

Supplementary Material

Inactivation of *Escherichia coli* Using Biogenic Silver Nanoparticles and Ultraviolet (UV) Radiation in Water Disinfection Processes

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Table S1. Analysis of capping proteins of biogenic silver nanoparticles using UPLC-MS/MS, shotgun techniques, and identified using the protein BLAST server (NCBI, <https://blast.ncbi.nlm.nih.gov>) [1]:

AgNP-FU Proteins	NCBI RefSeq	Molecular Weight (kDa)	Score	% coverage	Sequence
Predicted-glutamine amino-transferase [<i>Fusarium oxysporum</i>]		28.3	110	6	MKFLSTLAGALAFITTSASAIAHRNTERTCITPGAIPLKGSDIRNVGVVLFQALDMI DVFGPLDPLQLVSLSVQQNLHLIAETLDPVSTAPVAMNKFNSSFWPTIPPTKTFAD DLDDLDLLIVPGGPGARNPNLGAVTDYIAKMAPKVKILMTICTGSGIAARAGVLGH LAATNKNAWATMKAMGPVKVNWVSPARFVIDGKIWSSSGVTSGLDLIFAF IETFWGAQQS QRIASIIEHV PRATAADDPSQHFNITPTEA QPCPKA
Malate dehydrogenase [<i>R. solanacearum</i>]		35.4	92	5	MAKAPMRVAV TGAAGQIGYA LLFRIAAGEM LGKDQPVILQ LLEIPDEKAQKALKGMVMEI EDCAFPLLAG MEAHADPMTA FKDVDVALLVGARPRPGPGMERKDLLSANAAQIFTAQGKALNAVASRNVKLVVGN PANTNAYIAMKSAPDLPRENFTAMLRLDHNRALSQIAAKTGKPVSSIEKLFVWGN HSPTMYADYRYATIDGQSVKDMINDPVWNNDVFLPTVGKRGAAIIEARGLSSAAS AANAAIDHVRDWVLGSNGKIVTMGIPSNGDYEIPQDVMFGFPVTANGKYEVVKG F EVDAYSRERI NITLKELEEE RAGVQHLLG
Hypothetical, Zn-peptidase [<i>F. graminearum</i>] (FG06655.1)	XP_011326283.1	53.9	89	5	MAPPQEALDF VDFVNASPTP YHAVQSASAR FEKAGFKLIR ERDSWASTLRPGGKYYLTRN ASTIVAFITIG RKWRPGNPVA IVGAHTDSPC LRLKPVSKKT NVGFLQIGVE TYGGGIWTW FDRDLSIAGR VLVKEGDNFV QKLVKVDKPLVRIPTLAIHL HRQTNFDPNK ETELFPIAGL VAAELNKDVK EKSEEKKDDG EEDEEFKPLK VITERHHPQV LDVIAAEAGV EVSDIVDFEL VLYDTQKSCIGGLADEFIFS PRLDNLGMTY CSVEGLIESV KNESSLEEDGTIRLTVCFDHEEIGSTAQG ANSNLLPSVI

					RRLSVLPGNRDASSEGSYEAVHHEGEDATAEQTLSRSFLVSADMAHSVHPNYAG KYESS HQPAMNGGT V KINANQRYA TNSPGIVLIE ECARTAGVPL QLFVV RNDSP CGSTIGPLA AALGMRTLDLGNPQLSMHSI RETGGTADV YGIRLFREFF EKYGSLEPKI LID
Hypothetical, dehydrogenase [<i>F. graminearum</i> and <i>F. oxysporum</i>] (FG02461.1)	XP_011318385.1	35.2	75	6	MFAASRIQRRAFSATARDLS KVTVLGAAGG IGQPLSLLLK MNPRVTDLALYDIRGGPGVA ADISHVNTKS SVKGYEPNAA GLKEALSGAEVVLIPAGVPRKPGMTRDDLFTNASIVRDLAKAAEAAPKAKLLIIS NPV NSTVPIVKEV YKAAGVYNPK TLFGVTTLDV VRASRFVSEI KGTDPKDENI TVVGGHSGVT IVPLFSQSNH PDLSNAELV KRVQFGGDEV VKAKDGAGSA TLSMAMAGAR MADSVLRAVQ GEKGVKEPAF VESPLYKDQG IEFFSSQVEL GPEGVEKIHPLGKLDANEK LVDAALVDLK KNIEKGVAFV ASNPPK
2-Methylcitrate synthase [<i>F. graminearum</i> PH-1]	XP_011315788.1	52.0	74	4	MALNLTTSR ALSSLKPLTR AAFVGARGYA TAEFDLKATL REAIPAKRELLKKVKAHSNK VLGEVKVENT LGGMRGLKAM VWEGSVLDANEGRFHGRTIKDCQKELPKG KTGTEMLPEA MFWLLLTGQVPSVNQVRGFSRELAEKQAPIFVSKMLNDFPKDLHPMTQFAMAVS ALNYESKFAKAYEQGINKADYWEPTFDDCISLLAK LPTIAAKIYQ NAYRGGGALP AEVDLEQDW YNFAAMLGKG GKENENFQDL LRLYLALHGD HEGGNVSAHA THLVGSALSD PFLSYSAGLQLAGPLHGLA AQEVLRWIIQ MKEAIPSNYT EQDVNDYLWS TLNSGRVVPG YGHAVLRKPDPRFEALMDYA AARPEIANDPVFQLVEKNSR IAPEVLKKHGKTKNPYPNVD SSSGVLFHHYGFHETLYYTA TFGVSRGLGPLAQLIWDRAL GLPIERPKSI NLEGILKQVE GQ

Hypothetical protein FGSG_02204.1 [<i>F. graminearum</i> PH-1]	XP_011318096.1	59.6	69	2	MARGWFVNCA AVLLALTAGV DAYTVPALSA RAKDSGPKAV NISVPVDHFHNETIYEPHSD KKFPPLRYWFD AQYYRKGGPV IILASGETSG EDRIPFLEHG ILQMLANATG GIGVILEHRY YGTSFPVPDL KPNMRFLST EQALADTAYFAQHVEFGME EHNLTASTTP YIYGGSYAG AFAAFARKIY PDLFWGGISS SGVTEAIVDY WQYFEARLF APGDCAKVTQ KLTHAVDNIL LGDDKEEKQLKIAFGLLGL RDDDFAAMTIS QGIGGLQSNN WDPASDSSSFGLYCGSVSSD DILFASTRPLAPYVKWLIS AGYKKQLKYM TNRFLNYIGY IRSNVESDKSGRCGDKTLDQ CYSIRGSMND TKLDPNNMSR QWTYQTCTQW GYWQTGSGAP KDQLPMVSRLIDVEYNTIPC REEFNITTPPNVESINKLGG FNFSYPRVAFIDGEYDPWRA ATPHAIGLP RESTASEPFILIPYGVHHWDENGLAPGSEEIGLPPPAVKQAQQDIIDFTKAWLEDWE KEK GGATADL
Hypothetical protein LOC100191904 Dehydrogenase [<i>F. fujikuroi</i>]	CAM90598.1	35.7	67	8	MSSPHFSKVLVFGATGEVGS AVALEAHALG AHVSIALRDT TKTNEWISPSQERAADLQRI SADLTDPSL KRAVHDGAQ AAFIYAVRSK DALRGAIAG RDAGIQYVVF LSTSQVRTAG TTKGDIRSIK PDHFIPWQHA QVEIALEELEVPHAAVR <color>AGF FASNPLRIYL</color> DRSSSEPQVN LLAPEVPHDP IDPKDIGR <color>AA</color> <color>AAVLVNPRLYASGYQGEPKK</color> DVVYLSGPAL LSQTEQWEII NRELVVAGKPEVKVNHITVE QYLENLAKLH VPDVVAKS LA KSMVETRALYAPEDYEKS <color>RG</color> <color>NVELLTGR</color> KATSFDEFVKRE IPRYFD
Malate dehydrogenase [<i>F. moniliforme</i> and <i>F. verticillioides</i>]		35.4	85	7	MAKAPMRVAVTGAAGQIGYA LLFRIAAGEM LGKDQPVILQ LLEIPDEKAQKALKGVMMEI EDCAFPLLAG MEAHADPMTA FKDVDVALLV GARPRPGPGME RKDLLSANAQ IFTAQGKALN AVASRNVKVL VVGNPANTNA YIAMKSAPDLPRENFTAML <color>R</color> LDHNRALSQIAAKTGKPVSS IEKLFVWGNH SPTMYADYRY ATIDGQSVKD MINDPVWNND VFLPTVGKRGAAIEAR <color>GLS</color>

