWPGN-IMQHVNRWYWKNHLSPKRLSTGFLMYT----LASAICEE
Galgai_3	LKVQLAWPGN-IMQHVNRWYWKNHLSPKRLSTGILMYT----LASAICEE
Lepocu_3	LKVQLAWPGN-IMQYVNRWYWKTHLAPKRLSTGILMYT----LASAMCEE
Tetnig_3	LKVQLAWPGN-IMQYINNYWKTQKLSPKRLSTGILMYT----LASSMCEE
Squaca_3	LKVQLAWPGN-IMQHINKYWKTQKLSPKRLSTGILMYT----LASAICEE
Perfla_3	LKVQLAWPGN-IMQYVNSYWKTQKLSPKRLSTGILMYT----LASSMCDQ

Salsal_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMYT----LASSMCEE
Serlaldor_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Treber_3	LKVELAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Cynsem_3	LKVQLAWPGN-IMQYIN-----STGILMYT----LASSMCDQ
Paroli_3	LKVQLAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LAYAMCEE
Paroli_3b	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Plaste_3	LKVQLAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LAYAMCEE
Plaste_3b	LKVQLAWPGN-IMQYINSYWKTQLSPKRLSTGILMYT----LASSMCDQ
Erpcal3	LKVQLAWPGN-IMQHINRYWKTQHLAPKRLSTGILMYT----LASAMCEE
Calmil_3b	LKVELAWPGN-IMQYVNKYWKTQLSPKRLSTGILMYT----LASSVCEE
Hetzeb_3	LKVQLAWPGN-IMQHINKYWKTQLSPKRLSTGILMYT----LASAICEE
Latcha_3	LKLQLAWPGN-IMQHVNRWYWKHLSPKRLSTGILMYT----LASAMCQE
Anates_3	LNVLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Ampcit3	LKVQLAWPGN-IMKYVNNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Auslim_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Cypvar_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Krymar_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Funhet_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Gamaff3	LKVQLAWPGN-IMQHINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Orylat_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Orenil_3	LKVQLAWPGN-IMKYVNNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Mayzeb_3	LKVQLAWPGN-IMKYVNNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Punnye_3	LKVQLAWPGN-IMKYVNNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Punnye_3a	LKVQLAWPGN-IMKYVNNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Neobri_3	LKVQLAWPGN-IMKYVNNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Misang_3	LKVQLAWPGN-IMQYVNRYWKTQHLSPKRLSTGILMFT----LASSMCEE
Sinrhi3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMFT----LASSLCEQ
Singra_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMFT----LASSLCEQ
Hapbur_3	LKVQLAWPGN-IMKYVNNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Astcal_3	LKVQLAWPGN-IMKYVNNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Notfur_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Cypcar_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMYT----LASSMCDQ
Poefor3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Poelat_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Poeret_3	LRVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Angang_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMYT----LASAMCEE
Xipmac_3	LKVQLAWPGN-IMQHINNYWKTQHLSPKRLSTGILMYT----LASSMCDQ
Masarm_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Permag_3	LNVLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Gnapet3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILVYT----LAAAMCEE
Ostbic_3	LKVQLAWPGN-IMQHVNRFWKTQLSPKRLSTGILMYT----LASGMCDQ
Gadmor_3	LKVQLAWPGN-IMQYVNSYWKTQLSPKRLSTGILMYT----LASSMCDQ
Scifor_3	LKVQLAWPGN-IMQHIFRWKTQHLSPKRLSTGILMYT----LASAMCDQ
Acapol3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Ampoce_3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Scifor_3b	LKVQLAWPGN-IMKFFNRYWKTQLSPKRLSTGILMYT----LASVMCEE
Ostbic_3b	LKVQLAWPGN-IMKFFNRYWKTQLSPKRLSTGILMYT----LASAMCEE
Parkin_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILVYT----LAAAMCEE
Ampper3	LKVQLAWPGN-IMQYINNYWKTQLSPKRLSTGILMYT----LASSMCDQ
Oncmyk_3	LKVQLAWPGN-IMQYINRYWKTQLSPKRLSTGILMYT----LASSMCEE
Gasacu_3	LKVQLAWPGN-IMQYVNSYWKTQLSPKRLSTGILMYT----LASTMCDQ
Labber_3	LKVQLAWPGN-IMQYINSYWKTQLSPKRLSTGILMYT----LASSMCDQ
Panbuc_3	LKMRLAWPGN-IMQYFNSYWKTQLSPKRLSTGILMYT----LASAMCEE
Parhas3	LRVQLAWPGN-IMKYINRYWKTQLSPKRLSTGILMFT----LASSVCEE
Cluhar_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMYT----LASSLCEQ
Aloalo_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMYT----LASSLCEQ
Panhyp_3	LRVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMFT----LASSLCEQ
Eleele_3	LRVQLAWPGN-IMTYINRYWKTQLSPKRLSTGILMFT----LASSMCKQ
Denclu_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMYT----LASSLCEQ
Sarpil_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMYT----LASSLCEQ
Eigvir_3	LRVQLAWPGN-IMKYINRYWKTQLSPKRLSTGILMFT----LASSVCEE
Aptalb_3	LRVQLAWPGN-IMKYINRYWKTQLSPKRLSTGILMFT----LASSVCEE
Sinans_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMFT----LASSLCEQ
Pygnat_3	LRVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMFT----LASSLCEQ
Astmex_3	LRVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMFT----LASSLCEQ
Caraur_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMFT----LASSLCEQ
Danrer_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMFT----LASSLCEQ
Ictpun_3	LRVQLAWPGN-IMQYVNRYWKTQLAPKRLSTGILMFT----LASSLCEQ
Plealt_3	LKVQLAWPGN-IMQYVNRYWKTQLSPKRLSTGILMYT----LASSMCEE
Plealt_9	LKVELAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Gasacu_9	LKVELAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Parkin_9	LNVLAWPGN-IMHYINSYWKTQLSPKRLSTGILMYT----LASAMCEE
Acapol_9	LKVELAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Larcro_9	LKVELAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Notcor_9	LKVELAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LASAMCEE
Latcal_9	LKVELAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LAYAMCEE
Serlaldor_9	LKVELAWPGN-IMHDVNKYWKTKNLSPKRLSTGILMYT----LAYAMCEE

Monalb_9	LKVDLAWPGN-IMHNINKYWTKSLSPKRLSTGILMYT----LATAMCDE
Serdum_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LAYAMCDE
Perflu_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Perfla_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Stepar_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Molmol_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Hipcom_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Takrub_9 B	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Takrub_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRVSTGIFMYT----LASAMCDE
Cynsem_9	LKVKLAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LAYAMCDE
Scomax_9	LKVKLAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LAYAMCDE
Corlav_9	LKIELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCEE
Oncmyk_9	LKIELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCEE
Salsal_9	LKIELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCEE
