

Figure S1. Alignment of the cloned *EgrNAC61pro* sequence against the *E. grandis* v.2.0 clone BRASUZ1 sequence (Myburg *et al.* 2014).

EgrNAC61pro cloned	CATGTGTGCG	TTTGAGAGAG	AGAGAGAGAG	AGAG	----	-----	---TAGGGGAC	42
EgrNAC61pro reference	CATGTGTGCG	TTTGAGAGAG	AGAGAGAGAG	AGAG	AGAGAG	AGAGAGAGAG	AGTAGGGGAC	60
EgrNAC61pro cloned	AGTGTGGTAG	TTTTCGGGGT	GCTTTTCATA	TAGATTTTAA	GGTCGAGGGT	CATAGTTTTT		102
EgrNAC61pro reference	AGTGTGGTAG	TTTTCGGGGT	GCTTTTCATA	TAGATTTTAA	GGTCGAGGGT	CATAGTTTTT		120
EgrNAC61pro cloned	CGATGGAGCC	CTGCCCTCCT	CTTTCGGCTA	TGGTTATTTG	TTGCTTCTTG	TAACGCATTT		162
EgrNAC61pro reference	CGATGGAGCC	CTGCCCTCCT	CTTTCGGCTA	TGGTTATTTG	TTGCTTCTTG	TAACGCATTT		180
EgrNAC61pro cloned	TTTGGGTAAT	CCAGAAAGAT	CGTGGGACCC	CATCTTCCCC	GGCCTCTCTG	TTCAGGATTA		222
EgrNAC61pro reference	TTTGGGTAAT	CCAGAAAGAT	CGTGGGACCC	CATCTTCCCC	GGCCTCTCTG	TTCAGGATTA		240
EgrNAC61pro cloned	CCATCATATA	ATCACGTTTG	CTACTGAGGA	GGAAGCTGGG	ATACACCAGA	TAACCACGAG		282
EgrNAC61pro reference	CCATCATATA	ATCACGTTTG	CTACTGAGGA	GGAAGCTGGG	ATACACCAGA	TAACCACGAG		300
EgrNAC61pro cloned	CAAGTTGATC	CAGCGGGTTG	ATGAATTCGC	TTTTCTTTTG	GAAAAGTTGT	GGGGGCTTCA		342
EgrNAC61pro reference	CAAGTTGATC	CAGCGGGTTG	ATGAATTCGC	TTTTCTTTTG	GAAAAGTTGT	GGGGGCTTCA		360
EgrNAC61pro cloned	GGTCGCTAAA	TACAGCAGTA	CCATATAAAC	AGGTCCTCTC	GATACGACCT	TTTGTTCCAAC		402
EgrNAC61pro reference	GGTCGCTAAA	TACAGCAGTA	CCATATAAAC	AGGTCCTCTC	GATACGACCT	TTTGTTCCAAC		420
EgrNAC61pro cloned	AGCGGATGGA	AAATGCGGAG	GAGCTGGAGA	TCGACAGTGT	ACGGATACTA	TAGCAGATTTC		462
EgrNAC61pro reference	AGCGGATGGA	AAATGCGGAG	GAGCTGGAGA	TCGACAGTGT	ACGGATACTA	TAGCAGATTTC		480
EgrNAC61pro cloned	GTCCTGCCTT	TTGATTGCGA	TACCCACTCG	CTTACCTAGC	ACACAAAAAA	AAAAAAAAAA		522
EgrNAC61pro reference	GTCCTGCCTT	TTGATTGCGA	TACCCACTCG	CTTACCTAGC	ACACAAAAAA	AAAAAAAAAA		540
EgrNAC61pro cloned	AAAAAAATTA	GTTTTAAAT	TTTTTGGTGT	TGATCAATAA	CGGAAAAGAT	TGGATTTTGT		582
EgrNAC61pro reference	AAA--TTA	GTTTTAAAT	TTTTTGGTGT	TGATCAATAA	CGGAAAAGAT	TGGATTTTGT		596
EgrNAC61pro cloned	GCGGCAATAA	TATTTAGGTA	GTGAATATGT	TCGCTTATCG	GTTTTCCATT	TTAATCATTT		642
EgrNAC61pro reference	GCGGCAATAA	TATTTAGGTA	GTGAATATGT	TCGCTTATCA	GTTTTCCATT	TTAATCATTT		656