					SAASAANAAIDHVRDWVLGS NGKIVTMGIP SNGDYEIPQD VMFGFPVTTANGKYEVVKGF EVDAYSREKINITLKELEEE RAGVQHLLG
Putative glucoamylase GMY1 [<i>F. verticillioides</i> and <i>F. graminearum</i>]	ABY89280.1	68.7	84	1	MYFVSSAFLLGSVLQNVLG RPTFDERSLL QERQSSVDSF IKSESSIAIEQLLCNIGSDG CNSKNVATGI VIASPDTQDP DYFYTWTRDAALVFKYVVDR FINQYDAGLQR KIQEYIASQ AKLQGVSNPS GSLSDCGSGLG EAKFNVDMSAFTGGWGRPQR DGPALRATAM ITYANWLIAN GYTSTANDIV WPVVRNDLNY VAQYWNQTGF DLWEEVKGSS FFTTGSQYRGAALAKKLGS GDNYSNIAPQALCFLQTYWI SSGKYVDSNI NVNDGRTGKD ANSILSSIHN FDPALNCDA TFQPCSDKALANHKAVTDSF RSWNINKGIS QGSAVAVGRY VEDVYYNGNPWYLATLAAAE QLYDAIYVWKQQGSITVSDV SLSFFKDLVS SVSTGTYASD SATFKSITDAVSKYADGYVA IVAKYVGTGDGHLEQFDKND GHPLSATDLTWSYAAFLSAA DRRAVGIPPS WAGSVAAVPN QCGTNTVAGS YSSATATSFP ASQTPKGVP TPTGTQTSTS TSTSTSSST GTSCPTATSV AVTFQEVTNTFGDTIKIVG NIAALGNWDTSKAVALSASD YTASNPVWKATISLTAGQSI QYKYINVKKD GSLTWEKDPN RTYAVPKTCATTATKSDKWQS
Hypothetical protein LOC100191904 Reductase [<i>Botryotinia</i> <i>fuckeliana</i>]		35.7	69	8	MSSPHFSKVL VFGATGEVGS AVALEAHALG AHVSIALRDT TKTNEWISPSQERAADLQRI SADLTDPSL KRAVHDGAQ AAFIYAVRSK DALRGAIAG RDAGIQYVVF LSTSQVRTAG TTKGDIIRSIK PDHFIPWQHA QVEIALEELEVPHAAVR AGF FASNPLR IYL DRSSEPKQVN LLAPEVPHDP IDPKDIGRAA AAVLVNPRLY ASGYQGEPKK DVVYLSGPAL LSQTEQWEII NRELVVAGKPEVKVNHITVE QYLENLAKLH VPDVVAKSLA KSMVETRALYAPEDYEKS RG NVELLTGR KATSFDEFVKRE IPRYFD

NAD(P) ⁺ -specific glutamate dehydrogenase [<i>F. graminearum</i> , <i>F. oxysporum</i> and <i>F. oxysporum f.</i> <i>sp. lycopersici</i> 4287]	XP_018234470.1	48.8	62	4	MSHLPQEPEF EQAYGELASA LENSSLFNEH PEYR TALAVA AIPERVIQFRVVWNDDKGNL QVNRGYRVQFNGALGPYKGG LRFHPSVNLS ILKFLGFEQI 101 FKNALTGLNM GGGKGGADFD PKGKSDAEIR RFCQAFMTEL SKHIGAETDVPAGDIGVGGR EIGYLFGAYR KFANRWEGVL TGKGLSWGGS LIRPEATGYG LVYYVEYMLK HANRGTFEGK RVALSGSGNV AQYAALKIIE LGGSVVSLSDSKGALVAKEG SSFTPEQIHN IAALKIKHQA LTTFEHDGQFTWIEGARPWVHVGKV DIALP SATQNEVSKE EAQALVDAGA FIVAECSNMG CTAAEADVFEAHREKGAEA LWYAPGKASN CGGVAVSGLE MAQNSQRQIW TEKEVDDRLK AIMKDAFVAG LETAQKYVEA KEGELPLIA GSNIAGFIKV AEAMHDQGDWF
Porin [<i>Ralstonia</i> <i>pickettii</i>]	WP_012763112.1	39.3	152	16	MKMKLFAAAVAALAAGGAYA QSSVTLYGVV DAGLTYANKV PNGNGGGSSR VGLDSGGLSG SRW GLRGVED LGGLKGIFN LESGFTIDDG KSAQGGRLFG R NAYVGLQGQWGQLTLGRQQ NLLYDFSLIY DPMAIASRYG LANQDAFFSGR ADNAVKYIG TFGGLSVSAL YSFNRDGNEQ PGLPKLGREW SLGAN YAGGP FSVGAVYDQS NQTTIATADN KEQRATIAGT YAFGPAKLYA GYRWHYHANFATVAGNGNLR S NLYWL GAGYQ ATPALT LTGT AYYQQFKNSN AGNPSWLFVVG TDYALS KRTDAYFN LAYAKN SSCS GLGV LNKTDSYAGT TLGSTNFGNQN VYSSPAAGN ANQFGATVGI RHKF
ADP, ATP carrier protein [<i>F. oxysporum f.</i> <i>sp. lycopersici</i> 4287]	XP_018243474.1	33.6	113	7	MSEQPQKV LG MPPFVADFLM GGVSAAVSKT AA APIERVKL LIQNQDEM LKTGR LDR KYNG IGD CFKR TMA DEGVMSLWRG NTANVIR YFPTQ ALNFA FR DKFKKMFGYKK DKDGYALWMA GNLASGGAAG ATSL LFV SLDY ARTRLANDAKNAKSGGDR QFNGLVDVYK KTLASDGIAG LYRGFMPSVA GIIVYRGLYF GMYDSIKPVV LTGPLANNFL ASFALGWIV TTGAGIASYPL DTIRRRMMMTSGEAVKYKNT LDAARQIVAK EGVKSLFKGA GANILRGVAG AGVLSIYDQL QVLLFGKAFK

ATP synthase beta chain, mitochondrial precursor [Neurospora crassa and <i>F. oxysporum f.</i> <i>sp. cubense race 4]</i>	XP_963253.2; EMT62383.1	55.5	112	6	MFKSGISAF A RTARPSFAAA SRRAVRPAAL NLRAPALSRF ASSAGVGDGKIYQVIGAVVD VKFDTDKLPP ILNALETQNN GQKLVLEVSQ HLGENVVRCI AMDGTEGLVR GAKASDTGAP ITIPVGPATL GR IINVTGDP IDERGPIKTDKFPRPIHAEAP EFVEQSTTAE ILVTGIKVVD LLAPYARGGK IGLFGGAGVG KTVFIQELIN NIAKAHGGYS VFTGVGERTR EGNDLYHEMQ ETSVIQLGDSDKVALVFGQM NEPPGARARV ALTGLTIAEY FRDEEGQDVL LFIDNIFR FT QAGSEVSALL GR IPSAVGYQ PTLAVDMGQM QERITTTKG SITSVQAVYVPADDLTDPAP ATTFAHLDAT TVLSRGISEL GIYPAVDPLD SKSRMMLDPRI VGQEHYETAT RVQQILQEYK SLQDIILA LG MDELSEADKL TVERARKIQRFLSQPFTVAQ VFTGIEGKLV DLKDTIASFK AILAGEGDDLPEGAFYMGD FASARAKGEK ILAELEGQA
Mitochondrial outer membrane protein porin [<i>F. graminearum</i>]	PCD31551.1	37.1	87	3	MSVPAFS DIA KPANDLLNKD FYHLSATT FE FKDTAPNGVA FKVTGKS SHEKATS AAI E GK YTDKPTGTT S PSSSTSLSQ SPSPSPPPVS NPRRKQNLPS LSVSRLGP K SGWPIGFATF VRPGFAQLLM FYSRTGLTLT QTWN TANALDTKIEVADSLA KGLKLEG LFN FLPATAAKGA KFNLHFKQPG FHGRAFF DLL KGPVANVDAV VGHEGFLAGA SAGYDANKAA LTAYSAAVGY AAPQYSAAITASDNLSVFAA SYYHKVNSQV EAGAKATWNS KTGN AVGLEV ASKYRIDPVS FTKVKINDR G IA ALAYNVLL REGV TLGLGG SF DTQKLDQA THKLGASFTFEG