Onctsh_9	LKVELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCEE
Salalp_9	LKIELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCEE
Ampoce_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Ampper9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Labber_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Umbpyg_3B	LKVKLAWPGN-IMHYVNRYWTKHLSPKRLSTGILMYT----LASAMCEE
Esoluc_3b	LKVQLAWPGN-IMHYINRYWTKQLSPKRLSTGILMYT----LASAMCEE
Gadmor_9	LKIELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCEE
Umbpyg_9	LKVELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCEE
Esoluc_9	LKVELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCEE
Permag_9	LKVELAWPGN-IMHDVNKYWRTKNLSPKRLSTGILMYT----LASAMCDE
Bolpec_9	LKVELAWPGN-IMHDVNKYWRTKNLSPKRLSTGILMYT----LASAMCDE
Poefor9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Masarm_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Angjap_9	LKVQLAWPGN-IMQYVNRYWTKRLSPKRLSTGILMYT----LASAMCEE
Poelat_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Poeret_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Xipmac_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Hapbur_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAICDE
Orylat_9	LKVELAWPGN-IMHNVNKYWTKNLSPKRLSTGILMYT----LAFSMCDE
Gamaff_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Neobri_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAICDE
Funhet_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LAYAMCDE
Punnye_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAICDE
Cypvar_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LAYAMCDE
Krymar_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Notfur_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Notpie_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Orenil_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAICDE
Auslim_9	LKVELAWPGN-IMQDVNKYWTKNLSPKRLSTGILMYT----LASAMCDE
Anates_9	LKVELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LAYAMCDE
Astcal_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAICDE
Mayzeb_9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAICDE
Orymel_9	LKVELAWPGN-IMHNVNKYWTKNLSPKRLSTGILMYT----LAFAMCDE
Ampcit9	LKIELAWPGN-IMHDVNKYWTKNLSPKRLSTGILMYT----LASAICDE
Macfas_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Macmul_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Macnem_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Musmus_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Ponabe_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNE
Papanu_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Nomleu_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Pantro_2	VNVRTAYPSLPLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Latcha_2	INVQTAYPSLRLHLAVRGYWLTKNVLIKRPTTGILMYT----LATRFCSE
Gnapet2	LNVRPAFPSLRLLDVAVRGYWLTKNVQIKRPTTGILMYT---MATRFCDE
Panbuc_2b	VHVRPAFPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT----LATRFCNQ
Ostbic_2	INVHTAFPSLRLHLAVRGYWLTKNVQIKRPTTGILMYT---MATRFCDE
Sinrhi2	VNVRTAFPSLRLHLAVRGYWLTKNVQIKRPTTGILMYT---MATRFCDE
Hetzeb_2	IRVQTAYPSLRLHLAVRGYWLTKNRILIKRPTTGILMYT---LATRFCDE
Hipcom_2	ADVRTAFPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT---MATRFCDE
Prigla_2	IHVQTAYPSLRLHLAVRGYWLTKNRVLIKRPTTGILMYT---LATRFCDE
Scytor_2	IHVQTAYPSLRLHLAVRGYWLTKNRVLIKRPTTGILMYT---LATRFCDE
Tetcal_2	IHVQTAYPSLRLHLAVRGYWLTKNRVFIKRPTTGILMYT---LATRFCDE
Rhityp_2	LHVQTAYPSLRLHLAVRGYWLTKNVLIKRPTTGILMYT---LATRFCDE
Parkin_2b	LAVRPAFPSLRLLDVAVRGYWLTKNVHIKRPTTGILMYT---MATRFCDE
Angang_2	LNVRPAFPSLRLHLAVRGYWLTKNVLIKRPTTGILMYT---MATRFCDE
Pygnat_2	VNVHTAFPSLRLHLAVRGYWLTKNVQIKRPTTGILMYT---MATRFCDE
Parkin_2	LDVRPAFPSLRLLDVAVRGYWLTKNVQIKRPTTGILMYT---MATRFCDE
Gorgor_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT---LATRFCNQ
Thegel_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT---LATRFCNQ
Tupchi_2	VNVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT---LATRFCNQ
Galgai_2	INVRTAYPSLRLHLAVRGYWLTKNVHIKRPTTGILMYT---LATRFCNR
Eleele_2	GNVHAAPPSLRLHLAVRGYWLTKNIQIKRPTTGILMYT---MATRFCDE

Danrer_2	VNVRTAFPSLRLLHAVRGYWLTNHVQIKRPTTGLLMYT----MATRFCDE
Canlupfam_2	VNVRTAYPSLRLLHAVRGYWLTNKVHIKRPTTGLLMYT----LATRFCNQ
Aloalo_2	VNVRTAFPSLRLLHAVRGYWLTNQVQIKRPTTGLLMYT----MATRFCDE
Astmex_2	VSVHAAPSLRLLHAVRGYWLTNNIQIKRPTTGLLMYT----MATRFCEE
Sinans_2	VNVRTAFPSLRLLHAVRGYWLTNHVQIKRPTTGLLMYT----MATRFCDE
Scifor_2	INVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEQ
Ceraty_2	VNVRTAFPSLRLLHAVRGYWLTNKVHIKRPTTGLLMYT----LATRFCNQ
Anocar_2	INVRTAYPSLRLLHAVRGYWLTNKVYIKRPTTGLLMYT----LATRFCNR
Anates_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Ampbic_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Sarpil_2	VNVRTAFPSLRLLHAVRGYWLTNQVQIKRPTTGLLMYT----MATRFCDE
Xenlae_2	INVHTAYPSLRLLHAVRGYWLTNKVHIKRPTTGILMYT----LATRFCNR
Cluhar_2	VNVRTAFPSLRLLHAVRGYWLTNQVQIKRPTTGLLMYT----MATRFCDE
Cypcar_2	VNVRTAFPSLRLLHAVRGYWLTNHVQIKRPTTGLLMYT----MATRFCDE
Denclu_2	VNVRTAFPSLRLLHAVRGYWLTNQVLIKRPTTGLLMYT----MATRFCEE
Notpie_2	VDVRMAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Erpcal2	INVQTAYPSLRLLYAVRGYWLTNKVPIKRPTTGLLMYT----LATRFCDE
Amical_2	INVRTAFPSLRLLHAVRGYWLTNKVPIKRPTTGMLMYT----LATRFCEE
Lepocu_2	INVRTAFPSLRLLHAVRGYWLTNKVPIKRPTTGLLMYT----LATRFCEE
Homsap_2	VNVRTAYPSLRLLHAVRGYWLTNKVHIKRPTTGLLMYT----LATRFCQK
Bostau_2	VNVRTAYPSLRLLHAVRGYWLTNKVHIKRPTTGLLMYT----LATRFCNQ
Caraur_2	VNVRTAFPSLRLLHAVRGYWLTNQVQIKRPTTGLLMYT----MATRFCDE
Thythy_2B	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Onctsh_2B	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Salsal_2B	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Oncmyk_2B	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Onckis_2B	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Salsal_2A	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Thythy_2A	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Salalp_2A	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Corlav_2A	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Cormar_2A	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Onctsh_2A	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Oncmyk_2A	VDVHTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Neobri_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Takrub_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Tetnig_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Orenil_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Orylat_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Krymar_2	VDVRMAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Notfur_2	VDVRMAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Poelat_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Gadmor_2	VGIRTAFPSLRLLHAVRGYWLTTNNVQIKRPTTGLLMYT----MATRFCEE