EgrNAC61pro cloned	TACGTAATAA	ATTGGTTGGC	GATATAACTT	TTATTTTGAT	AGCGATAAAT	CTCAATTAGG		702
EgrNAC61pro reference	TACGTAATAA	ATTGGCTGGC	GATATAACTT	TTATTTTGAT	AGCGATAAAT	CTCAATTAGG		716
EgrNAC61pro cloned	TATATTTGAG	TTTCAATTCT	TTGAAGAGTT	GAATATTTT	CATTACGGAA	GGGTAAAGGT		762
EgrNAC61pro reference	TATATTTGAG	TTTCAATTCT	TTGAAGAGTT	GAATATTTT	CATTACGGAA	GGGTAAAGGT		776
EgrNAC61pro cloned	AAATTCCTTA	TTTTTGTAAAC	TTACAAAAGG	TCATATCATA	AGGTCATATT	TGAGCTTTTT		822
EgrNAC61pro reference	AAATTCCTTA	TTTTTGTAAAC	TTACAAAAGG	TCATATCATA	AGGTCATATT	TGAGCTTTTT		836
EgrNAC61pro cloned	TAAAAAGAAA	AAAATAAGTG	GCCAACTTGT	CAATACCAAT	CAACAGGAAC	TATAACTTAG		882
EgrNAC61pro reference	TAAAAAGAAA	AAAATAAGTG	GCCAACTTGT	CAATACCAAT	CAACAGGAAC	TATAACTTAG		896
EgrNAC61pro cloned	TCAACATATT	CTAATTAGAT	GCTTCATGGC	TTACTCAATA	TAACAATGCT	GAACTTATTA		942
EgrNAC61pro reference	TCAACATATT	CTAATTAGAT	GCTTCATGGC	TTACTCAATA	TAACAATGCT	GAACTTATTA		956
EgrNAC61pro cloned	AGACTAGTTT	ACAAAATTGA	TTTATAAAAT	TGTCAGACAG	CAAATGGCCT	TTTAAACAAC		1002
EgrNAC61pro reference	AGACTAGTTT	ACAAAATTGA	TTTATAAAAT	TGTCAGACAG	CAAATGGCCT	TTTAAACAAC		1016
EgrNAC61pro cloned	TTTACCAAAA	AAAAAA--	-----	-----	-----	A		1029
EgrNAC61pro reference	TTTACCAAAA	AAAAAATGGC	CTTTTAAACA	ACTTTACCAA	AAAAAAAAAA			1076
EgrNAC61pro cloned	AACAAATGAT	CTATAAGCAA	TGACCCTTAA	GTAAACGTGT	AAAGAACTAA	AACTATACAT		1089
EgrNAC61pro reference	AACAAATGAT	CTATAAGCAA	TGACCCTTAA	GTAAACGTGT	AAAGAACTAA	AACTATACAT		1136
EgrNAC61pro cloned	TTTATGTATT	ACTAAATGGT	GTTGAAAATA	GAAAGAATCG	CATCTTACCA	AACATGAC		1149
EgrNAC61pro reference	TTTATGTATT	ACTAAATGGT	GTTGAAAATA	GAAAGAATCG	CATCTTACCA	AACATGACCA		1196
EgrNAC61pro cloned	TTGATTTTCT	ATTTTGAAT	GTTTTCCTGA	GCAAAATGAG	GAGCAAACCA	AACATTTGAC		1209
EgrNAC61pro reference	TTGATTTTCT	ATTTTGAAT	GTTTTCCTGA	GCAAAATGAG	GAGCAAACCA	AACATTTGAC		1256
EgrNAC61pro cloned	ACTATAAGTG	TTATTTTGAC	TTAACCTTGA	GTCAAAACTA	ATTAATGTTA	ACAAATGGAT		1269
EgrNAC61pro reference	ACTATAAGTG	TTATTTTGAC	TTAACCTTGA	GTCAAAACTA	ATTAATGTTA	ACAAATGGAT		1316
EgrNAC61pro cloned	TTGATCTTGT	TAGAATGCTA	ATGACTAAAT	ATTTAGATTTC	GCAACATTTA	ATTAAGTCAT		1329
EgrNAC61pro reference	TTGATCTTGT	TAGAATGCTA	ATGACTAAAT	ATTTAGATTTC	GCAACATTTA	ATTAAGTCAT		1376