6-Phospho gluconate dehydrogenase, decarboxylase 1 [Aspergillus niger CBS 513.88]	XP_001394208.2	54.1	87	4	MADQAVADFG LIGLAVMGQN LILNAADHGF TVCAYNRTTS KVDRFLENEAKGKPIVGAHS VEEFCAKLKR PRRIMLLVMA GKPVDQFIES LLPHLEKGDI IIDGGNSHFP DSNRRTKYLA EKGR FVGSG VSGGEEGARY GPSLMPPGNEEAWPYIKDVF QSISAKSDGE ACCDWVGDEG AGHFVKMVHN GIEYGDMQLI CEAYDILKRG LGLPAKEIAD VFAKWNKGVL DSFLIEITRD VLYFNDNDGTPLVEKILDKA GQKGTGKWTA INALDLGMPV TLIGEAVFSR CLSALKDERI RASSLLDGPT PEFTGDKQAF IDDLEQALYA SKIISYAQGF MLIQEAAREYGWKLKNPSIA LMWRGGCIIR SVFLKDITNA YRKNPDLENL LFDEFFNTAI KKAQSGWRNV VSKGALWGIP TPAFSTALSF YDGYRTRDLP ANLLQAQR DYFGAHTFR IKP EHANETYPEG KDIHVWTGR GGNVSASTYI A
Predicted protein Glutamin amidotransferase [<i>F. oxysporum</i>]		28.3	84	6	MKFLSTLAGA LAFTTSASA IAHRNTERTC ITPGAIPDLK GSDIRNVGVVLFQALDMIDV FGPLDPLQLV SLSVQQLNLH LIAETLDPVS TAPVAMNKFN SSFWPTIPPT KTFADDLDL LLIVPGGPGA RNPNLGAVTD YIAKMAPVKILMCTGSG IAARAGVLDG HLAATNKNAW ATMKAMGPKV NWVSPAR FVI DGKIWSSSGV TSGLDLIFAF IETFWGAQQS Q RIASIIEHV PRAATDDPFSQHFNITPTEA QPCPKA IASIIEHVPR
Quinase, HSP70 actin [<i>F. graminearum</i> and <i>F. oxysporum</i>]	XP_018238735.1	85.9	82	4	MSVVGIDFGT LKTVIAIARN RGDVVTNEV SNR ATPSLVG FGPKSRYLGEAAKTQEISNL KNTVSSLKRL AGRSFNDPDI QVEQQYVTAP LVDVNGQVGA EVNYLGKKEH FTATQLVGMY LSKIKQTAGA ELKLPVQDVC MSVPPWFTDVQRR ALIDAAE IAGLR VRLI NDGTAALGW GITKLDLPAP EEPARRVCFI DIGHSSYTIVS IVEFKKGELA VKATTWDKDF GGRDFDRALV EHLAKEFKGKYKVDIMTHGR ALARTIAAAE KTKKILSANQ QAPVNIESLM NDIDASAMIT RQEFEAMIEP LLQRTHHPLE EALAQAQLTK DDIDIIEVVG GGSRVPALKERIQAFFGKTL SFTLNADEAL ARGSAFSCAI LSPVFRVRDF AVQDIISYPI EFGWEKAPDI PDEDTSLTIVF NKGNVMPSTK ILTFYRKQPF

					DLEARYAQPELLPGKTNPWI GRFSVKNVKA DGKDDFMICK LKARVNIHGV LNVETGYYVE EEEVEEVNE DPDVSLPAPP MASSPPDSV STSSSASVGD DSRAYPVKRQRLNDDDKL LCSAAVVDEN LEPSTYENRS LTYTSHKAME TDKDAPKKTR KVKKQVRKGD LPISTGSASL DDSTKASLLE KESAMVMEDK LVADTEEKNEALEAYIYDLR AKLDEQYSEF ASDEEKETIK AKLEATEDWL YEDGEDTTKG VYVAKIDEIR AMAGPIVQRH FEKVEAERQA ALEKAEAERA AKKAEDARKAQDAEKATAD QEMKDADAQD AEGTADPQ
Putative histone H2B protein [<i>Phaeoacremonium minimum</i> UCRPA7]	XP_007912731.1	14.8	89	11	MPPKAADKKP AAKAPVASKA PEKKDAGKKT ASTGEKKKRT KARRETYSSYIYKVLKQVHP DTGISNR AMS ILNSFVNIDF ER VATEASKL AAYNKKSTIS SREIQTSVRL ILPGELAKHA VSEGTKAVTK YSSSTK
Integral membrane protein [<i>Pyrenophora tritici-repentis</i> Pt-1C-BFP]	XP_001933871.1	47.8	82	2	MLGTPLNCEL GEGEVVVNNND LRISFHRTIR VPDNDQKSFL PPDLGAYPLKPIQAYSKKMP TEMTSKGGLF FPMYQSEAMW INFECRKSQH YIIKIYVGKV NAISGEAAVE DAGTKLRRQA KLARQHANVD AASSLQDYII VPGQKWLDGIAEADGSVRQF VAMPFGSGYS VESQVTGKDA AGGIQFEITP YKPPQVASNT QRSANGHQKS FSIFVKTLTG KHITLSVWKE DTISMKDMI QVKEGIPLSQQR LIFNGKQL EDGRT LADYG IENEFTIVLV LNLRGGGTGP PLEMAVAAGG KIKQGIVADK LADHWQSART TVLNVQILNS AVYRTVTGED PPTMPIDAKTYARHGLPFYD LYEEQSGISG DFSMIKSIGQ IDHKEDDTAT PKIVKIGEQA TQLRVGLTNP NGPLRGFRTA SSDLKKEYEGF HVVQF

Rs15_podan 40s ribosomal protein s15 (s12)	XP_009251452.1	17.5	78	10	MADEYDAEQA AELKRKRAFR KFSYR GIDLD QLLDLSSDQL RDVVHARARRRINRGLKRRP MGLIKKLRKA KQEACPNEKP DLVKTHLRDM IVVPEMIGSV IGIYSGKEFN QVEIKPEMVG HYLAEFSIY KPVKHGRPGI GATHSSRFIPLK
[<i>F. graminearum</i> and <i>F. oxysporum</i>]					
Nucleoside diphosphate kinase	XP_011324585.1	25.9	60	7	MVAEEPRQRK DPAVSGKENS KQQRRRTAEN LAPPFFALLF ALLAFYIILSPPSSSLSPPV PVCHSTISSL VSSSQVIPDK NIAKMSSEQ TFIAIKPDGV QR GLVGPPIIS RFENRGFKLA AIKLMTPGKE HLEKHYADLA GKPFFAGLIEYMNSGPICAM VWEGRDAVKT GRSILGATNP LASSPGTIRG DYAIIDVGRNV CHGSDSVENA QKEIALWFKE GEVVSWKSAQ FNWVYEKA
[<i>F. graminearum</i> PH-1]					

AgNP-OR Proteins	NCBI RefSeq	Molecular Weight (kDa)	Score	% coverage	Sequence
DNA polymerase epsilon catalytic A-like isoform X1 [Citrus sinensis]	XP_006471371.1	253.8	50.5	0.5%	MDRRRWDRQDGRTKKQKLIRSAEEELEAKLGYDLFSEGDKRL GWLLTFASSSLEDEDTRKVYSCIDLQFVSDGSTFKSKYKFRP YFYAATKEKMEMDVEAYLRRRYESQIADIEILEKEEDLDKNHL SGLHKSYLKISFDTVQQLMVDVKDLLQVVERNQAKFDAAEAYE SILTGKREQRQPQDFLDCIVDLREYDVPYHIRFAIDNDVRGQW YDVSVSSTGPLLEKRV DLLQRAEVHVCAF DIETTKPLKFPDA DYDIIMMISYMLDGQGYLIINRECVGEDIEDLEYTPKPEFEGY FKVTNVNNEIELLRLWFAHMQEVKPGIYVTYNGDYFDWPFL ET RAAHHGFKMSEELGFQCDKNQGECRAKFACHLDCFAWVKRDSY LPQGSQGLKAVTKAKLG YDP LEVN P E DMVRFAKEKPQM MASYS VSDAVATYYLYMTYVHPFIFSLATIIPMS PDEVLRKGSGTLCE MLLMVQAYKANVICPNKHQS DPEK FYRNHLLESETYIGGHVEC LESGVFRSDLPTSFKLDPSAYEQLNNLDRDLQYAIKVEGKMD LESVSNYDEVKNAIMEKLLRLQEEPIREECPLIYHLDVAAMYP NIILTNRLQPPSIVTDEVCTACDFNRPGKTCLR KLEWVWRGEI FMGKRSDYYHLKKQIESEFVG TNGHLSKSFLDLPKMEQQSRL KDR LKKYCQKAYKRVLDKP VTEL REAGICMRENSFYVDTVRSF RDR RYEYKGLNKVWKGLSEAKASGNSIKI QEAQDMVVLYDSL QLAHKCILNSFYGYVMRKGARWYSMEMAGVVYTGA KIIQNAR