Xipmac_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Poeret_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Astcal_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Hapbur_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Acapol_2B	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Ampoce_2A	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Acapol_2A	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Mayzeb_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Punnye_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Latcal_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Singra_2	VNVRTAFPSLRLLHAVRGYWLTNHVQIKRPTTGLLMYT----MATRFCDE
Auslim_2	VDVRMAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Monalb2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----LATRFCEE
Ampoce_2B	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Chiham_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Gasacu_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Gymacu_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Labber_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Cypvar_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Funhet_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Larcro_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Paroli_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Perflu_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Serdum_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Stepar_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Notcor_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Treber_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Serlaldor_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIKRPTTGLLMYT----MATRFCEE
Plaste_2	VDVRTAFPSLRLLHAVRGYWLTTNNVHIK-PTTGLLMYT----MATRFCEE
Clabat_4	LPVRMAYPSLRLLHAVRGYWLTNKVNIKRPTTGLLMYT----MATRFCDE
Ictpun_4A	LPVHMAYPSLRLLHAVRGYWLTNKVNIKRPTTGLLMYT----MATRFCDE
Panhyp_4	LPVRMAYPSLRLLHAVRGYWLTNKVNIKRPTTGLLMYT----MATRFCDE
Umbpyg_4	LSVRTAYPSLRLLHAVRGYWLTNKINIKRPTTGLLMYT----LATRFCDE
Esoluc_4	LRVRTAYPSLRLLHAVRGYWLTNKINIKRPTTGLLMYT----LATRFCDE

Plealt_4	LRVKTAYPSRLVHAVRGYWLTKINIKRPSTGLLMYT----LATRFCNE
Onckis_4B	LRVRTAYPSRLIHVVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Onckis_4A	LRVRTAYPSRLIHVVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Onctsh_4	LRVRTAYPSRLIHVVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Oncmky_4	LRVRTAYPSRLIHVVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Corlav_4	LRVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Astmex_4A	LPLRTAYPSRLIHAVRGYWLTKVNIKRPTGLLMYT----MATRFCDE
Pygnat_4	LPVHMAYPSRLIHAVRGYWLTKVNIKRPTGLLMYT----MATRFCDE
Aloalo_4	LRVRTAYPSRLIHAVRGYWLTKNIH IKRPSTGLLMYT----LATRFCDE
Cluhar_4	LSVKPAYPSRLIHAVRGYWLTKNIH IKRPSTGLLMYT----LATRFCDE
Denclu_4	LHLRMAYPSRLFHAVRGYWLTKVNIKRPTGLLMYT----LATRFCDE
Konpun4	LRVRTAYPSRLIHAVRGYWLTKNIH IKRPSTGLLMYT----LATRFCDE
Sarpil_4	LRVRTAYPSRLIHAVRGYWLTKNIH IKRPSTGLLMYT----LATRFCDE
Caraur_4	LKVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----MATRFCDE
Cteide_4	LKVRMAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----MATRFCDE
Petmar_4	LPLRAAFPSRLMHAVRGYWLTKVYIKRPSTGLLMYT----LATRFCRE
Cypcar_4	LRLRTAYPSRLIHAVRGFWLTKINIKRPSTGLLMYT----LATRFCDE
Danrer_4	LKVRTAYPSRLIHAVRGFWLTKINIKRPSTGLLMYT----MATRFCDE
Misang_4	LKVRTAYPSRLIHAVRGYWLTKIKIKRPSTGLLMYT----MATRFCDE
Angjap_4	LRVRTAYPSRLIHAVRGYWLTKVNIKRPTGLLMYT----LATRFCDE
Cypcar_4A	LRLRTAYPSRLIHAVRGFWLTKINIKRPSTGLLMYT----LATRFCDE
Angang_4	LRVRPPTPRSGLIHAVRGYWLTKVNIKRPTGLLMYT----LATRFCDE
Cypcar_4B	LKVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Sinans_4A	LKVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----MATRFCDE
Sinans_4B	LKVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----MATRFCDE
Singra_4A	LKVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----MATRFCDE
Aptalb_4	LPVRMAYPSRLVHAVRGYWLTKVNIKRPTGLLMYT----MATRFCDE
Eigvir_4	LPVHMAYPSRLIHAVRGYWLTKVNIKRPTGLLMYT----LATRFCDE
Eleele_4	LPVRMAYPSRLIHAVRGYWLTKVNIKRPTGLLMYT----MATRFCDE
Parhas_4	LPVRMAYPSRLVHAVRGYWLTKVNIKRPTGLLMYT----MATRFCDE
Scifor_4	LKLRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Gnapet4	LLLRTAYPSRLIHAVRGYWLTKVNIKRPTGLLMYT----LATRFCNE
Ostbic_4	LRVRTAYPSRLNHAVRGYWLTKIKIKRPSTGLLMYT----LATRFCDE
Parkin_4	LLLRTAYPSRLIHAVRGYWLTKVNIKRPTGLLMYT----LATRFCNE
Panbuc_4	LKVRTAYPSRLIHAVRGYWLTKVNIKRPTGLLMYT----LATRFCDE
Erpcal4	LKVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Salsal_4	LRVRTAYPSRLIHVVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Saltru_4	LRVRTAYPSRLIHVVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Salalp_4	LRVRTAYPSRLIHVVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Salfon_4	LRVRTAYPSRLIHVVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Thythy_4	LSVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Calmil_4	LSIQTAYPSRLIHAVRGYWLTKVYIKRPSTGLLMYT----LATRFCDE
Hetzeb_4	LSIQTAYPSRLIHAVRGYWLTKIYIKRPSTGLLMYT----LATRFCDE
Rhityp_4	LNIQTAYPSRLIHAVRGYWLTKIYIKRPSTGLLMYT----LATRFCDE
Scytor_4	LNIQTAYPSRLIHAVRGYWLTKIYIKRPSTGLLMYT----LSTRFCDE
Squaca_4	LSIQTAYPSRLIHAVRGYWLTKVYIKRPSTGLLMYT----LATRFCDE
Amical_4	LKVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Lepocu_4	LKVRTAYPSRLIHAVRGYWLTKINIKRPSTGLLMYT----LATRFCDE
Agema_4	LPVRMAYPSRLVHAVRGYWLTKVNIKRPTGLLMYT----MATRFCDE
Anocar_4	LKVRTAYPSRLIHAVRGYWLTKVFIKRPTGLLMYT----LATRFCDE
Canlupfam_4	LKVRTAYPSRLIHAVRGYWLTKVPIKRPTGLLMYT----LATRFCDE
Crigri_4	LKVRTAYPSRLIHAVRGYWLTKVPIKRPTGLLMYT----LATRFCDE
Galgal_4	LKVRTAYPSRLIHAVRGYWLTKVHIKRPTGLLMYT----LATRFCDE
Mesaur_4	LKVRTAYPSRLIHAVRGYWLTKVPIKRPTGLLMYT----LATRFCDE
Homsap_4	LKVRTAYPSRLIHAVRGYWLTKVPIKRPTGLLMYT----LATRFCDE
Notscuscu_4	LKVQTAYPSRLIHAVRGYWLTKVYIKRPSTGLLMYT----LATRFCDE
Psetextex_4	LKVRTAYPSRLIHAVRGYWLTKVYIKRPSTGLLMYT----LATRFCDE
Musmus_4	LQVRTAYPSRLIHAVRGYWLTKVPIKRPTGLLMYT----LATRFCDE
Pogvit_4	LKVRTAYPSRLIHAVRGYWLTKVFIKRPTGLLMYT----LATRFCDE
Promuc_4	LKVRTAYPSRLIHAVRGYWLTKVYIKRPSTGLLMYT----LATRFCDE
Pantro_4	LKVRTAYPSRLIHAVRGYWLTKVPIKRPTGLLMYT----LATRFCDE
Pytbiv_4	LKVRTAYPSRLIHAVRGYWLTKVYIKRPSTGLLMYT----LATRFCDE
Ratnor_2	VNVRTAYPSRLHLHAVRGYWLTKVHIKRPTTGILLMYT----LATRFCNQ
Ratnor_4	LKVRTAYPSRLIHAVRGYWLTKVPIKRPTITGILLMYT----LATRFCDE
Siltro_2	INVHTAYPSRLHLHAVRGYWLTKVHIKRPTTGILLMYT----LATRFCNR
Siltro_4	LKVRTAYPSRLIHAVRGYWLTKVQIKRPSTGLLMYT----LATRFCDE