EgrNAC61pro cloned	CAAAAGAGGC	TCCTCACTCG	ATCAATTTAG	TCATGATAGC	TATGCAAAAG	ATAAGTCTTC		1389
EgrNAC61pro reference	CAAAAGAGGC	TCCTCACTCG	ATCAATTTAG	TCATGATAGC	TATGCAAAAG	ATAAGTCTTC		1436
EgrNAC61pro cloned	TTATGCAAAT	TATTATTAGG	GGCATTCCCT	TTAATAGACT	TAACCATTCG	AACTTAAAAA		1449
EgrNAC61pro reference	TTATGCAAAT	TATTATTAGG	GGCATTCCCT	TTAATAGACT	TAACCATTCG	AACTTAAAAA		1496

EgrNAC61pro cloned	GACAAGGATC	GCGTCCAACA	ATACCAAAAG	CTAATACATA	CGATTCTACT	GATTTTCTTT	1509
EgrNAC61pro reference	GACAAGGATC	GCGTCCAACA	ATACCAAAAG	CTAATACATA	CGATTCTACT	GATTTTCTTT	1556
EgrNAC61pro cloned	AAATGTGATT	GACCTAATCT	AACTTGCAAA	AATCTCCTCC	CCCACCCCCC	CTCCCCACCC	1569
EgrNAC61pro reference	AAATGTGATT	GACCTAATCT	AACTTGCAAA	AATCTCCTCC	CCCACCCCCC	CTCCCCACCC	1616
EgrNAC61pro cloned	TCTCTCTCGC	TAGGTGGTTG	GCTATTGCGG	GAGCTCAGAC	CCCACCTTAA	GTACACAGTA	1629
EgrNAC61pro reference	TCTCTCTCGC	TAGGTGGTTG	GCTATTGCGG	GAGCTCAGAC	CCCACCTTAA	GTACACAGTA	1676
EgrNAC61pro cloned	GTGAACAATC	ATATTCTAAC	TTTTTCATGCA	ACTTTGGACC	TACATGTGTC	CTACCACCAT	1689
EgrNAC61pro reference	GTGAACAATC	ATATTCTAAC	TTTTTCATGCA	ACTTTGGACC	TACATGTGTC	CTACCACCAT	1736
EgrNAC61pro cloned	TATAAATTAT	CATGGCTGCA	TTACCCTTTA	CGCACAGCCC	CCCGCCTCCT	CTCTCTCTCT	1749
EgrNAC61pro reference	TATAAATTAT	CATGGCTGCA	TTACCCTTTA	CGCACAGCCC	CCCGCCTCCT	CTCTCTCTCT	1796
EgrNAC61pro cloned	CTCTCTCTCT	CTCTCTCTCT	CTCTCTCTCGG	CGGTTTCATCT	CTCTTCCATC	TCAAAGGACG	1809
EgrNAC61pro reference	CTCTCTCTCT	CTCTCTCTCT	CTC - - - CGG	CGGTTTCATCT	CTCTTCCATC	TCAAAGGACG	1852
EgrNAC61pro cloned	AGTTTTTTCGG	TTTTTATCTT	CCTTCAGGTC	TTTTCTATG	GAGTTCCTCA	TATAGATCAA	1869
EgrNAC61pro reference	AGTTTTTTCGG	TTTTTATCTT	CCTTCAGGTC	TTTTCTATG	GAGTTCCTCA	TATAGATCAA	1912
EgrNAC61pro cloned	AAATCTCCAC	ACACACACAC	ACACAACGCT	TTCCACTCGA	CACGCTGAGC	ATACAGCTCG	1929
EgrNAC61pro reference	AAATCTCCAC	ACACACACAC	ACACAACGCT	TTCCACTCGA	CACGCTGAGC	ATACAGCTCG	1972
EgrNAC61pro cloned	TTAATTCGGT	CCTCTGTTGT	AAGAGAAA				1957
EgrNAC61pro reference	TTAATTCGGT	CCTCTGTTGT	AAGAGAAA				2000

Figure S2. Alignment of the cloned *PagWND1Apro* sequence against the *P. grandidentata* allele (*PgWND1Apro* reference) (<http://popgenie.org>)