LLIEKIGKPLELTDGIWCVLPGSPENFTFKTKDLKKLTIS
YPCVMLNVDVARNNNDQYQTLVDPVSPTYETHSECSIEFEVD
GPYKAMILPASKEEGILIKKRYAVFNDDGTLAELKGFEIKRRG
ELKLICKVFQAELFDKFLHGSTIEECYSAVAAVANRWLDLDDNQ
GKDIADSELIDYISESSTMSKSLADYGEQKSCAVTTARRLSDF
LGDTMVKDGLRCQYIVACEPQGTPVSERAVPVAIFETDAEIM
KFYLRKWCKTSSDVGIRSVWDWSYYKQRSSAIQK**IITIPAAM**
QKVSNPVPVVHPDWLYKKREKDKFRQRKLVDFSSLKKDD
FLNKTCNAETNLMDENVEDLEDFPKKRNSVNGPRPIVRCFEVNNEQKTVKTTDQV
DSLRRQQLEPSEVSDQQPSSQNAIDTENIDRIVDYKGWLELKCRWKDNLDRRKKQK
LGSLRASHQANGVSESLGDMINHKEAQRRTGVGSYFRRQETAMTRC
HWQIIQLVPSSQSGVFLAWVVVEGIMVRIPITVPRLFYLN SKD
PIPEKFPGRRVNKTLPHGRRSFNLIEVMIDEDQFRKESKKLAA
LLADPEVEGYIETKVPPEFNAILQIGCVCKVDKSTKRNTQDG
WNLSELHMKTTAECPYLEQSFSFYLYHSISDVRAIYIFYFPT
SRTVTVVVSPHQHRELSPSILEKQFREACRTLSTELPPGVRI
TFKVEYVGYVKDAEKILQRAISEYRHEHYGPTVAVIECPNSHS
RLGLRLVNLDFPCVSIPPNDARSKYQVLGWQQNAKIGMQRCA
ASSQWFNERISLARYAHVPLGNFEPDWLMFTADVFFSRALHDQ
QQILWISDDGVPDLGGTSEEDECFADEVHQPVLYPGAYRKVS
VELKIHHLSVNALLKSNSQVNEMEGGGLFGFDQDMNSGPYNNEL
CGFDETTSSAPAFRVLKQLIQRCLTDATSGNFADAILQHLY
RWLCSPHSKLHDPVLHRILHKVMQKVFAMILLAERKLGAAIF
ANFSKVIIDTGKFDSAACKAYCDSLLKALQTRELFIEWIELEV
HFWHSLLFMDQNYGGIPARADESLODSQVDIVSSWNIAEYL
PKEIQDHFVLVVSEFMYIPWKHAQKLAASRASLQEGRSSCTPSI
TVAAAENFESHIVQYVKGEISSYFTGKLLSIVRDAIHMKKMN
NDQHNSPGVMQTAANIHKVDAPEFIKHVCAAFALDQNVQHDV

LVMRKNLKYVRVREFAPEAEFRDPCPSFILPNVICSYCNDCR
DLDLCRDMAALLAQDWHCAMPQCGQPYDREVMENALLQIVRQRE
RLYHLQDLVCIRCNQVKAAHLAEQCACAGSFRCKEDASDFRSM
MQIFLNIAQRQGFQLLQECTSWILEVQ

Thyroid adenoma- associated protein homolog [<i>C. simensis</i>]	XP_006482571.1	249.5	69.8	0.5%	MSAKWRALQHRHRYTYSAVVFPTSLTESLTQIPSSQNNSFSKF HNAFRELVSLNSIYAQVNHAKKFASSFIELLSSANAAADEWVL SKATRVYLEVMFLENSLPLHRTLVSALAKERKFQALIVSCFRD LCDEYGGGRASDQNKRFCVSRRVLSVMSLPKLGYLMDVIQDC AVLVAWDVVLGLNGVVLETQEWAARPSPIVMEQCQEALSCLYYL LQRCLDKFKGLSGQKESIMEMIFVVVLISILKSTAFSRDCYVA GVALCAALQVCLGPQELGLFLIEGIFYQKTCFSSEKSKEFE DALQVCFRKTPFNGDVCSEIHNFVLSRLCLIRGILTAVSRNV LNALFFVSKEDLSNGSENGDDSAKTILYNGILPELCYCENPT DSHFNFHALTVLQICLQQIKTSILANLTNVSFYDPIPEDMGT RILRIIWNNLEDPLSQTVKQVHLVFDLFLDISSLRWDVGSER IKSFLQKIASDLLCLGPRCKGRYVPLALLTKRLGAKTLLGMSP DLLSEIVNAYIDDDVCSAATSLKCFLECLRDECWSSNGISRG YAVYRGHCLPPFLYGLASGVSKLRSNLNTYALPVLLMDVDGI FPMLAFVSVVPSEEENLSYPELDCSSIELK VEQQVAVFVSL K VSRSLALAEGDIDLWKNSVLRGSKFVTEGSNLYALVCIKG INFKVLVDWLVLALTHADELLRVDAAESLFLNPKTASLPSHLE LTLMKEAVPLNMRSCSTAFQMKTSLFRKFFSRVTALERQFK QGSWRPVVSCENSRTLINGTDTVISKAENLFKFMRWLSCFLF FSCYPSAPYKRKIMAMELILTMMNIWSIAPPQEKLDSVLESS LYPYNKGITAPNSTLLVGSIIDSWDRLRESSFRILLHFPSP PGISSEGMOVQKVITWSKKLVCSPRVRESDAGALALRLIFRKYV LDLGWIVRASVNVCCLHPQPQLKGEGQICKSSAPVVEYIKSL IDWLEVAVKEGERDLSESCENSFVHGILLALRYTFEELDWNSN AVLSGYSEMKALEKLLLELVMRITSLALWVVSADAWCPLPEDMD DMIIDDNLLLDVPEEMDEPLRSLEDEEKNSKPAQDVRTSEQVV MVGCWLAMKEVSLLLGTIIRKIPLPINSSSDTVDSGSGTSDAA
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DDLLMTMSDAMLDLKQLEKIGNHFLEVLLKMKHNGAIDKTRAGFTALCNRLCS
NDLRLCRLTESWMEQLMERTVAKGQIVDDLRRSAGIPAAFIALFLAEPKGPKLL
PQALRWLIDVANRSLLDIENKGAKTMCEFHSNQETESAVPPDIY
ATWNSSKIRDEGVVPTVHAFNILRAAFNDTNLAADTSAFSAEA
LIISIRSFSSPYWEIRNSACLAYTALIRRMLGFLNVQKRESAR
RALTGLEFFHRYPPLHPFIFNELRVITELLGNASSGQSASNLA
NVVHPSLCPMILLCRLKPSALAGESGDDLDPLMPFIRRC
TQSNLKVRVLASRALTGLVPNEKLPDVLLNIASELLCVEDQNE
AAPVSSLRGTHRASFNLIHGILLQLGSLLDANCRLNVDFSKKD
QILGDLIKILGNCSWIANPKMCPCPILNASFLKVLDHVLSIAR
TCHTSKSFSTVRNLLLESTDCLDVDASYGLTYDPTITELRK
KAANSYFSCVFQASEESGEEVQLPQRCSPVDSTSSKIPDMEN
TFSGLLERLVRSLSDSSYEVRLSTLKWLKFLKSTESDREVCE
LSSYEIKSIQNWTKNNLQATLMSRLELEKNPRCTNYVRLLLFT
WNLLQFQKLGSNVCTETIFVGSDVCDCSVQFWDRLMSSYELTR
HAKIKESLINCMAICIRRFANLFTSSILVDARKKTIEISESDH
LGRSAHLFACITAFVNIINRHSSSEPVNMRKAATGSIVASGL
LEQADLIGSYVSNHQIPSENSSLHFEPQEAGNMYAHQVLVIWF
TCIKLLEDEDGIRQLAIDVQKCFSLKRGSSHGVPNQVEK
VIELSFEHLSSIFGCWIEYFDYLCQWVLVAASHVVSGGLVRR
VFDKEIDNHHEEKLLISQICCSQLEKIPILKSWVADSLNKDHA
RNYLLGWRQRFSHQLMSAKDHGRKYEGVDWIGGVGNHKDAFL
PLYANLLGFYALSICIFKVEAEDEMHLLSDVVELGRIISPFLR
NPLVGNLYLLVVKLHEKQTGATADHTVEFRADMIWDGFDPYFL LR