Susscr_4	LKVRTAYPSRLIHAVRGYWLTKVPIKRPTGLLMYT----LATRFCDE
Taegut_4	LKVRTAYPSRLIHAVRGYWLTKVHIKRPTGLLMYT----LATRFCDE
Termextri_4M	LKVRTAYPSRLIHAVRGYWLTKVHIKRPTGLLMYT----LTTRFCDE
Thasirsir_4	LKVRTAYPSRLIHAVRGYWLTKVYIKRPSTGLLMYT----LATRFCDE
Xenlae_4B	LKVRTAYPSRLIHAVRGYWLTKVQIKRPSTGLLMYT----LATRFCDE
Xenlae_4A	LKVRTAYPSRLIHAVRGYWLTKVQIKRPSTGLLMYT----LATRFCDE
	201
Latcal_3	IHLYG----FWPFGWDPNTG---KELPYHYD KKGTKFTTKWQESHQLPA
Perflu_3	IHLYG----FWPFGWDPNTG---KELPYHYD KKGTKFTTKWQESHQLPA
Serdum_3	IHLYG----FWPFGWDPNTG---KELPYHYD KKGTKFTTKWQESHQLPA
Stepar_3	IHLYG----FWPFGWDPNTG---KELPYHYD KKGTKFTTKWQESHQLPA

Tetcal_3	IHLYG----FWPFAWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Monalb_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Molmol_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Takrub_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Canlupfam_3	IHLYG----FWPFGFDPNTR---EDLPYHYDYDKKGTKFTTKWQESHQLPA
Bostau_3	IHLYG----FWPFGFDPNTR---EDLPYHYDYDKKGTKFTTKWQESHQLPA
Homsap_3	IHLYG----FWPFGFDPNTR---EDLPYHYDYDKKGTKFTTKWQESHQLPA
Siltro_3	IHLYG----FWPFGWDPNTG---KDLPHYHYDYDKKGTKFTTKWQESHQLPA
Anocar_3	IHLYG----FWPFGFNPNNR---EDLPYHYDYDKKGTKFTTKWQESHQLPA
Musmus_3	IHLYG----FWPFGFDPNTR---EDLPYHYDYDKKGTKFTTKWQESHQLPA
Pantro_3	IHLYG----FWPFGFDPNTR---EDLPYHYDYDKKGTKFTTKWQESHQLPA
Ratnor_3	IHLYG----FWPFGFDPNTR---EDLPYHYDYDKKGTKFTTKWQESHQLPA
Galgal_3	IHLYG----FWPFGFDPNTR---EDLPYHYDYDKKGTKFTTKWQESHQLPA
Lepocu_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Tetnig_3	IHLYG----FWPFGWDPNTG---RELPHYHYDYDKKGTKFTTKWQESHQLPT
Squaca_3	IHLYG----FWPFAWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Perfla_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Salsal_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Serlaldor_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Treber_3	IHLYG----FWPFGWDPNTG---NDLPYHYDYDKKGTKFTTKWQETHQLPT
Cynsem_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Paroli_3	IHLYG----FWPFGWDPNTG---KDLPHYHYDYDKKGTKFTTKWQETHQLPS
Paroli_3b	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Plaste_3	IHLYG----FWPFGWDPNTG---NDLPYHYDYDKKGTKFTTKWQETHQLPS
Plaste_3b	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Erpcal3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Calmil_3b	IHLYG----FWPFAWDPNTG---RELPHYHYDYDKKGTKFTTKWQETHQLPA
Hetzeb_3	IHLYG----FWPFAWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Latcha_3	IHLYG----FWPFGWDPNSG---KDLPHYHYDYDKKGTKFTTKWQESHQLPA
Anates_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Ampcit3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Auslim_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Cypvar_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Krymar_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Funhet_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Gamaff3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Orylat_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Orenil_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Mayzeb_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Punnye_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Punnye_3a	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Neobri_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Misang_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Sinrhi3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Singra_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Hapbur_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Astcal_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Notfur_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Cypcar_3	-----
Poefor3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Poelat_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Poeret_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Angang_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPS
Xipmac_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Masarm_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Permag_3	-----LPYHYDYDKKGTKFTTKWQESHQLPA
Gnapet3	VHLYG----FWPFGWDPSTG---RELPHYHYDYDKKGTKFTTKWQESHQLPA
Ostbic_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQETHQLPT
Gadmor_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Scifor_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPS
Acapol3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Ampoce_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Scifor_3b	IHLYG----FWPFAWDPISG---KGLPHYHYDYDKKGTKFTTKWQESHQLPA
Ostbic_3b	IHLYG----FWPFGWDPISG---KGLPHYHYDYDKKGTKFTTKWQESHQLPA
Parkin_3	VHLYG----FWPFGWDPSTG---RELPHYHYDYDKKGTKFTTKWQESHQLPA
Amppe3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Oncmyk_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Gasacu_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Labber_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPA
Panbuc_3	VHLYG----FWPFGWDPASG---RELPHYHYDYDKKGTKFTTKWQESHQLPA
Parhas3	VHLYG----FWPFGWDPNTG---KDLPHYHYDYDKKGTKFTTKWQESHQLPT
Cluhar_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Aloalo_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Panhyp_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Eleele_3	VHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Denclu_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT
Sarpil_3	IHLYG----FWPFGWDPNTG---KELPYHYDYDKKGTKFTTKWQESHQLPT

Eigvir_3	VHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	T
Aptalb_3	VHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	T
Sinans_3	VHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	T
Pygnat_3	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	T
Astmex_3	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	T
Caraur_3	VHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	T
Danrer_3	VHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	T
Ictpun_3	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	T
Plealt_3	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	A
Plealt_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Gasacu_9	IHLYG----	FWPFGWDPNTG---	NDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Parkin_9	VHLYG----	FWPFGWDPISG---	KGLPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	A
Acapol_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Larcro_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Notcro_9	IHLYG----	FWPFGWDPNTG---	NDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Latcal_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Serlaldor_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Monalb_9	VHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	EAHQ	LP	S