PgWND1pro reference	AAATTTAATT	ATAACATGTA	CTTGTAAATGA	CAATTTATTC	AAAATATCGA	TATAACCATC	60
PagWND1Apro cloned	AAATTTAATT	ATAACATGTA	CTTGTAAATGA	CAATTTATTC	AAAATATCGA	TATAACCATC	60
PgWND1pro reference	AAACAATTGC	TGCTAAATTT	TCATTTTGTGTA	TTAATGTCAC	TAGATAACAG	TAAATTAATT	120
PagWND1Apro cloned	AAACAATTGC	TGCTAAATTT	TCATTTTGTGTA	TTAATGTCAC	TAGATAACAG	TAAATTAATT	120
PgWND1pro reference	TATACCAATA	TAAATTGTAA	ACTATCAATA	TCACCTGGAA	TAAATTAATA	ATATATACAA	180
PagWND1Apro cloned	TATACCAATA	TAAATTGTAA	ACTATCAATA	TCACCTGGAA	TAAATTAATA	ATATATACAA	180
PgWND1pro reference	TTAATAATGA	AACATCCACC	ATAAAATATA	AATTATTTGA	ATGAATCTCA	AACTCAACTA	240
PagWND1Apro cloned	TTAATAATGA	AACATCCACC	ATAAAATATA	AATTATTTGA	ATGAATCTCA	AACTCAACTA	240
PgWND1pro reference	TTTGATATTA	TTTGGGCCTA	TTTGTTTTTT	TTTGTTTTTT	ATTTTAAAAG	GGTTTTTAAA	290
PagWND1Apro cloned	TTTGATATTA	TTTGGGCCTA	TTTGTTTTTT	TTTGTTTTTT	ATTTTAAAAG	GGTTTTTAAA	300
PgWND1pro reference	AAAATTAATA	AAAAAATTC	TTACTTTTAA	TTAATATTTT	TTTTAATGTT	TTTCATATAAT	350
PagWND1Apro cloned	AAAATTAATA	AAAAAATTC	TTACTTTTAA	TTAATATTTT	TTTTAATGTT	TTTCATATAAT	360
PgWND1pro reference	TTTAATGTGC	TAATATTAAA	AATAATTTTT	AAATATAAAA	AATATTATTA	TTATGAATTT	410
PagWND1Apro cloned	TTTAATGTGC	TAATATTAAA	AATAATTTTT	AAATATAAAA	AATATTATTA	TTATGAATTT	420
PgWND1pro reference	CTAACAAAA	AATAATTTTA	AAAACAACCTA	CTATATCATA	TTTCCAAATA	CCTTCTTACA	470
PagWND1Apro cloned	CTAACAAAA	AATAATTTTA	AAAACAACCTA	CTATATCATA	TTTCCAAATA	CCTTCTTACA	480
PgWND1pro reference	GCAAAGCAGC	AATTAATAGC	CAATGGATCA	ATAAAGATCC	TAGAGCTGAA	CTCATTTTTA	530
PagWND1Apro cloned	GCAAAGCAGC	AATTAATAGC	CAATGGATCA	ATAAAGATCC	TAGAGCTGAA	CTCATTTTTA	540
PgWND1pro reference	AAATACCCAG	AGATATATAT	TGCAAGGGGG	TAAAAATATT	AAAATCACAA	GTACAATATG	590
PagWND1Apro cloned	AAATACCCAG	AGATATATAT	TGCAAGGGGG	TAAAAATATT	AAAATCACAA	GTACAATATG	600
PgWND1pro reference	GTATAAAAAA	CAATATAAAA	TAAAAACAA	AGGTGAAAAT	ATATCATCAA	TTCAAACCTCA	650
PagWND1Apro cloned	GTATAAAAAA	CAATATAAAA	TAAAAACAA	AGGTGAAAAT	ATATCATCAA	TTCAAACCTCA	660
PgWND1pro reference	ATCATCAACT	TTGATCATAC	TATACAGGCT	TCAAAGATGC	TATACTGCAT	GAAACCGGAT	710
PagWND1Apro cloned	ATCATCAACT	TTGATCATAC	TATACAGGCT	TCAAAGATGC	TATACTGCAT	GAAACCGGAT	720