Probable disease resistance protein At5g63020 [C. simensis]	XP_006465371.1	102.9	38.4	1%	MGNLLSSFLSSPESFRSILSYVGGEAKYVWALQVNLDALQAE DKLIRTKD DLLNKVELVEQQQPRARRTNQVKGWLQRVQETVT VVDLQNVRDQELDRCLGGFCSKDLASSYYFGKKVTLTEQVI LLKNERGEIKDIAEMVPEDA AVELALERTVVGQESMLDQVLRC ITDQETNRGIIGLYGTGGVGKTLLKQVNNKFCIEQRQHHFDV VIWGVVSVREP KLDKIQDAIGKRIGLSAESWMDKSLEEKALDIS NILSRKKFVLLDDIWIQPIDLTELGIPLQSLNVSSKVFTTRS LDVCGSMEA DEKIEVKCLVHDEAWRLFQEKG EATLRCHSDIL ELAQT LARECCGLPLALKTIGRAMAYKKNPDEWKYATKVLSTS PEKFSGMEENVFARLKFSYDSL PNYIIRSCFLYCSLF PEDYEV YKGDLIDYWISEGFVDAFDEGYTIIGDLLRACLLEEVNDNHVK MHDVIRD MALWIACKIDKEEENFLVHAGALLTEAPKIKDWEGF KRISLMENNITSLSAIPNCPHLRTLLL YRN RISM ITDGFFQFM PSLKVLNLGFNIFLNKLPSGLSSLISLEHLDLSFTVIRELPEE MKALVNLRYLNLEYVYLNRLPLQLLCNFTKLQALRMLGCSNYS GEEEDRVFFKDAEPFMKELLCLENLDLLSFTFDSWHAFETFLT FQKLLSCTESLELT KLYTPMSLNVLPAYMKHLKNFLIQNCAF EELKIENAVEIQNLVQRGFRSLHTVCISDCSRLKELTWLFAP NLKNIDVQNCNNMEEIISPGKLSEVSEIKERQNFLAELKFLCL KDLENLESIYFDPLPPQLK EIEVTGCPKLKKLPLDSTRAMGH KIVVKGNIEWWWELQWEDRVTQRVFSTCFDPMEIVF
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Probable inactive receptor kinase At2g26730	XP_015384636.1	68.5	55.1	2%	MRGSKFLFLEGILICIAILPRLFTGCVGGELSESFFKFISA VDSQNVLRIGWNGNLPHPCSYNLKGIKCNLHATSIVGIRLENM NLSGIIDAESLCKLRLRVVSLAKNLIQGRIPNSISNCRRLTY LNLLSSNLLSGAVPLALTKLKHLKTLDISNNHFAGTSPDNFKQE IKYFDKYVVETSSSEINRASTVEARGLEDTQPPSVHMSEHGE KRHWFRNWMTIPLAAGIGLVVLIAYCMGKKSAQIARDREILK ALQDSPSKSPPRVMIDIEVRPEVRRSELVFFVNENEKFKLDDL LEATADLRSQTICSSLFMVRLKNSAVYAVKRLKKLQVSMDEFS QTMRQIGNLKHPNILPLVCYNSTNEEKLLVYKYQSNGSLLSLL EAYIEGKRDFPWKLRLSIATGIAKGLDFIYQKSNEEKTIIPHGN LKLSNILLNENEDPLISECGYSKFLDPKKTCLFSSNGYTAPEK TVSEQGDVFSFGVILLELLTGKTVEKTGIDLPKWVKAMVREEW TGEVFDKEVAKAGRQWAFLNNVALKCVSNPDDRPTMAEVLE RIEEVVNGNDER DRDHSSSSMESIPHDSCLLHTVIQENWD TPRSSY
Squamous cell carcinoma antigen recognized by T-cells 3-like [C. sinensis]	XP_015383384.1	113.4	53.0	0.5%	MEPKEETLATIPEEEEEDGDTVIPDVENNPKPTTKDNSSSDSG SDSDSDSDSDSDSDSEDAKQSMELQTLQYQLSNEPSNYDTHV QYIKVLR KMGEIEK LRQAREAMNEIFPLTPAMWQEWARDEASI STGPEALLGVEKIYERGVSDYLSVPLWCODYLKVFQYEYDPSIRA FLPDGISKARNLFERAITAAGLHVSEGSNRETKKMEPKEETLA TIPEEEEEDGDTVIPDVENNPKPTTKDNSSSDSDASDSDSDSDS ESEDEAKQSMELQTLQYQLSNEPSNYDTHVQYIKVLRKMGEIE KLRQAREAMNEIFPLTPAMWQEWARDEASISAGPEALLGVEKI YERGVSDYLMHTSIPRPLLVLQEKEKQVQRIRSIFHRQLSPV LANSSATLLAYKSWEVEQGAVIDVESSNLGDSSNVALAYQKA

MYB transcription factor [<i>C. sinensis</i>]	AMH40451.1	36.6	67.4	4%	LEMCNARAHLEEQISRQDLSDEKFQQYMIYLKYEQSSGDPGR VQLLYERAITDFPVSSDLWLDYTQYLDKTLKGNVVRDVYSRA TKNCPWVGELWVRSLLSERSRASEEEISTVFEKSLLCAFSTF EYLDLFLTRIDGLRRRILFSGEVEGVLDYSLIRETFQRASDY LSEQMKNTDGLRLYAYWAHLEQSMGKDMVSARGVWERLLKIS GAMLEAWQSYISMEIELGHINEARSIYKRCYSKRFTGTGSEDI CHAWLRFEREYGTLEDFDHSVQKVTPRLEELQLFRSQESKSL PESADQKEHSVKKTGREKRKSDLNISYEQSPAQRQKNAPQPK KVHDKEKQQVQNLAEENEGRETKQTVEEQPKEQPIKDAVPGRT KGFTDECTAFLSNINLKATYEDLRRFFSDVGGVSSIRLHDKF TGKSRLAYVDFIDDEHLAAA VAKNKQMFLGKKLSIARSNPQ RKDSSGERAPTEQAQSHQQTGNAGTSASKESSIETSKQSRGRG DSVQLKGKNTFAVPRNVPLGFPAIKPKTEEGEDLKPKSNDEF RKMFIKKD
					MGRACPCEKIGLKKGRWTAAEDEILTKYIRANGEWSRSLPKN AGLLRCGKSCRLRWINYLRADLK RGNITAEEEETIVK LHSSLG NRWSLIAAQLPGRTDNEIKNYWNNSHLSRKTSFTGPADDPLTS DDLSNNGIKLAGGCKQRKGRTSKVNSKKHKLALASIGMPKTKR GTISEVLDQQVTADENKSSIGQVSCMASDEFFCGEASSDQASG LCLSKDIESEVLGPYEWLDSEIKRVNSNLNREKASADEVKRD QDKMAKSAEKESFWGSNEDELLYTFDPTMMNCGFDEEWLDF DWAAGGAECHHNQCELRGDDKLLCWLWDSGNGEGCQ

Protein	XP_006488076.1	84.1	31.2	1%	
ENHANCED DISEASE RESISTANCE 2 [<i>C. sinensis</i>]					MDNSQITSQGRMEGWLHLIRSNRIGLQYSRKRYFLLEDHFLKS FKSVPHSKNEDPVRSIAIIDSCIRVTDNGRESIHRKVFFIFTLY NTSNHNDQLKLGASSPEEAAKWIHSNLQEAAALKGGPHQGVGDHI GCPNSPWESFRLSGSSRASHTKSIDWTLCSGTHMEQVTAD VIA PSPWTIFGCQNGLRLFKEGKDRGSRGKWDHPAIMAVGVVDGT SEAIFQTLMSLGASRSVWDFCFYRCVVEHLDGHTDIHKQLY SDWLPWGMKRRDLLLRRYWRREDDGTYVILYHSVFHKKCPRQK GSVRACLKSGGYVITPMNHGKKSVVKHMLAIDWKCWRSYLQPS SARSITIRMLGRVAALRELFRAKQGNYSPEFLSGELTRNMRM HQTDGNMVQMPTEDGNSKENTSEEVDQVSSEHASLVGLNDAAD EFFDVPEPSDYDDSENGWTSDFGPEMNSQDTRHPKISTAAGFV RKLHDLAQKRGYVDLQGTAKEDNFSCCYGTTLQKDPTCTLPC SWTSTDPSFLIRGKNYLQDRHKVKAKGTLMQMVAADWLKSDK REDDLGGRPGGIVQKYAEQGGPEFFFIIINIQVPGSTTYSLALY YMMTTPVKDAPLLESFINGDDAYRNSRFKLIPYISEGSWIVKQ SVGKKACLIQALEINYFHGKNYLELGVDIGSSTVARGVVSLV LGYLNNLVIEMAFLIQANTEEELPEFLLGTCRLNHLDAAKAVL LKPSRLLSSSQGPVRN

Hypothetical protein CISIN_1g001123 1mg, partial [C. sinensis]	KDO77096.1	64.2	57.9	1.5%	DLWSGSEGGGIKIWPWEAIEKALSLKPEERHTAALIVERSYID LRSHLSVNGFSSILTS DIKNLLSDHSRAKVWSAGFLSFLWDA RTRELLKVFNIDGQIENRVDMSSLPDFAMEDEFKTKIVTSSKK DKAQSSFGFFQRSRNAIMGAADAVRRVAAKGGFGDDNNRTEAL TTSIDGMIWTGGANGLLLQWDPNGNRQLQDFQYLPFAVQCLCTF GSQIWVGYMNGIVQVLDEGNLLGGWVAHSSPVIKMAVGAGYI FTLANHGGIRGVNVTSPGPLDSILCKELAGKEFLYTRMENLKI LAGTWNVGQGRASQDALISWLGSAA SDVGIVVGLQEVE MGAG FLAMSAAKETVGLEGS AVGHWWLDMICKIL DDGST FERVGSRQLAGLLIAVVVRK NLKDYVGDVDVAAVPCGF GRAIGNKGAVGLRVRVYDRIMCFVNCHFAAHLEAV NRRNADFHDHVYRTMTFCRPSN LCSAAAAGASSVVQMLRSTNPLS GLTVEGP EADMVIFLG DFNYRLDGITYDEARDFISQRCFDWL RERDQLRAEMEAGNVFQ GMREADIKFPPTYKFEK HLAGLAGTL
Oleosin 18.2 kDa [C. sinensis]	XP_006470260.1	17.1	46.9	7%	MAERDRPQPHQLQVHPQQHSKSLIGQRGAAGG GPSASKVLA VL AMLPLGGTFLALAGVLTGTIIGLCVTTPLFIIFSPVIVPAAI VLALAVTGFLTSGAFGLTALSSLSWVLSILW QKTGSVPEMADQ AKKRVAGIADYVGQKTKEVGQDIQSKVHEAGGKTGRT