Serdum_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Perflu_9	IHLYG----	FWPFGWDPNSG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Perfla_9	IHLYG----	FWPFGWDPNSG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Stepar_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Molmol_9	IHLYG----	FWPFGWDPNTG---	NDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Hipcom_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Takrub_9 B	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	T
Takrub_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	T
Cynsem_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Scomax_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Corlav_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Oncmyk_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Salsal_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	A
Onctsh_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Salalp_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Ampoce_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Amppe9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Labber_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	T
Umbpyg_3B	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	A
Esoluc_3b	IHLYG----	FWPFGWDPNTG---	KELPYHYD	DRKGT	KFTT	KKWQ	ESHQ	LP	A
Gadmor_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Umbpyg_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Esoluc_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Permag_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	DRKGT	KFTT	KKWQ	ETHQ	LP	N
Bolpec_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	DRKGT	KFTT	KKWQ	ETHQ	LP	N
Poefor9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Masarm_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Angjap_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ESHQ	LP	S
Poelat_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Poeret_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Xipmac_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Hapbur_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Orylat_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Gamaff_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Neobri_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Funhet_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Punnye_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Cypvar_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Krymar_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Notfur_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Notpie_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Orenil_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Auslim_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Anates_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Astcal_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Mayzeb_9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Orymel_9	IHLYG----	FWPFGWDPNTG---	KELPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Ampcit9	IHLYG----	FWPFGWDPNTG---	KDLPYHYD	KKGT	KFTT	KKWQ	ETHQ	LP	S
Macfas_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHYD	SLKYGYTS	QASP	-HTMPL			
Macmul_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHYD	SLKYGYTS	QASP	-HTMPL			
Macnem_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHYD	SLKYGYTS	QASP	-HTMPL			
Musmus_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHYD	SLKYGYTS	QASP	-HTMPL			
Ponabe_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHYD	SLKYGYTS	QASP	-HTMPL			
Papanu_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHYD	SLKYGYTS	QASP	-HTMPL			
Nomleu_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHYD	SLKYGYTS	QASP	-HTMPL			
Pantro_2	IYLYG----	FWPFPLDQN-Q---	NPVKYHYD	SLKYGYTS	QASP	-HTMPL			
Latcha_2	IHLYG----	FWPFPRDHS-E---	RPVKYHYD	SLTYEYTS	QASP	-HTMPL			
Gnapet2	IHLYG----	FWPFALGPQ-G---	NPVKYHYD	SLTYQYTS	QASP	-HTMPL			
Panbuc_2b	IHLYG----	FWPFPRDVG-G---	RPVKYHYD	DALTYGYTS	QAGP	-HAMPL			

Ostbic_2	IHLYG----FWPFPLGPH-G---NPVKYHYDALTYYEYTSQVGP-HTMPL
Sinrhi2	IHLYG----FWPFAHDPD-G---KSVKYHYDTLTYHYTSGASP-HTMPL
Hetzeb_2	IHLYG----FWPFPKDQK-G---NVVKYHYDLSLTYEYNSRATP-HTMPL
Hipcom_2	IHLYG----FWPFSDAA-G---KAVKYHYDTLKYEYTSSSSP-HSMPL
Prigla_2	IHLYG----FWPFPKDQK-G---NVVKYHYDLSLTYEYNSRATP-HTMPL
Scytor_2	IHLYG----FWPFPKDQK-G---NAVKYHYDLSLTYEYNSRATP-HTMPL
Tetcal_2	IHLYG----FWPFKDPK-G---NAVKYHYDLSLTYEYNSRATP-HTMPL
Rhityp_2	IHLYG----FWPFKDHK-G---NAVKYHYDLSLTYEYNSRATP-HTMPL
Parkin_2b	IHLYG----FWPFSDAQ-G---NAVKYHYDLSLTYGYTSRTSP-HTMPL
Angang_2	IHLYG----FWPFQDPQ-G---NPMKYHYDLSLTYEYDSSHSP-HTMPL
Pygnat_2	IHLYG----FWPFPRDSE-G---KPVKYHYDLSLTYQYTSSSSP-HTMPL
Parkin_2	IHLYG----FWPFALGPQ-G---NPVKYHYDLSLTYEYTSQASP-HTMPL
Gorgor_2	IYLYG----FWPFPLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Thegel_2	IYLYG----FWPFPLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Tupchi_2	IYLYG----FWPFPLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Galgal_2	IHLYG----FWPFPLDQN-Q---QPVKYHYDLSLKYGYTSQASP-HTMPL
Eleele_2	IHLYG----FWPFSHGPE-G---KPVKYHYDALTYYEYTSSSSP-HTMPL
Danrer_2	IHLYG----FWPFAHDPD-G---KPVKYHYDTLTYHYTSSASP-HTMPL
Canlupfam_2	IYLYG----FWPFPLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Aloalo_2	IHLYG----FWPFHRDHQ-G---KRVKYHYDTLTYEFTSRASP-HTMPL
Astmex_2	IHLYG----FWPFPRDSE-G---KPVKYHYDLSLTYQYTSSSSP-HTMPL
Sinans_2	IHLYG----FWPFAHDPD-G---KPVKYHYDTLTYHYTSSASP-HTMPL
Scfor_2	IHLYG----FWPFLGPH-G---NPVKYHYDALTYYEYTSQVGP-HTMPL
Ceraty_2	IYLYG----FWPFPLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Anocar_2	IYLYG----FWPFPRDQD-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Anates_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDALKYEYTSSSSP-HTMPL
Ampbic_2	IHLYG----FWPFPLDPH-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Sarpil_2	IHLYG----FWPFHRDHQ-G---KRVKYHYDTLTYQFTSRASP-HTMPL
Xenlae_2	IYLYG----FWPFPRDLH-Q---NPVKYHYDLSLKYGYTSQAGP-HAMPL
Cluhar_2	IHLYG----FWPFHRDHQ-G---NVVKYHYDLSLTYEFTSRASP-HTMPL
Cypcar_2	IHLYG----FWPFAHDPD-G---KPVKYHYDLSLTYHYTSSASP-HTMPL
Denclu_2	IHLYG----FWPFHRDAQ-G---KPVKYHYDALTYYEYTSSSHSP-HTMPL
Notpie_2	IHLYG----FWPFPLDPK-G---KTVKYHYDLSLTYEYTSSSSP-HTMPL
Erpcal2	IHLYG----FWPFQDQK-G---NSVKYHYDLSLRYEFTSQSSP-HAMPL
Amical_2	IHLYG----FWPFSGPA-G---NPVKYHYDLSLTYEYTAQSSP-HTMPL
Lepocu_2	IHLYG----FWPFSLGPN-G---LPVKYHYDLSLTYEYRAQSSP-HSMPV
Homsap_2	IYLYG----FWPFPLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Bostau_2	IYLYG----FWPFPLDQN-Q---NPVKYHYDLSLKYGYTSQASP-HTMPL