PgWND1pro reference	AGACAGTTTC	TATCTTCCAA	TCGATAAAAA	GGGGGAAAAG	AAGAAAAAAT	GGGAAAGCTT	770
PagWND1Apro cloned	AGACAGTTTC	TATCTTCCAA	TCGATAAAAA	GGGGGAAAAG	AAGAAAAAAT	GGGAAAGCTT	780
PgWND1pro reference	TATTGTCTCT	CTCTCTCACC	AATTCTTTCT	CAGTGGTTGC	GATCTTGACT	CAAGAGGAAA	830
PagWND1Apro cloned	TATTGTCTCT	CTCTCTCACC	AATTCTTTCT	CAGTGGTTGC	GATCTTGACT	CAAGAGGAAA	840
PgWND1pro reference	ATTGTATCTT	CTTTTATCAA	CGAAAGATTG	AGCAGTTGCC	ATGTACAATC	ATGGAAAGGG	890
PagWND1Apro cloned	ATTGTATCTT	CTTTTATCAA	CGAAAGATTG	AGCAGTTGCC	ATGTACAATC	ATGGAAAGGG	900
PgWND1pro reference	AAGATATAAT	AAGTTCAAGA	AAGGAAAAATG	CAGATCTACA	AGAGAGTCCT	CTCTCACCAT	950
PagWND1Apro cloned	AAGATATAAT	AAGTTCAAGA	AAGGAAAAATG	CAGATCTACA	AGAGAGTCCT	CTCTCACCAT	960
PgWND1pro reference	TTTGTGGGTA	CATGACCATA	TTCTGTAGGA	CTGCTCTCCT	TGGACTCTAG	TAGCCATTCT	1010
PagWND1Apro cloned	TTTGTGGGTA	CATGACCATA	TTCTGTAGGA	CTGCTCTCCT	TGGACTCTAG	TAGCCATTCT	1020
PgWND1pro reference	TATTAAGGTT	TTCCAAGGCA	CGTGTTTGTA	AATTATAATA	TATATACGGA	GACTGGTCTT	1070
PagWND1Apro cloned	TATTAAGGTT	TTCCAAGGCA	CGTGTTTGTA	AATTATAATA	TATATACGGA	GACTGGTCTT	1080
PgWND1pro reference	GATATATGTA	GTACCATGCA	TTTGCACCTAG	TAAAAATGTT	TTCTTAAGGG	CACCTTTTGT	1130
PagWND1Apro cloned	GATATATGTA	GTACCATGCA	TTTGCACCTAG	TAAAAATGTT	TTCTTAAGGG	CACCTTTTGT	1140
PgWND1pro reference	TTGTATTAAT	TTTGGATAAT	CTGTAGTCTC	CCGTTGGAGC	AAAATATTGA	TCACTCTCAT	1190
PagWND1Apro cloned	TTGTATTAAT	TTTGGATAAT	CTGTAGTCTC	CCGTTGGAGC	AAAATATTGA	TCACTCTCAT	1200
PgWND1pro reference	GTTATTCTAA	TGCTAGCTAG	TACCATGATG	TGCACAGTTG	GTGTCTACAA	TGATAAAATG	1250
PagWND1Apro cloned	GTTATTCTAA	TGCTAGCTAG	TACCATGATG	TGCACAGTTG	GTGTCTACAA	TGATAAAATG	1260
PgWND1pro reference	TGAATAAAGA	AGTGAAAGGT	AGGGAGAAAT	ATAGAAATTA	CTCAGTCTCC	ACAAAGCCCA	1310
PagWND1Apro cloned	TGAATAAAGA	AGTGAAAGGT	AGGGAGAAAT	ATAGAAATTA	CTCAGTCTCC	ACAAAGCCCA	1320
PgWND1pro reference	TCATGTCTTT	CTCCCTCTAG	GGACCATGAA	AGGTCAGTGC	CTCCCGACCC	CATCATCTCT	1370
PagWND1Apro cloned	TCATGTCTTT	CTCCCTCTAG	GGACCATGAA	AGGTCAGTGC	CTCCCGACCC	CATCATCTCT	1380
PgWND1pro reference	CTCTCTTGCC	CTCTTGTCTG	TGAGGTGGTT	GCACAAGTAA	AACGAGTGAT	GTTTAGAGAG	1430
PagWND1Apro cloned	CTCTCTTGCC	CTCTTGTCTG	TGAGGTGGTT	GCACAAGTAA	AACGAGTGAT	GTTTAGAGAG	1440