Uncharacterized protein LOC102613021 isoform X1 [C. simensis]	XP_006468109.1	267.3	34.6	0.5%	MTDKNPSRRELLDRWRGIEEEEELDDGNDPLKRRRIDGLKEKW FADAFNFLIGLPEKNHIWCGSDIMGPYLELFNYFKDECHDS PLRLLWKRISGEMQHICIQCVSQHHQAQEMYSMEYESGVIGPLL DVLRLSLDEERVTKYLREINARLAHQEYYPQIDNNQVICIMYEV LMFPVLLDDQSLFETFETFIEAVDNMHELALDGHQLFPGVFA FFFNRNRVRTIGRRLARSMGKLRRATDLEPMQPPLKKFIGFLET EVLTSTFKTSRPRARLKRLPIWLGITSLLEFLEPPALEEGILE RYPIFFDTVLNHISGDSPEFSHAVSCLREFKMLGYKLWLRST LSPSVMRNTLLGQCFHTRSEKIHKDIFDLFPPFLQSLEALQDG EHEKQRRHFLYFLYQVPVSSNFSVLTAQMACKISLIIHRGY KMNPCCPFCAHMWGPFLVSSLKDSSLHSSLRQPAFDLIQTI IVSDAAALVTSVLKSARPLRTETIISVEMNEDEDLKFDPD VDEKDDNSSWNEFTAQSRTSQEFRVWMCIPMLWIDVLDINP SVLPVSFSKVVFWARSHFSIVEPEISAEMALDVRAWLSSATE ISSTFGWKAPTGCDDGGAGKVSNSMEVSTMCLPLIRAFKRLT AHFIVQIGQQGELRKQWTWEPRMGESLILSLVDPNDNVRQFGKC ILEQVSNTRGLASGLKFLSSSTSSLSTIFLGLKHALKLVQLDS VLLKFQSLHHFFFVLRKIFEEGHLPKCDLLKSSSGHSSITMFS SQGGFLRQPQFESFDANTCSSNIDLKLWEKFHYTLSEITWPS VKRCLQEGKTFLDYSLCQMTCIRVLEILPVVFGKVCPLAELS GYSATTMQNVDFKWLHDLVDWGSQLKVIVYWKRTITCLLN LLKDSCSGTSLLTVSSIENLISSDHLDMDGLVEKVSLCVSLS KESSRNSGKTLMSMAHFPEDLSVERKSATLDIRPFPVKDMVE ILDSETIASKSKDNLIVVSDDETEKEPSVDQGLLSDFKSRQCV VVSKTGAPISDKRASQTESLKNRVSILDSSKDLLDGSGPASPK QVLDESVGKSLNSLDSKVVDGKKESNSKFNASDSLQFQNRVG LRNKPVESSSFKNVNQASTNVVAKPTNKLKELVCDVENDPLE
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SSFKSGKHQQTYLTKGPFVPKRQVIQLK
SPFENRCGLHRMETGVKRGPPKLDDWYKPILEIDYFATVGLA
SSREDENRVHCKLKEPVCFQSPEQFVSIFRPLVLEEFKAQLH
SSFLEMSSWEDMYYGSLSVLSVERVDDFLVRFVHDDNDSVTS
KIFSENDLVLLTRVSPQKTPHDVHMVGKVERRERDNRRSSIL
LIRFYLQNGSVRLNQARRNLLERSKWATLIMSITPQLREFHA
LSSLKSIPLPIILNPVNVRGYNESREPDLGKLSQLQQILKT
SFNESQLQAISVAIGLSSSWKKDCELSLIQGPPGTGKRTTIVIA
IVSALLATRTSPKSHLKQNYSSCINSRPKIGQSAAIARAWQDA
ALARQINEDSERDKKSSESSVRARVLICAQSNAAVDELVSRIS
KEGLYGSDGKTYKPYLRVGNVKTVHPNSLPFFIDTLVDHRLA
EERMHLTDPKNEFCTRSSTLSNLEKLVDRIFFEAKRANTKD
GNSDPKNMLDDEVHKGDDVKLDVELEAKLRKLYEQKKQIYRE
LGAAQVQEKKSYEETKALKHKLRSILKEAEIVVTTLSGCGGD
LYGVCSESVSGFKFGNPSENTLFDAVVIDEAAQALEPATLIPL
QLLKSYGTRCVMVGDPKQLPATVLSNVASKFLYECMSMFERLQR
AGHPVVMLTKQYRMHPDICRFP SLHFYENKLLNGEEMSRKSAP
FHVTGGLGPYVFYDISDGQELRGKNAGAFSLYNEHEVDAVEL
LRFFRKRYLSEFVGGRIGIITPYKSQQLLRSQFSNAFGSSVT
SDIEFNTVDGFQGREVDILILSTVRAADSSSASSGSRSSSIGF
VADVRRMNVALTRARLSLWILGNARTLQMNYNWAAALVKDAKER
NLVISIKKPYASMFKSMFKSSLRKNHSSELQDDHLSQLKHTEK
HGDTNQFVKQIGRKS RAGVETKTRDIDHMAQCNCNAVARDNDTV
SAKREDLQTSRRRARDQSDLPKTDHPSAAANGQSRTSKSVKSA
VLGEHVLDSETRGEESGKKFSSNTLDQKKDEYSKSKLDQS
APLDQQKDKYSKGKSDHSGHEAGNSHKHSKFVSKGSSKSFEQ
DRSLKKLK**GSDPSTGGSQK**EQEANDQGRNPNSVGSSDALIAKR

KQQREAVDAILYSSLISSKKPEPVKPAPTKRSLSPTSIAGGGI
RPPKRKKVPAASSEALQDQ

Uncharacterized	XP_006488053.1	79.7	26.1	1%	MSHPQQLRRRALNQPLEPDHHESSFLSSHAKASQTSATASSTT SRCSSFASKSASYSSNQHQYSSFHQNLFCFTSCIRLNVFSTSS KRWSAWFKLHCPSMASQQTRLSFNMPDIARRKKISRQQKK EELQR EVSM LQKMLEQEETLHEILERIHNGQDGSAISIPNFLP PKVKELLAELALVEGEIKRLEGQISQLQLGLKHEQEVTKETKS KQWQLGSLGNLQGHSTYMANISSLINKVGNEKVAFETKALHF ISKAIGDYNLSDFSVNEKMGNSKVVFVDQKENQFQQQEVK FQDRVPRKSGMIKPASPLRDPRHPTPKPRERNAAEISFDLPPK SLSNSILLEESIQNWQPNKLSESIMKCLNFIVRLLRTSRAIE LEKAGPIRSRMHSITSRSFRADTSLNSKSSIVLQKDSRQQDP YGIFDMEESIPRDIGPYKNLVIFSSSMDPKCISSSSVPLIR
LOC102616627	[<i>C. sinensis</i>]				

					KLRILMNNLQTVDLKALTYQQKLAFWINMFNACIMHGFLQYGV PNSPEKLIALMNKATLSIGGSTINAQAIEHYILRGQESSNLKE VDQKAGEKDEKEAIVRKLYGLESTDPNVTFALCYGTRSSPAVR IYTADGVIAELEKSKEYLQASVVVTNTRKIAFPPELLFRNMLD FAMIDITLVEWVCHQLPTSGSLRKSMDCFRHQGHNNNGKISIT VEKIPYDFEFQYLLAI
Uncharacterized protein	XP_015386446.1	31.7	41.4	0.5%	MMKIPYADHFPGHITSMCKLDVIVNAIREKLTRQQLQLFK DNI FGHFLRCR SYPFSGVIVHNLLRQVSHGDGNDKDDLWFQVGDH LIRLSIGEWCLVTGLCCGEKVFVFLKHKTKHRLNKYFGGRNRD INLGQFEEIFMNLHFKTMNDTALKIAMFYFADRVLHGRKDHC QINFNLLNEVDDINHFRSIPWGRLSWETIYKSIDNVNLNGKAKK FKKASAENPLHRIEKYNFYGFTSAVHA WIFE AIEGLPLEWVEK IRRKASFIPPPKT
LOC107177306 [C. sinensis]					
Phospholipase A1-Sigma 3, chloroplastic [C. sinensis]	XP_006470637.1	61.1	31.6	1.5%	MAPNLLSFSSPKGVFPFLPQQYRYYNNKAKTSLLYLNNTNV SLNSKNLLKCSSVSNLSTPPLDETAFDHQQEEEEQEQQE ELHEMWKAIQGCNDWQGLLDPMNCLRKEIIRYGEFSQACYDS FDFDPHSKYCGTCKYSAASFFKKLDMADSGYQISRYLYATSNI NLPKFFQKSRLSSVWSTYANWMGYIAVTDEEEIKRLGRRDIV VAWRGTVTYIEWIYDLKDILHTANFGSDPSIKIELGFHDLYTK KEQSCNYCTFSAREQVLAEIKRLIEYYEGEEISITFTGHSLGA ALAIVSAYDVAELGLNIVNDGESSSTKKIPITVYSFAGPRVG NLKFKERCDELGVKVLVVNVHDKVPTVPGILANEKFQFQKHF