Caraur_2	IHLYG----FWPFAHDPD-G---KPVKYHYDLSLTYHYTSSASP-HTMPL
Thythy_2B	IHLYG----FWPFPKDSQ-G---KPVKYHYDLSLTYEYTSHASP-HTMPL
Onctsh_2B	IHLYG----FWPFQDSQ-G---KPVKYHYDLSLTYEYTSHASP-HTMPL
Salsal_2B	IHLYG----FWPFQDSQ-G---KSVKYHYDLSLTYEYTSHASP-HTMPL
Oncmk_2B	IHLYG----FWPFQDSQ-G---KPVKYHYDLSLTYEYTSHASP-HTMPL
Onckis_2B	IHLYG----FWPFQDSQ-G---KPVKYHYDLSLTYEYTSHASP-HTMPL
Salsal_2A	IHLYG----FWPFPRDSQ-G---KPVKYHYDLSLTYEYTSHASP-HAMPL
Thythy_2A	IHLYG----FWPFPRNSQ-G---KPVKYHYDLSLTYEYTSHASP-HTMPL
Salalp_2A	IHLYG----FWPFPRDSQ-G---KPVKYHYDLSLTYEYTSHASP-HTMPL
Corlav_2A	IHLYG----FWPFPRDSQ-G---IPVKYHYDLSLTYEYTSHASP-HTMPL
Cormar_2A	IHLYG----FWPFPRDSQ-G---IPVKYHYDLSLTYEYTSHASP-HTMPL
Onctsh_2A	IHLYG----FWPFPRDSQ-G---KPVKYHYDLSLTYEYTSHASP-HTMPL
Oncmk_2A	IHLYG----FWPFQDSQ-G---KPVKYHYDLSLTYEYTSHASP-HTMPL
Neobri_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Takrub_2	IHLYG----FWPFPSDPH-G---RPVKYHYDLSLTYEYTSSSSP-HTMPL
Tetnig_2	IHLYG----FWPFPLDPR-G---RPVKYHYDLSLTYEYTSSSSP-HTMPL
Orenil_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Orylat_2	IHLYG----FWPFVDSH-G---KAVKYHYDLSLTYEYTSSSSP-HTMPL
Krymar_2	IHLYG----FWPFALDPR-G---RPVKYHYDALKYEYTSSSSP-HAMPL
Notfur_2	IHLYG----FWPFPLDPK-G---KTVKYHYDLSLTYEYTSSSSP-HTMPL
Poelat_2	IHLYG----FWPFPLGPQ-G---RPVKYHYDLSLTYEYTSSSSP-HTMPL
Gadmor_2	IHLYG----FWPFPLDPR-G---RPVKYHYDLSLTYEYTSSSSP-HTMPL
Xipmac_2	IHLYG----FWPFPLGPQ-G---RPVKYHYDLSLTYEYTSSSSP-HTMPL
Poeret_2	IHLYG----FWPFPLGPQ-G---RPVKYHYDLSLTYEYTSSSSP-HTMPL
Astcal_2	IHLYG----FWPFSLDPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Hapbur_2	IHLYG----FWPFSLDPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Acapol_2B	IHLYG----FWPFPLDPH-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Ampoce_2A	IHLYG----FWPFPLDPH-G---NPVKYHYDLSLTYEYTSSSSP-HTMPL
Acapol_2A	IHLYG----FWPFPLDPH-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Mayzeb_2	IHLYG----FWPFSLDPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Punnye_2	IHLYG----FWPFSLDPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Latcal_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Singra_2	IHLYG----FWPFAHDPD-G---KPVKYHYDLSLTYHYTSSASP-HTMPL
Auslim_2	IHLYG----FWPFPLDPR-G---RPVKYHYDLSLTYEYTSSSSP-HTMPL
Monalb2	IHLYG----FWPFPLDLQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Ampoce_2B	IHLYG----FWPFPLDPH-G---NPVKYHYDLSLTYEYTSSSSP-HTMPL
Chiham_2	IHLYG----FWPFSDHPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL
Gasacu_2	IHLYG----FWPFHRDPQ-G---RPVKYHYDALKYEYTSSSSP-HTMPL
Gymacu_2	IHLYG----FWPFSDHPQ-G---KPVKYHYDLSLTYEYTSSSSP-HTMPL

Labber_2	IHLYG----FWPFPLDPQ-G---RPVKYHYDYLKYEYTSASAP-HTMPL
Cypvar_2	IHLYG----FWPFPLDPQ-G---RPVKYHYDYLKYEYTSSSSP-HTMPL
Funhet_2	IHLYG----FWPFPLGPH-G---RPVKYHYDYLKYQYTSSSSP-HTMPL
Larcro_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDYLKYEYTSSSSP-HTMPL
Paroli_2	IHLYG----FWPFALDPQ-G---KPVKYHYDYLKYEYTSRSSP-HSMPL
Perflu_2	IHLYG----FWPFPLDPQ-G---RSVKYHYDYLKYEYTSSSSP-HTMPL
Serdum_2	IHLYG----FWPFALDPQ-G---KPVKYHYDYLKYEYTSSSSP-HTMPL
Stepar_2	IHLYG----FWPFPLDPQ-G---KPVKYHYDYLKYEYTSSSSP-HTMPL
Notcor_2	IHLYG----FWPFSHDPQ-G---KPVKYHYDYLKYEYTSSSSP-HTMPL
Treber_2	IHLYG----FWPFSHDPQ-G---KPVKYHYDYLKYEYTSSSSP-HTMPL
Serlaldor_2	IHLYG----FWPFALDPQ-G---KPVKYHYDYLKYEYTSSSSP-HTMPL
Plaste_2	IHLYG----FWPFALDPQ-G---KPVKYHYDYLKYEYTSRSSP-HTMPL
Clabat_4	IHLYG----FWPFPKDNS-G---NPVKYHYDMLKYRYFSNAGP-HRMPL
Ictpun_4A	IHLYG----FWPFPKDSS-G---NPVKYHYDMLKYRYFSNASP-HRMPL
Panhyp_4	IHLYG----FWPFPKDAS-G---NPVKYHYDMLKYRYFSNASP-HRMPL
Umbpyg_4	IHLYG----FWPFPRDAK-G---NAVKYHYDMLKYRYFSNAGP-HRMPL
Esoluc_4	IHLYG----FWPFPRDAN-G---NVVKYHYDMLKYSYFSNAGP-HRMPL
Plealt_4	IHLYG----FWPFPRDAN-G---NLVKYHYDMLKYRYFSNAGP-HRMPL
Onckis_4B	IHLYG----FWPFPRDAN-G---NMVKYHYDMLKYRYFSNASP-HRMPL
Onckis_4A	IHLYG----FWPFPRDAN-G---NMVKYHYDMLKYRYFSNASP-HRMPL
Onctsh_4	IHLYG----FWPFPRDAN-G---NMVKYHYDMLKYRYFSNASP-HRMPL
Oncmyk_4	IHLYG----FWPFPRDAN-G---NMVKYHYDMLKYRYFSNAGP-HRMPL
Corlav_4	IHLYG----FWPFPRDSN-G---NVVKYHYDMLKYRYFSNAGP-HRMPL
Astmex_4A	IHLYG----FWPFPKDAN-G---IPVKYHYDMLKYRYFSAGP-HRMPL
Pygnat_4	IHLYG----FWPFPKDAA-G---NPVKYHYDYLKYRYFSRAGP-HRMPL
Aloalo_4	IHLYG----FWPFPKDTH-G---NPVKYHYDYLKYRYFSNAGP-HRMPL
Cluhar_4	IHLYG----FWPFPKDSQ-G---NPVKYHYDYLKYRYFSNAGP-HRMPL
Denclu_4	IHLYG----FWPFPRDTQ-G---NPVKYHYDMLKYRYLSNAAP-HRMPL
Konpun_4	IHLYG----FWPFPKDSQ-G---NTVKYHYDYLKYRYFSNAGP-HRMPL
Sarpil_4	IHLYG----FWPFPKDTH-G---NPVKYHYDYLKYRYFSNAGP-HRMPL
Caraur_4	IHLYG----FWPFPRDGS-G---NPVKYHYDGLRYRYFSNAGP-HRMPL
Cteide_4	IYLYG----FWPFPKDAN-G---NPVKYHYDYLKYRYFSNVGP-HRMPL
Petmar_4	IHLYG----FWPFQYNIA-G---KPVRYHYEGLRYRYFSRAGP-HTMPL
Cypcar_4	IHLYG----FWPFPKDGN-G---NPVKYHYDGLKYRYFSNAGP-HRMPL
Danrer_4	IYLYG----FWPFPKDAS-G---NPVQYHYFDGLKYRYFSNAGP-HRMPL
Misang_4	IHLYG----FWPFPKDGN-G---NPVNYHYDYLKYRYFSNAGP-HRMPL
Angjap_4	IHLYG-----
Cypcar_4A	IHLYG----FWPFPKDGN-G---NPVKYHYDGLKYRYFSNAGP-HRMPL
Angang_4	IHLYG----FWPFPKDLG-G---NPVKYHYDALKYRYFSKASP-HRMPL
Cypcar_4B	IHLYG----FWPFPKDGN-G---NPVKYHYDGLRYRYFSNASP-HRMPL
Sinans_4A	IHLYG----FWPFPKDGN-R---NTVKYHYDGLKYRYFSAGP-HRMPL
Sinans_4B	IYLYG----FWPFPKDGN-G---NPVKYHYDGLRYRYFSNAGP-HRMPL
Singra_4A	IHLYG----FWPFPKDGN-R---NPVKYHYDGLKYRYFSAGP-HRMPL
Aptalb_4	IHLYG----FWPFPKDAE-G---NPVKYHYDSLKYRYFSAGP-HRMPL
Eigvir_4	IHLYG----FWPFPKDAE-G---NPVKYHYDYLKYRYFSAGP-HRMPL
Eleele_4	IHLYG----FWPFPKDAK-G---NLVKYHYDYLKYRYFSNAGP-HRMPL
Parhas_4	IHLYG----FWPFPKDAE-G---NPVKYHYDSLKYRYFSAGP-HRMPL
Sclfor_4	IHLYG----FWPFPKDSK-G---NAVKYHYDALKYRYFSNASP-HKML
Gnapet_4	IHLYG----FWPFPKDSS-G---NPVKYHYDKLKYRYFSNAGP-HRMPL
Ostbic_4	IHLYG----FWPFPKDSK-G---NMVKYHYDYLKYRYSSKAGP-HRMPL
Parkin_4	IHLYG----FWPFPKDSS-G---NPVKYHYDKLKYRYFSNAGP-HRMPL
Panbuc_4	IHLYG----FWPFPKDLQ-G---NPVKYHYDRLKYRYFSKAGP-HRMPL
Erpcal_4	IHLYG----FWPFPKDSI-G---KPVKYHYDELKYRYFSNASP-HRMPL
Salsal_4	IHLYG----FWPFPRDAN-G---NMVKYHYDMLKYRYFSNAGP-HRMPL
Saltru_4	IHLYG----FWPFPRDAN-G---NMVKYHYDMLKYRYFSNAGP-HRMPL
Salalp_4	IHLYG----FWPFPRDAN-G---KIVKYHYDMLKYRYFSNAGP-HRMPL
Salfon_4	IHLYG----FWPFPRDAN-G---KIVKYHYDMLKYRYFSNAGP-HRMPL
Thythy_4	IHLYG----FWPFPRDAN-G---NVVKYHYDMLKYRYFSNAGP-HRMPL
Calmil_4	IHLYG----FWPFPKDAN-G---TPVKYHYDNLKYRYFSNAGP-HRMPL
Hetzeb_4	IHLYG----YWPFPKDAK-G---TPVKYHYDNLKYRYFSNVGP-HRMPL
Rhityp_4	IHLYG----YWPFPKDSK-G---VPVKYHYDNLKYRYFSNAGP-HRMPL
Scytor_4	IHLYG----YWPFPKDSK-G---TPVKYHYDNLKYRYFSNAGP-HRMPL
Squaca_4	IHLYG----YWPFPKDAK-G---APVKYHYDNLKYRYFSNAGP-HRMPL
Amical_4	IHLYG----FWPFPKDTK-G---RLVKYHYDELKYRYFSNASP-HRMPL
Lepocu_4	IHLYG----FWPFPKDSQ-G---RPVKYHYDELKYRYFSNASP-HRMPL
Agema_4	IHLYG----FWPFPKDAS-G---NPVKYHYDMLKYRYFSNASP-HRMPL
Anocar_4	IHLYG----FWPFPRDIN-G---KTVKYHYDDLKYRYFSNASP-HRMPL