PgWND1pro reference	AAGAGGAGGT	AGAGGGAGAA	AAGGAGAGAG	ATTGAGATTT	TTTTCTTAGC	ATAGTGGTGG	1490
PagWND1Apro cloned	AAGAGGAGGT	AGAGGGAGAA	AAGGAGAGAG	ATTGAGATTT	TTTTCTTAGC	ATAGTGGTGG	1500

			1,520		1,540		1,560	
PgWND1pro reference	TTTCAGTGGT	GTTTTTCAAA	TGGATATTCA	GGTCATGGGT	CGTAGTTGAG	ATGGAGGCGT	1550	
PagWND1Apro cloned	TTTCAGTGGT	GTTTTTCAAA	TGGATATTCA	GGTCATGGGT	CGTAGTTGAG	ATGGAGGCGT	1560	
			1,580		1,600		1,620	
PgWND1pro reference	GCCCCCTGCA	CATACAAATA	CAAATAGTTA	CCTCTAACGC	TTCTTCTTCT	TTTTTTTCTT	1610	
PagWND1Apro cloned	GCCCCCTGCA	CATACAAATA	CAAATAGTTA	CCTCTAACGC	TTCTTCTTCT	TTTTTTTCTT	1620	
			1,640		1,660		1,680	
PgWND1pro reference	TTTTTTTTCT	TTTCTTGATG	GACCCGATTG	GCCAATTGTT	AGTACCTATA	TTGTGGGCCT	1670	
PagWND1Apro cloned	TTTTTTTTCT	TTTCTTGATG	GACCCGATTG	GCCAATTGTT	AGTACCTATA	TTGTGGGCCT	1680	
			1,700		1,720		1,740	
PgWND1pro reference	GGAAAAACCC	TACCCCTCTT	TCTATCTTTA	GTGACTAGTC	TCTACTTCTA	GGTGGTTGGC	1730	
PagWND1Apro cloned	GGAAAAACCC	TACCCCTCTT	TCTATCTTTA	GTGACTAGTC	TCTACTTCTA	GGTGGTTGGC	1740	
			1,760		1,780		1,800	
PgWND1pro reference	TCTTCTCCAA	GGCTTAGACC	CCACAGTAAG	TACACTAATG	GAATTGATTG	CAAAACTTTT	1790	
PagWND1Apro cloned	TCTTCTCCAA	GGCTTAGACC	CCACAGTAAG	TACACTAATG	GAATTGATTG	CAAAACTTTT	1800	
			1,820		1,840		1,860	
PgWND1pro reference	CATGCATTTT	TGGACCCCTC	CCCCACATGC	CCTACAAACC	ATTATAAATT	ATCAGGACTG	1850	
PagWND1Apro cloned	CATGCATTTT	TGGACCCCTC	CCCCACATGC	CCTACAAACC	ATTATAAATT	ATCAGGACTG	1860	
			1,880		1,900		1,920	
PgWND1pro reference	CATTACCCTT	TACGCACCCT	CTCTCCTTGT	TAATGTTGTC	TCTCATTTTT	GCTTCTCTTT	1910	
PagWND1Apro cloned	CATTACCCTT	TACGCACCCT	CTCTCCTTGT	TAATGTTGTC	TCTCATTTTT	GCTTCTCTTT	1920	
			1,940		1,960		1,980	
PgWND1pro reference	CATATTGATC	TCTAGCTATT	CTCTTTTTCT	CTCTATCATC	AGCTTTTACC	TGTACGTTGA	1970	
PagWND1Apro cloned	CATATTGATC	TCTAGCTATT	CTCTTTTTCT	CTCTATCATC	AGCTTTTACC	TGTACGTTGA	1980	
			2,000		2,020		2,040	
PgWND1pro reference	TCATCTATCT	ATATATACAC	ATATATTAC	TCACTAGCCA	GCTTTATACA	ATAATTTGTC	2030	
PagWND1Apro cloned	TCATCTATCT	ATATATACAC	ATATATTAC	TCACTAGCCA	GCTTTATACA	ATAATTTGTC	2040	
PgWND1pro reference	CTAGCAAAA	2039						
PagWND1Apro cloned	CTAGCAAAA	2049						