					EEATKFPWSYAHGVVELALDHTNSPFLKNTKDFGCAHNLEALL HLLDGYCGKENQFCLETTKRDIALVNKSCDFLKSEYEVPPIHWR QDENKGMVRNTDGR WVLPERPR LEALPEDTAHHLQVKLNIAN SNNNNNSNSANNSSQLEAI
Hypothetical protein	KDO69165.1	44.9	43.5	3%	MAGICCGVVGESEPAVSVEQSSRASRRRLERPFNLVADVAV LPPSENVKRKK LEYTTLAAHAR ENTEQNCEKDSEGRRTV NKEELVGNNEAADDLVNDNPKGMTSVCGRRLMEDTVSIHPS FCKQNCAHFYGVFDGHGCSHVAMKCKDRLHDILREEIESCNVV EESVKWKQTMQASFGKMDKEVQDWSSKISNCRCELQTPQCD AVGSTAVVAVVTPEKLIVSNCGDSRAVLCRNGVAVPLSNDHKP DRPDPELLRIAAGGRVIYWDGPRVLGVLAMSRAIGDNYLKPYV ISEPEVTVTERTAEDECLILASDGLWDVVSNETACSVVRTCFR AQKAAAAASPPGPSEAVSGQSSDKACLDASILLKLALAR RSSDNVSVVVVDLRIKSQKQGLSS
CISIN_1g015135 mg [<i>C. sinensis</i>]					
Hypothetical protein	KDO70337.1	43.1	33.3	2.5%	MGNAVGCVSAGVKAPKKASSYGFNPFPFFHGRPRNALQSS SSSSRNKKQKRERIQVDEGSAITSEQALPAALPFHSDQTSSI PFSRSTSVVHPSLGSKK QSFQRSSSAR RRSNNNDPLIKRPHQLV NQEPKIESPETSHFVLVHGGGFGAWCWYKTMTLLKESGFKVDA VDLTGSGVSSCDTNITSLEQYVKPLIDTFNELGNEEKVILVG HDFGGACISYVMELFPSKVAKA VFIAATMLTSGQSALDTISQQ
CISIN_1g016141 mg [<i>C. sinensis</i>]					

Putative disease resistance protein RGA3 [<i>C. sinensis</i>]	XP_006492568.1	109.9	38.8	1%	MGSNDLMQQAQIFLYANGKQNPPTSIDLRTLLRDLLNRSAA KDVELALISMPIPAPVLEKLSVSDDNYGSVPRFYIKTLQDC AIPSVQEAMINSNPPELVFEIKGSDHAPFFSKPRALHRILVE ISKITHR MVDAIVSPLLEKLISFSVKEVTQQVKLVKGVDQEVEKLTIHLQ MIHAVLNDAEQRQVKEKSVRWLGLRLKDVSYDIEDVLDEWITA RRKLQMKQNGHFPQKQVCSCSPASSIGFEKIILRPDIAVKIKE INEKLDIAITQKYIFKFVENGNSNTRERPGRAQSTSLEDDEEI CGRVDEKNELLSKLLCESSDSPKGLHIISIIGMGGMGKTTLAQ LACNHEEVKRKFDKILWVCVSETFEEFRVAKAIVEALDGHESR LGEFQSLIKHIYESVAGMCFLVLDDVWDGNYMKWEPFFHCL KNGLHRSKILVTRKKVASMMGSTNIISIKELTEEECRLLFN KIAFSDRPIEEREKLEQIGRKIANCKGLPLAAKIIGSLMRSK ETEEEWRRILNSGLWKVEEIEKDILSSLLSYNDLPSKVKKCF SYCAIFPKDYNIEKDRLITLWMAQGYLDTEQDEEMESKGEYF GILASRSFFQEFTKSYDNCIMQCKMHDMDVHDFGQFISQNECLS MEISGLNAINSFDEKVRHLLLIVNGNGASFPVSTCGVKMRSLI IDYSRYFHLYLNGKILERLFRESTSLRVLEFGDWARSLQLGP LTRIPRNIELVHLRYLNLSNQSIRKLPDTLCELYNLQKLDIS CCCKLKELPQGIGKLINMRHLLNYGTISLRYMPVGIGRLTSLR TLDEFYVSGGGGIDGRKACRLESRSLELLQVCGIRRLGNVTD VGEAKRLELDKMKNLSCLLFNKEEGDGQRRKNEDDQLLEF LQPPPNLRKLLIGSYRGKTVFPPWMSLTNLRSLDLDDCENCE KLPPLGKLPSEKLSISFMCSVKRDNEILGIESDHHDSSCS SSSVTIAFPKLKSLTISWMLELEDWDYGIKTGNAFISIMPR
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					LSSLTFDSCPKLKALPDHFHQTTLQEENIGWNCGLLEKRYRK GEGEDWHK ISHIPNLEIGP
Hypothetical protein	KDO65488.1	22.7	42.6	6%	MFRTRSIFSLPDELLSEILARVGACSLDDLLNAGLSCKLFNEI TFDKYVLRQASIEKIPAMPWHKNYSFLEKCRDSGNPEALYKQG VVEFFSYSNLEAGVAYLDIATKSGHLGASYILGVIFLCKDDED DDNESNQKGMQHLDKVYRAKRLSQCR NKLQSITQTLWK NYYLK PKLNKCPSRKNHGLKVGWPCEVDDIEL
CISIN_1g038912 mg, partial [C. sinensis]					
Hypothetical protein	KDO69816.1	11.3	28.2	8%	MR KLEHGEELK ATFPKIVFNPSFEEDEEKCMDITTVQRSTMSRLSPEETSDLTGSERKA EPVRQNPTLPPPASVRLTQPPPPPPP PPSVNHPSQATLPIR
CISIN_1g037051 2mg, partial [C. sinensis]					
Glyceraldehyde-3-phosphate-dehydrogenase GAPC1,	XP_006484037.1	37.2	46.9	4.5%	MAGDKKIKIGINGFGRIGRLVARVVLQRDDVELVAVNDPFIST DYMTYMFKYDSVHGQWKHNLKVKEKTLFGEKPVAVFGFRN PEEIPWAKTGAEYVVESTGVFTDKDKAAHLKGGAKKVISAP SKDAPMFVVGVNEKEYKPELDIVSNASCTTNCLAPLAKVIHDK

cytosolic [C. <i>sinensis</i>]					FGIVEGLMTTVHSITATQKTVDGPSMKDWRGGR AASFN IIPSSTGAAKAVGKVLPALNGKL TGMSFRVPTVDVSVVDLTVR LEKEATYEEIKNAIKEESEGKLKGILGYTEEDVVSTDFVGDSR SSIFDAKAGIALSKNFVKLVSWYDNEWGYSSRVIDLIVHMAKT QA
Uncharacterized protein	XP_015389051.1	16.3	34.1	7%	MANVESDSTPSVPKKENITPVG SKIAELNESRAELLNRIQGLK QDLQNWRSKLDTQVKIYRDELTDMKK TLSVEVEQLR SEFQELR STLQQQQDDVTASLRNLGLQDFSGDDKERKDDPNINGKDEEVH AIATPVEDNAKADDK
LOC102621728 isoform X4 [C. <i>sinensis</i>]					
Hypothetical protein	KDO60176.1	79.7	26.1	1%	MSHPQQLRRALNQPLEPDHHESSFLSSHAKASQTSATASSTT SRCSSFASKSASYSSNQHQYSSFHQNLFCSTCIRLNVFSTSS KRWSAWFKLHC PGSFMASQQTRLSFNMPDIARRKKISRQQKK EELQR EVSMQLQK MLEQEETLHEILERIHNGQDGSAISIPNFLP PKVKELLAELALVEGEIKRLEGQISQLQLGLKHEQEVTKETKS KQWQLGSLGNLQGHSTYMANISSPLINKVGNEKVA FETKALHF ISKA IKGDYNLSDFSVNEKMGNSKVVFDQKENQFQQQQEVK FQDRVPRKSGMICKPASPLRDPRHPTPKPRERNAAEISFDLPPK SLSNSILLEESIQNWQPKNLSESIMKCLNFIVVRLRTSRAIE LEKAGPIRSRMHSSITSRSFRADTSLSKSSIVLQKDSRQQDP YGIFDMEESIPRDIGPYKNLVIFSSSSMDPKCISSSSVPLIR KLRILMNNLQTVDLKALTYQQKLA FWINMFNACIMHGFLQYGV