Canlupfam_4	IHLYG----FWPFPKDLN-G---KAVKYHYDDLKYRYFSNASP-HRMPL
Crigri_4	IHLYG----FWPFPKDLN-G---KAVKYHYDDLKYRYFSNASP-HRMPL
Galgai_4	IHLYG----FWPFPKDLH-G---KPVKYHYDDLKYRYFSNASP-HRMPL
Mesaur_4	IHLYG----FWPFPKDLN-G---KAVKYHYDDLKYRYFSNASP-HRMPL
Homsap_4	IHLYG----FWPFPKDLN-G---KAVKYHYDDLKYRYFSNASP-HRMPL
Notscuscu_4	IHLYG----FWPFPKDIN-G---KPVKYHYDDLKYRYFSNASP-HRMPL
Psetextex_4	IHLYG----FWPFPKDIN-G---KPVKYHYDDLKYRYFSNASP-HRMPL
Musmus_4	IHLYG----FWPFPKDLN-G---KAVKYHYDDLKYRYFSNASP-HRMPL
Pogvit_4	IHLYG----FWPFPKDMN-G---KPVKYHYDDLKYRYFSNASP-HRMPL
Promuc_4	IHLYG----FWPFPKDIN-G---KPVKYHYDDLKYRYFSNASP-HRMPL

Pantro_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Pytbiv_4	IHLYG----FWPFPKDIN-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Ratnor_2	IYLYG----FWPFPDLQN-Q---NPVKYHYYDSLKYGYTSQASP-HTML
Ratnor_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Siltro_2	IYLYG----FWPFPDLH-Q---NPVKYHYYDSLKYGYTSQAGP-HAMPL
Siltro_4	IHLYG----FWPFPKDVY-G---NQVKYHYYDELKYKYFSNAGP-HRMPL
Susscr_4	IHLYG----FWPFPKDLN-G---KAVKYHYYDDLKYRYFSNASP-HRMPL
Taegut_4	IHLYG----FWPFPKDLH-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Termextri_4M	IHLYG----FWPFPKDFY-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Thasirsir_4	IHLYG----FWPFPKDIN-G---KPVKYHYYDDLKYRYFSNASP-HRMPL
Xenlae_4B	IYLYG----FWPFTKDVY-G---NQVKYHYYDELKYKYFSNAGP-HRMPL
Xenlae_4A	IHLYG----FWPFPKDVH-G---NQVKYHYYDELKYKYFSNAGP-HRMPL
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Latcal_3	EFKLLYKMHTEGLLKLTLSHCA---
Perflu_3	EFKLLYKMHTEGLLKLSLSHCA---
Serdum_3	EFKLLYKMHEGLLKLSLSHCA---
Stepar_3	EFKLLYKMHTEGLLKLSLSHCA---
Tetcal_3	EFKLLFKLHTEGLTKLTLSHCA---
Monalb_3	EFKLLYKMHEGLLKLTLSRCA---
Molmol_3	EFKLLYRMHTEGLLKLTLSHCA---
Takrub_3	EFKLLYKMHREGLLKLSLSHCA---
CanlupFam_3	EFQLLYRMHGEGLTKLTLSHCA---
Bostau_3	EFQLLYRMHGEGLTKLTLSHCA---
Homsap_3	EFQLLYRMHGEGLTKLTLSHCA---
Siltro_3	EFKLLYKMHREGLTKLTLSQCA---
Anocar_3	EFQQLFRMHSEGLAKLTLSHCA---
Musmus_3	EFQLLYRMHGEGLTKLTLSHCA---
Pantro_3	EFQLLYRMHGEGLTKLTLSHCA---
Ratnor_3	EFQLLYRMHGEGLTKLTLSHCA---
Galgai_3	EFQLLYRMHGEGLAKLTLSRCA---
Lepocu_3	EFKLLYKMHTEGLLKLSLSHCA---
Tetnig_3	EFKLLYKMHREGVLKLSLSHCG---
Squaca_3	EFKLLFKLHTDGLTKLTLSHCA---
Perfla_3	EFKLLYKMHTEGLLKLSLSHCA---
Salsal_3	EFKLLYRMHTEGLLKLTLSHCA---
Serlaldor_3	EFKLLYKMHEGLLKLSLSHCA---
Treber_3	EFKLLYKLHREGVIKLSVTHCS---
Cynsem_3	EFKLLYKMHTEGLLKLSLSHCA---
Paroli_3	EFKLLYKLHREGVTKLSLTHCT---
Paroli_3b	EFKLLYKMHTEGXKLSLSHCA---
Plaste_3	EFKLLYQLHREGVTKLSLTHCA---
Plaste_3b	EFKLLYKMHTEGLLKLSLSHCG---
Ercal3	EFKLLYKMHEEGLTKLTLSHCA---
Calmil_3b	EFKILFKMHTAGLTKLSLSPCV---
Hetzeb_3	EFKLLFKLHTDGLTKLTLSHCA---
Latcha_3	EFKLLYKMHGEGLTKLTLSHCA---
Anates_3	EFKLLYKMHEGLLKLTLSHCA---
Ampcit3	EFKLLYKMHTEGLLKLSVSHCA---
Auslim_3	EFKLLYKMMDGLLKLTLSHCA---
Cypvar_3	EFKLLYKMHTEGLLKLSLSHCA---
Krymar_3	EFKLLYRMHTDGLLKLTLSHCA---
Funhet_3	EFKLLYQMHTEGLLKLSLSHCA---
Gamaff3	EFKLLYKMHTEGLLKLSLSHCA---
Orylat_3	EFKLLHKMHTEGLLKLTLSHCA---
Orenil_3	EFKLLYKMHTEGLLKLSLSHCA---
Mayzeb_3	EFKLLYKMHTEGLLKLSLSHCA---
Punnye_3	EFKLLYKMHTEGLLKLSLSHCA---
Punnye_3a	EFKLLYKMHTEGLLKLSLSHCA---
Neobri_3	EFKLLYKMHTEGLLKLSLSHCA---
Misang_3	EFKLLFKMHTEGILKLSLSHCT---
Sinrhi3	EFKLLFKMHADGVLKLSLSHCT---
Singra_3	EFKLLFKMHADGVLKLSLSHCA---
Hapbur_3	EFKLLYKMHTEGLLKLSLSHCA---
Astcal_3	EFKLLYKMHTEGLLKLSLSHCA---
Notfur_3	EFKLLYKMHTDGVKLSLSHCA---
Cypcar_3	-----
Poefor3	EFKLLYKMHTEGLLKLSLSHCA---
Poelat_3	EFKLLYKMHTEGLLKLSLSHCA---
Poeret_3	EFKLLHRMHSEGLLKLSLSHCA---
Angang_3	EFKLLYKMHTDGVIKLSLSHCA---
Xipmac_3	EFKLLYKMHTEGLLKLSLSHCA---
Masarm_3	EFKLLYKMHEGLLKLTLSHCA---
Permag_3	EFKLLYRMHTEGLLKLSLSHCA---
Gnapet3	EFKQLYKMHAEGLTKLSLSHCI---
Ostbic_3	EFKLLYKMHEEGLTKLSLARCA---
Gadmor_3	EFKLLYKMHTKGLLKLNLSHCA---
Scifor_3	EFKLLYKMHQGLAKLSLARCA---

Acapol3	EFKLLYKMHT EGLLKL SL SHCA---
Ampoce_3	EFKLLYKMHEGLLKL SL SHCA---
Scflor_3b	EFKLLHSLHMEGVVQLNLS PCA---
Ostbic_3b	EFKLLHSLHMEX-----
Parkin_3	EFKQLYKMHAEGLTKL SL SHCI---
Amppe3	EFKLLYKMHEGLLKL SL SHCA---
Oncmyk_3	EFKLLYKMHT EGLIKL TL SHCA---
Gasacu_3	EFKLLYKMHT QGLLKL SL SHCA---
Labber_3	EFKLLYKMHT EGLLKL SL SHCA---
Panbuc_3	EFKFLYKMHT EGLIRL TL TPCI---
Parhas3	EFKLLFKMHT EGVKL SL SHCT---
Cluhar_3	EFKLLFKMHT EGLLKL TL SHCA---
Aloalo_3	EFKLLFKMHT EGLLKL TL SHCA---
Panhyp_3	EFKLLFKMHT EGIKL SL SHCA---
Eleele_3	EFKLLFRMHT EGVKL SL SHCT---
Denclu_3	EFKLLFKMHT EGLLKL SL SHCA---
Sarpil_3	EFKLLFKMHT EGLLKL TL THCA---
Eigvir_3	EFKLLFKMHT EGVKL SL SHCT---
Aptalb_3	EFKLLFKMHT EGVKL SL SHCT---
Sinans_3	EFKLLFKMHADGVKL SL SHCA---
Pygnat_3	EFKLLFKMHT EGVKL SL SHCT---
Astmex_3	EFKLLFKMHT EGVKL SL SHCA---
Caraur_3	EFKLLFKMHADGVKL SL SHCA---
Danrer_3	EFKLLFKMHADGVKL SL SHCA---
Ictpun_3	EFKLLFKMHT DGILKL SL SHCA---
Plealt_3	EFKLLYKMHT EGLLKL TL SHCA---
Plealt_9	EFKLLYKMHGEGVTRMSL SHCT---
Gasacu_9	EFKLLYKLHRDGVIKL SL THCS---
Parkin_9	EFKLLHTLHTEGMVRLSVAPCA---
Acapol_9	EFKLLYKLHREGVIKLG L THCS---
Larcro_9	EFKLLYKLHREGVIKLS L THCT---
Notcor_9	EFKLLYKLHREGVIKLS V THCS---
Latcal_9	EFKLLYKLHREGVTKLS L THCT---
Serlaldor_9	EFKLLYKLHREGVTKLS L THCT---
Monalb_9	EFKLLYKLYKEGVTKLS L THCP---
Serdum_9	EFKLLYKLHREGVTKLS L THCT---
Perflu_9	EFKLLYKLHREGVIKLS L THCS---
Perfla_9	EFKLLYKLHREGVIKLS L THCS---
Stepar_9	EFKLLYKLHRDGVIKL SL THCS---
Molmol_9	EFKLLYKLHREGVIKLS L THCA---
Hipcom_9	EFKLLYRLHRDGVTKLS L THCT---
Takrub_9 B	EFKLLYKLHREGVIRLS L THCT---
Takrub_9	EFKLLYKLHREGVIRLS L THCT---
Cynsem_9	EFKLLYKLHREGVTKLS L THCT---
Scomax_9	EFKLLYKLHREGVTKLS L THCA---
Corlav_9	EFKLLYKMHGEGVTKLS L SHCS---
Oncmyk_9	EFKLLYKMHGEGVTKLS L SHCS---
Salsal_9	EFKLLYRMHT EGLIKL TL SHCA---
Onctsh_9	EFKLLYKMHGEGVTKLS L SHCS---
Salalp_9	EFKLLYKMHGEGVTKLS L SHCS---
Ampoce_9	EFKLLYKLHREGVIKLG L THCS---
Amppe9	EFKLLYKLHREGVIKLG L THCS---
Labber_9	EFKLLYKLHREGVIRLS L THCS---
Umbpyg_3B	EFKLLYKMHT EGLIKL TL SHCA---
Esoluc_3b	EFKLLYKMHT EGLIKL TL SHCA---
Gadmor_9	EFRLLYKMHGEGVTKLS L SHCA---
Umbpyg_9	EFKLLYKMHAEGVTKLS L SHCS---
Esoluc_9	EFKLLYKMHGEGVTKLS L SHCS---
Permag_9	EFKLLYKLHREGAIKLS L THCS---
Bolpec_9	EFKLLYKLHREGAIKLS L THCS---
Poefor9	EFKLLYKLHREGVIKLS L THCT---
Masarm_9	EFKLLYKLHREGVIKLS L THCI---
Angjap_9	EFKLLYKMHT DGVIKLS L SHCA---
Poelat_9	EFKLLYKLHREGVIKLS L THCT---
Poeret_9	EFKLLYKLHREGVIKLS L THCT---
Xipmac_9	EFKLLYKLHREGVIKLS L THCA---
Hapbur_9	EFKLLYKLHREGVIKLS L THCS---
Orylat_9	EFKLLYKLHREGVTKLGL SHCT---
Gamaff_9	EFKLLYKLHREGVIKLS L THCA---
Neobri_9	EFKLLYKLHREGVIKLS L THCS---
Funhet_9	EFKLLYKLHREGVTKLS L THCT---
Punnye_9	EFKLLYKLHREGVIKLS L THCS---
Cypvar_9	EFKLLYKLHREGVTKLS L THCT---
Krymar_9	EFKLLYKLHREGVIKLS L THCI---
Notfur_9	EFKLLYKLHREGVTKLS L THCS---