Penta tricopeptide repeat- containing protein At5g04780, mitochondrial- like [C. sinensis]	XP_006467747.1	105.9	48.4	1%	PNSPEKLIALMNKATLSIGGSTINAQQAIEHYILRGQESSNLKE VDQKAGEKDEKEAIVRKLYGLESTDPNVTFALCYGTRSSPAVR IYTADGVIAELEKSKEYLQASVVNTNTRKIAFPPELLFRNMLD FAMDIDTLVEWVCHQLPTSGSLRKSMVDCFRHQGHNNNGKISIT VEKIPYDFEFQYLLAI
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					SWIEVKDKVYTFTVGDRSHARSKEIYAKLDEVS DLLNKAGYVP MVETDLHDVEESEKEQLLYHHSEKLAFA GLIATPPGATIRVK KNLRICVDCHTSF EFISKIVSREII VRDVNRFHHFRNGSCCG GYW
Probable inactive receptor kinase At2g26730 [C. sinensis]	XP_015384636.1	68.5	55.1	2%	MRGSKLFLFLEG LICIAILPRLFTGCVGGELSESESFFKFISA VDSQNVLRIGWNGNLPHPCSYNLKGIKCNLHATSIVGIRLENM NLSGIIDAESLCKLRHLRVVSLAKNLIQGRIPNSISNC RRLTY LNLSNNLLSGAVPLALTKLKHLKTLDISNNHFACTSPDNFKQE IKYFDKYVVETSSSEINRASTVEARGLEDTQPPSVHMSEHGE KRHWFRNWMTIPLAAGIGLVVLIAYCMGKSAQIARDREILK ALQDSPSKSPPRVM DIEEV RPEVRRSELVFFFVNENEKF KLDL LEATADLRSQTICSSLFMVRLKNSAVYAVKRLKKLQVSMDEFS QTMRQIGNLKH PNPILPLVCYNSTNEEKLLVYKYQSNGSLLSLL EAYIEGKRD FPWKRLSIATGIAKGLDFIYQKSNEEK TIPHGN LKLSNILLNENEDPLISECGYSKFLDPKKTCLFSSNGYTAPEK TVSEQGDVFSFGVILLELLTGKTVEKTGIDLPKWVKAMVREEW TGEVFDKEVAKAGRQWA FPLLNVALKCVSNSPDDRPTMAEVLE RIEEVVNGN D E RDHSNSSFSSMESIPHDSCLLHTVIQENWD TPRSSY

Proline-rich protein 4-like [C. sinensis]	XP_006487410.1	55.8	598	1.5%	MRILPGSRGALVCFLVPLLFAVSLCHAKDKAVEVVGTGECADC AQSNFKTSQAFSGLRVTIDCKSKNGEFKTRGTGELDEEGQFKV SLPPEIVEDGKLKDECYAQVHSSSATPCPAYDGLESSKIVLKT KINGKHTFGLAKKLKFSPVTCASAFFWPHFKYPPPLPKWSHPKF KLPHLKSFGHHPPFPFPKSFPKFKPLPPIPKFKKPLPPIP IPPVPFYKPKPIPKVIPPIPIYKPKPIPVLPPPPIP KPPIPKLLPPIPIYKPKPIPVLPPPPIP IPIYKPKPIPVLPPPPIP PKLPLPPIP YKPKPIPVLPPPPIP YKPKPIPVLPPPPIP YKPKPIPVLPPPPIP KIPPKYNDHPKFGKWRPLPPLFPLFPSHP
Uncharacterized protein LOC102616407 [C. sinensis]	XP_006483435.1	28.3	26.5	3%	MMVAMVKDEWVRAAMMDDSVVVELVRLKKQTNHVVKSEAEAV AVPLRWGIRQRRSRSSRCDAVSMRKDAADSANNSMRASPTTP LSWSGGGSGGAASPSATADEETSRHQTSAVRSKGTATNETTGN STKRSRKKKTFAQLKEEEGFLLK ERIHLNKELETLRATYKIQS AKNENLKRIKLDLGLDSGKNSSESHVDNLGLASSTFPSQSAIID LPRLEYCETHEVVPAHSSLCLLPDLNMTPAEDDSASETLYGMS

Beta-hexosaminidase 2-like [C. sinensis]	XP_006492777.1	66.5	79.7	3.5%	MARAIIFISQLCLLSQSDPINVWPKPRIFSWPKPEATSL AAEFKIQAPMQTQLSSAVDRYLKLKSEHHHLVRPSINISS PPLQTLSISVDNISVPLTHGVNESYSVTITSDENTAYLVASTV WGAMRGLETFSQLVGWNPSCVAVGIVWDEPLFSHRGLLLDT RNYYEVDILRTISAMSANKLNVFHWHITDSHSPLLLSDPN LAAKGSGYGEDLYLTPSDVKKIIYGLDYGVRVVPEIDTPGHSG SWAGAHPEIVSCANKFWWPAGTKWEDRLASEPGTGQLNPLHPK TFGVMINVLENVASIFPENFFHSGGDEILPACWK SDSLIQSFL STGGTLSEVLEK FINFVFPFIVALDKTAIYWEDVILDNEIKVD PSYLYPEYTIFQSWKNGTESTKKIVQAGYRVIVSSSDYYYLDC GHGGFLGNDSLQDQPPEIQKAAGGGSWCSPFKTWQTVNYDIT EGLTEEEKELVLGGEVALWSEQADGTVLDARLWPRTSAMAEALWSGNRDETGKK RYAEATDRLNEWRHRMVNRGIGAEPIQPLWCL QNPGMCNTVHAYNSGDDEENVTLSTGSADFKGFADSS
Hypothetical protein CISIN_1g0011 [C. sinensis]	KDO77096.1	64.2	57.9	1.5%	DLWSGSEGGGIKIWPWEAIEKALSALKPEERHTAALIVERSYID LRSHLSVNGFSSILTS DIKNLLSDHSRAKVWSAGFLSFALWDA RTRELLKVFNI DGQIENRVDMSSLPDFAMEDEFKTKIVTSSKK DKAQSSFGFFQRSRNAIMGAADAVRRVAAKGGFGDDNNRTEAL TTSIDGMIWTGGANGLLLQWDPNGNRLQDFQYLPFAVQCLCTF GSQIWVGYMNGIVQVLDEGNLLGGWVAHSSPVKMAVGAGYI FTLANHGGIRGWNVTSPGPLDSILCKELAGKEFLYTRMENLKI LAGTWNVGQGRASQDALISWLGSAA SDVGIVVVLQEVEMGAG FLAMSAAKETVGLEGSAVGHWLDMIGKILDDGSTFERVGSRQ

Protein	XP_006465090.1	132.7	33.1	1%	LAGLLIAVWVRKNLKDYGVDVAAVPCGFRAIGNKGAVGLR VRVYDRIMCFVNCHFAAHLEAVNRRNADFDHVYRTMTFCRPSN LCSAAAAGASSVVQMLRSTNPLSLTVEGVPELSEADMVIFLG DFNYRLDGITYDEARDFISQRCFDWLREQDQLRAEMEAGNVFQ GMREADIKFPPTYKFEK HLAGLAGTL
chromatin remodeling isoform X1 [C. sinensis]					MAEKKS KPRSLND SHYR LLQDLAS PTNRS ALSS FSE YEE KPSV AKH LASS KLN DNAS V KRL QFS DTTR FD STL DDKP VKV EA EVR TNDCS VL SRD HDH VES RS VIDE EKPQ KVIE GRR RLCK VSS RD VDNTEN RAVV DDEPN FSD ITDF DSPL QSKT VSTM VNIES RAVI DDGPKF SDITV FD SPP KAKT VSEND NYK GGNE IRD ILND LSAR LEILS IDK RRV PKTV DP EDD FS RL V KNG DTG QGS KGNL PEY AS AE SSF SLT SD LS DSSG VTKDN VGG VES VADEYE ESK GDD VA DEEQ ETEN VGIG LKR NE PRW VD NN LV SARE SFES NLD GEED GG SLGE VEG DEHLS RV HET KK HHQR QKK NEPK RVHD GER FNG QSF VSGG REEY DD EDC VIV SGKLV VNR PDR RDG KLN KSA HSG LVN VLDD YSD DS VLE DEG SIT LSG PR STYML PGK IGNML FPH QREG LRWL WSL HCQG KGG ILG DDM GLG KTM QICG FLA GLF HSRL IKR ALVV APT LLS HWI KEL TAV GLSA KIREY FGTC V KTR QYEL QY VLQDKGV LTT YDI VRNN SKSL RGSS FIS DE AGDD DAI WD YM LDEGH LIK NP STQRA KSL LEIP SAHRII ISGT PIQNN LKEL WA LFNFCCPELL GD NKWF KE KYEL PI RG ND KHAL DRE KRIG SAV

AKELRERIQPYFLRRLKNEVFHEDDVTSATLSKKNEMIVWLR
LTSCQRQLYEAFLNSEIVLSAFDGSPAALTILKKICDHPLLL
TKRAAEDVLDGMDSMLNPEDAALAEKLAMHIADVAEKDDFQEQQ
HDNISCKISFILSLLDKLIPEGHNVLIFSQTRKMLNLIQESIG
SKGYKFRLRIDGTTKASDRVKIVNDFQEGDVAPIFLLTSQVGGL
GLTLTKADRIVVDPAWNPSTDNQSVDRAYRIGQKKDVVVYRL
MTCGTVEEKIYRKQIFKGGLFKTATEHKEQIRYFSQQDLRELL
SLPKQGFDSLTQQQLHEEHGDQHNMDSELAHIQFLDTLGIA
GVSHHSLLFSKTARVQVVQEEEATRRKGTAFVGNSSSSYLVA
RNVDGAEYAFNPRDIKLNKKSSSPKNEAKLKESDIKERIKRLS
QLISNKVTVERLPDKGTKLQKQIAELNSELNKIKMEKRPEPGV
IDLDDVTGKLQRGLFLTQQF

*Empty boxes = there are no registered NCBI Reference Sequences in the platform.

**Peptides in red = identified by MS.

Reference

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