Notpie_9	EFKLLYKLHREGVTKLS L TRCS---
Orenil_9	EFKLLYKLHREGVIKLS L THCS---

Auslim_9	EFKLLYKLHREGVTKLSLTHCT---
Anates_9	EFKLLYKLHREGVTKLSLTHCT---
Astcal_9	EFKLLYKLHREGVIKLSLTHCS---
Mayzeb_9	EFKLLYKLHREGVIKLSLTHCS---
Orymel_9	EFKLLYKLHREGVTKLGLSHCT---
Ampcit_9	EFKLLYKLHREGVIKLSLTHCT---
Macfas_2	EFKALKSLHEQGALKLTVGQCD---
Macmul_2	EFKALKSLHEQGALKLTVGQCD---
Macnem_2	EFKALKSLHEQGALKLTVGQCD---
Musmus_2	EFKALKSLHEQGALKLTVGQCD---
Ponabe_2	EFKALKSLHEQGALKLTVGQCD---
Papanu_2	EFKALKSLHEQGALKLTVGQCD---
Nomleu_2	EFKALKSLHEQGALKLTVGQCD---
Pantro_2	EFKALKSLHEQGALKLTVGQCD---
Latcha_2	EFRTLYGLHQGALKLTVGECA---
Gnapet_2	EFKTLRALHRQGALCLHTEACS---
Panbuc_2b	EFQALKVLHERGALQLHTGLCH---
Ostbic_2	EFETLKALHRQGALRLHTGTCTN---
Sinrhi_2	EFRTLALHRQGALRLHTGPCQ---
Hetzeb_2	EFKTLRNMHLQGALKLNVGECN---
Hipcom_2	EFRTLALHHQGALRLHTGNCH---
Prigla_2	EFKTLRNMHLQGALKLNVGECK---
Scytor_2	EFKTLRNMHLQGALKLNVGECK---
Tetcal_2	EFKTLKNMHLRGALRLNVGECN---
Rhityp_2	EFKTLRNMHLQGALKLNVGACR---
Parkin_2b	EFRTLRLHALGVLQLHTGSCR---
Angang_2	EFSTLRDLHSQGALRLHIGRCG---
Pygnat_2	EFRTLMLHRKGALRLHTGTCTN---
Parkin_2	EFKTLRALHRQGALCLHTEACS---
Gorgor_2	EFKALKSLHEQGALKLTVGQCD---
Thegel_2	EFKALKSLHEQGALKLTVGQCD---
Tupchi_2	EFKALKSLHEQGALKLTVGQCD---
Galgai_2	EFKALKTLHQGALKLTVGECE---
Eleele_2	EFRTLSTLHSQGALQLHTGTCTN---
Danrer_2	EFRTLALHRQGALRLHTGPCQ---
CanlupFam_2	EFKALKSLHEQGALKLTVGQCD---
Aloalo_2	EFRTLSSLHRQGALRLHTSACS---
Astmex_2	EFRTLSTLHRQGALRLHTGTCTN---
Sinans_2	EFRTLALHRQGALQLHTGPCQ---
Scifor_2	EFETLRALHRQGALRLHTGACN---
Ceraty_2	EFKALKSLHEQGALKLTVGQCD---
Anocar_2	EFKALKALHQGALKLTVGACD---
Anates_2	EFRTLALHRQGALRLHTGTCTN---
Ampbic_2	EFRTLSTLHRQGALRLHTGTCTN---
Sarpil_2	EFRTLSSLHRQGALRLHTSACS---
Xenlae_2	EFKALKNLHLQGALKLNVGECE---
Cluhar_2	EFRTLSTLHKQGALRLHTSSCS---
Cypcar_2	EFRTLALHRQGALRLHTGPCQ---
Denclu_2	EFRTLALHRQGALRLHTGTCTN---
Notpie_2	EFRTLSSLHRQGALRLHTGTCTN---
Ercal_2	EFQALQRLHQGALKLNVGDCV---
Amical_2	EFKTLKNLHSQGALQLHTGPCN---
Lepocu_2	EFKALKSLHEQGALKLHTGECN---
Homsap_2	EFKALKSLHEQGALKLTVGQCD---
Bostau_2	EFKALKSLHEQGALKLTVGQCD---
Caraur_2	EFRTLALHRQGALRLHTGPCQ---
Thythy_2B	EFRTLSSLHRQGALRLHTGSCD---
Onctsh_2B	EFRTLSSLHRQGALRLHTGSCD---
Salsal_2B	EFRTLSSLHRQGALRLHTGSCD---
Oncmyk_2B	EFRTLSSLHRQGALRLHTGSCD---
Onckis_2B	EFRTLSSLHRQGALRLHTGSCD---
Salsal_2A	EFRTLSSLHRQGALRLHTGSCD---
Thythy_2A	EFRTLSSLHRQGALQLNTGSCD---
Salalp_2A	EFRTLSSLHRQGALRLNTGSCD---
Corlav_2A	EFRTLSSLHRQGALRLNTGSCD---
Cormar_2A	EFRTLSSLHRQGALRLNTGSCD---
Onctsh_2A	EFRTLSSLHRQGALRLNTGSCD---
Oncmyk_2A	EFRTLSSLHRQGALRLNTGSCD---
Neobri_2	EFRTLSTLHRQGALRLHTGVCG---
Takrub_2	EFRTLSSLHRQGALQLHTGPCD---
Tetnig_2	EFRTLSTLHRQGALRLHSGPCA---
Orenil_2	EFRTLSTLHRQGALRLHTGVCG---
Orylat_2	EFRTLSTLHRQGALRLHTGSCE---
Krymar_2	EFRTLSSLHRQGALRLHTGICH---
Notfur_2	EFRTLSSLHRQGALRLHTGTCTN---
Poelat_2	EFRTLSTLHRQGALRLHTGSCD---
Gadmor_2	EFRTLNTLHRKGALRLHTGTCTN---

Xipmac_2	EFRTLSTLHRQGALRLHTGSCD---
Poeret_2	EFRTLSTLHRQGALRLHTGSCD---
Astcal_2	EFRTLSTLHRQGALRLHTGVCG---
Hapbur_2	EFRTLSTLHRQGALRLHTGVCG---
Acapol_2B	EFRTLSALHRQGALRLHTGTCD---
Ampoce_2A	EFRTLSTLHRQGALRLHTGTCD---
Acapol_2A	EFRTLSALHRQGALRLHTGTCD---
Mayzeb_2	EFRTLSTLHRQGALRLHTGVCG---
Punnye_2	EFRTLSTLHRQGALRLHTGVCG---
Latcal_2	EFRTLSTLHRQGALRLHTGTCD---
Singra_2	EFRTLSALHRQGALQLHTGPCK---
Auslim_2	EFRTLSSLHRQGALRLHTGTCD---
Monalb2	EFRTLSTLHRQGALRLHTGPCD---
Ampoce_2B	EFRTLSTLHRQGALRLHTGTCD---
Chiham_2	EFRTLSALHRQGALRLHTGTCD---
Gasacu_2	EFRTLSALHRQGALRLHTGTCD---
Gymacu_2	EFRTLSALHRQGALRLHTGTCD---
Labber_2	EFRTLSALHRQGALRLHTGSCD---
Cypvar_2	EFRTLSTLHRQGALRLHTGSCD---
Funhet_2	EFRTLSTLHRQGALRLHTGHCD---
Larcro_2	EFRTLSALHRQGALQLHTGSCD---
Paroli_2	EFRTLNTLHRQGALRLHTGTCE---
Perflu_2	EFRTLSALHRQGALRLHTGTCD---
Serdum_2	EFRTLSTLHRQGALRLHTGTCD---
Stepar_2	EFRTLSTLHRQGALRLHTGTCD---
Notcor_2	EFRTLSALHRQGALRLHTGTCD---
Treber_2	EFRTLSALHRQGALRLHTGTCD---
Serlaldor_2	EFRTLSTLHRQGALRLHTGTCD---
Plaste_2	EFRTLNALHRQGALRLHTGTCD---
Clabat_4	EFKTLKMLHSGALKLTTSKCR---
Icpun_4A	EFKTLKMLHSGALKLMTSKCT---
Panhyp_4	EFKTLKMLHSGALKLTTSKCR---
Umbpyg_4	EFKTLKILHSGALKLTTSKCT---
Esoluc_4	EFKTLKMLHSGALKLTTSKCA---
Plealt_4	EFKTLKMLHSGALKLTTSKCI---
Onckis_4B	EFKTLKMLHSGALKLTTSKCE---
Onckis_4A	EFKTLKMLHSGALKLTTSKCE---
Onctsh_4	EFKTLKMLHSGALKLTTSKCE---
Oncmk_4	EFKTLKMLHSGALKLTTSKCE---
Corlav_4	EFKTLKMLHSGALKLTTSKCE---
Astmex_4A	EFKTLKTLHSGALKLTTSKCR---
Pygnat_4	EFKTLKMLHSGALKLMTSTCR---
Aloalo_4	EFKTLKTLHSGALKLTTSKCV---
Cluhar_4	EFKTLKVLHSGALKLTTSKCM---
Denclu_4	EFKTLKALHYKGALKLTTSKCT---
Konpun4	EFKTLKTLHSGALKLTTSKCT---
Sarpil_4	EFKTLKTLHSGALKLTTSKCV---
Caraur_4	EFKTLKRLHSGALKLTTSKCT---
Cteide_4	EFNTLKSILHNGAMKLTTSKCT---
Petmar_4	EYRTLHRLHSLGALKLTTGKCT---
Cypcar_4	EFKTLKTLHSGALKLTTSECT---
Danrer_4	EFQTLQRLHSGALKLTTSKCT---
Misang_4	EFRTLRTLHNGALKLTTTKCE---
Angjap_4	-----
Cypcar_4A	EFKTLKTLHSGALKLTTSECT---
Angang_4	EFKTLKTLHSGALKLTTSKCA---
Cypcar_4B	EFKTLKTLHSGALKLTTSKCT---
Sinans_4A	EFKTLKTLHSGALKLTTSECT---
Sinans_4B	EFKTLKRLHSGALKLTTSKCT---
Singra_4A	EFKTLKTLHSGALKLTTSECT---
Aptalb_4	EFKTLKMLHSGALKLTTSKC----
Eigvir_4	EFKTLKMLHSGALKLTTSKCP---
Eleele_4	EFKTLKMLHSGALKLTTSKCP---
Parhas_4	EFKTLKMLHSGALKLTTSKCR---
Scifor_4	EFNTLKMHLHSGALKLTTSKCT---
Gnapet4	EFKTLKFLHSGALKLTTSKCT---
Ostbic_4	EFKTLKMLHNGALKLTTLKCT---
Parkin_4	EFKTLKFLHERGALKLTTSKCT---
Panbuc_4	EFQTLKALHSGALKLTTSTCT---
Erpcal4	EFKTLKMLHSGALKLTTSKCL---
Salsal_4	EFKTLKMLHSGALKLTTSKCE---
Saltru_4	EFKTLKMLHSGALKLTTSKCE---
Salalp_4	EFKTLKMLHSGALKLTTSKCE---
Salfon_4	EFKTLKMLHSGALKLTTSKCE---
Thythy_4	EFKTLKMLHSGALKLTTSKCE---
Calmil_4	EFKTLKSLHSGALKLTTGKCG---
Hetzeb_4	EFKTLKSLHSGALKLTTGKCV---

Rhityp_4	EFKTLKSLHDKGALKLTTGKCV---
Scytor_4	EFKTLKSLHDKGALKLTTGKCV---
Squaca_4	EFKTLKSLHDKGALKLTTGKCV---
Amical_4	EFKTLKTLHNKGALKLTTSTCA---
Lepocu_4	EFKTLKMLHNKGALKLTTTKCT---
Agema_4	EFKTLKMLHSGALKLTTSKCR---
Anocar_4	EFKTLNMLHNRGALKLTTGKCA---
Canlupfam_4	EFKTLNVLHNRGALKLTTGKCV---
Crigri_4	EFKTLNVLHNRGALKLTTGKCM---
Galgai_4	EFKTLNVLHNRGALKLTTGKCV---
Mesaur_4	EFKTLNVLHNRGALKLTTGKCM---
Homsap_4	EFKTLNVLHNRGALKLTTGKCV---
Notscuscu_4	EFKTLNMLHNKGALKLTTGKCI---
Psetextex_4	EFKTLNMLHNKGALKLTTGKCI---
Musmus_4	EFKTLNVLHNRGALKLTTGKCM---
Pogvit_4	EFKTLNVLHNRGALKLTTGKCV---
Promuc_4	EFKTLNMLHNRGALKLTTGKCI---
Pantro_4	EFKTLNVLHNRGALKLTTGKCV---
Pytbiv_4	EFKTLNMLHNRGALKLTTGKCI---
Ratnor_2	EFKALKSLHEQGALKLTVGQCD---
Ratnor_4	EFKTLNVLHNRGALKLTTGKCM---
Siltro_2	EFKALKNLHLQGALKLNVGECR---
Siltro_4	EFKTLNLLHNKGALKLTTGKCI---
Susscr_4	EFKTLNVLHNRGALKLTTGKCV---
Taegut_4	EFKTLNVLHNRGALKLTTGKCI---
Termextri_4M	EFKTLHMLHNQGALKLTTGKCV---
Thasirsir_4	EFKTLNMLHNRGALKLTTGKCI---
Xenlae_4B	EFKTLNLLHNKGALKLTTGKCI---
Xenlae_4A	EFKTLNLLHNKGALKLTTGTCT---