

Suppl. Figure 2. Top : List of maize α -Expansins genes and putative genes studied with corresponding names, GB# of assembled ESTs and genomic DNA. Bottom : Alignment of translated sequences. ZmEXPA1 to ZmEXPA5 have been published and named by Wu et al 2001a.

Deposited Name	Gene name	Genebank accession#				TIGR TC Contig member #	in silico specificity ?	full or partial genomic (d)
		representative ESTs or ETG	cDNA (a)	TIGR Contig / MAGI Contig	TIGR Genomic DNA (c)			
	ZmEXPA1		AF332169	TC300662	AZM5_10694	22	no	full
	ZmEXPA2		AF332170	TC292884	AZM5_9655	16	no	full
	ZmEXPA3		AF332171	TC305812	AZM5_84479	12	no	partial
	ZmEXPA4		AF332172	TC292883	AZM5_9171	22	no	full
	ZmEXPA5		AF332173	TC312134	AZM5_21648	21	no	full
ZmEXPA6		DR824570		TC310902	lacking	54	pollen/anther	
ZmEXPA7		DV524240		TC310903	lacking	49	pollen/anther	
ZmEXPA8		CF009349		TC287543	AZM5_84998	46	pollen/anther	full
ZmEXPA9		BT016845		TC292888	AZM5_22176	28	no	full
ZmEXPA10		DR967444		TC298364	AZM5_93913	27	no	partial
ZmEXPA11		AY106266		TC292885	AZM5_9172	13	no	full
ZmEXPA12		DT644592		TC298359	AZM5_26440	10	no	partial
ZmEXPA13		DY532520		TC291600 / MEC85804 (b)	AZM5_61641	4	no	full
		(a) published by Wu et al 2001 Plant Physiol						
		(b) One TIGR contig with few members was completed by a MAGI contig						
		(c) Blast search October 2006						
		(d) <i>partial</i> means that sequence extends beyond BAC end						

1 10 20 30 40 50 60 70 80 90 100 110 120

AF332169_ZnEXPA1 MAAASALLLLLCSAFCSLAHRAGV-----DYGSMSAHATFYGGSDASGTMG-----GACGYGNM

AF332173_ZnEXPA5 MALAGALLLLGL----LAREAAA-----GGMSAHATFYGGSDASGTMG-----GACGYGNL

AF332171_ZnEXPA3 MKAATGSSSYSRALALLLAA--CLLWKEACF-----SASGLNKAFATFYGGSDASGTMG-----GACGYGNL

AF332172_ZnEXPA4 MAAMPAPLLPLLLLVAARMTLSPAARIPGVYVGGGGGMSAHATFYGGSDASGTMGTYVHPMIHTHTYTYIQKRRLADETKGNLALQGACACGYGNL

TC292885_ZnEXPA11 MAAMPALLL---LVATATAMFSPAARIPGVY--GGGMSAHATFYGGSDASGTMG-----GACGYGNL

AF332170_ZnEXPA2 MAHRQAVLAAYVLAALFPLALSRGLGLVGHVVRPHTHGLGLGHHHSQPYPHGAPLAGGAWSSAHATFYGGSDASGTMG-----GACGYGNL

TC292888_ZnEXPA9 TRRYHAG-----GACGYGNL

TC298364_ZnEXPA10 MAPRLLLFLLLL--LPLLAGHQHPSSYGSSALSEWRPAKASY---YAADPEDAI-----GGACFGDL

TC298359_ZnEXPA12 MAPLLLFLLLLPLLTALADGHQHLSSYGSSALSDWRPAKASY---YAADPEDAI-----GGACFGDL

MEC85804_ZnEXPA13 STERRGEGGVSSLPSPVLLVYVYVLSAASFGGVGLDGGYEEHRLGTAPYVKEFQSHPLNDG-----GGACGYGDL

TC310902_ZnEXPA6 MAGSMHAAPRPLLLSLLVAVLAVAADVANAGHAKPLTPGGRRVYVHMHGKF-----TAGPMKPAHATFYGGSDG--SGTT-----AGACGYKDT

TC310903_ZnEXPA7 MAGSMHAAPRPLLLSLLVAVLAVAADVANAGHAKPLTPGGRRVYVHMHGKF-----TAGPMKPAHATFYGGSDG--SGTT-----AGACGYKDT

TC287543_ZnEXPA8 MSGRSATIMAPLLASMLLVGLAVGSEEEEDGGGK-----KKPHVNHGKF-----KAEPHTDGHATYGGSDGLTDTTD-----GGACGYKGE

Consensusl..l.....w..ahAt%ygg.da....g. .GACG%gnl

121 130 140 150 160 170 180 190 200 210 220 230 240

AF332169_ZnEXPA1 YSTGYGTNTAALSTALFNDGAAACGSCYELRCDD--NG-QSCLPGT--ITYTATNFCPPNYGLPSDD--GGCNPPrPHFDMAQPAFLQIAQYRAGIVPVYRVRVPCVKKGGIRFTINGHSY

AF332173_ZnEXPA5 YSTGYGTNTAALSTALFNDGAAACGSCYELRCDD--DG-RMCLPGT--ITYTATNFCPPNYGLPSDD--GGCNPPrPHFDMAEPAFLRIAQYRAGIVPVAFRRVPCVKKGGIRFTINGHSY

AF332171_ZnEXPA3 YSTGYGDTAALSTALFNDGASCGCYRISCDYQADP-RFCIRGT--SVTITATNLCPPNYALPND--GGCNPPrQHFDMAEPAWLKIGIYRGGIVPVYNYQRVPCVKKGGVRFVSINGRDY

AF332172_ZnEXPA4 YSQGYGNNAALSTALFDEGLRCGACFEIRCEEQPGW-RMCRPGRPSILYATNFCPPNYALPSDD--GGCNPPrPHFDLAMPFLHIAEYRAGIVPVSYRRVPCRKSGGVRFITINGFRY

TC292885_ZnEXPA11 YSQGYGNNAALSTALFNQGLSCGACFEIKCEDQPGW-RMCRPGSPSILYATNFCPPNYALPSDD--GGCNPPrPHFDLAMPFLHIAEYRAGIVPVYTYRRVPCRKSGGVRFITINGFRY

AF332170_ZnEXPA2 YSQGYGTNTAALSTALFNGLSCGACFEYRCDAAGGGSHSCLPGS--VVYATNFCPPNNAALPSDD--GGCNPPrAHFDMSQPVFQRIALYRAGIVPVSYRRVACNKKGGIRFTINGHSY

TC292888_ZnEXPA9 YSQGYGTNTAALSTALFNGLSCGACFEYRCDAAGGGGRSCLPGS--VVYATNFCPPNNAALPSDD--GGCNPPrAHFDMSQPVFQRIALYRAGIVPVSYRRVACNKKGGIRFTINGHSY

TC298364_ZnEXPA10 GKHYGMATVGLSTALFERGAACGGCYEYKCVEDL---KYCLPGTSIVV-TATNFCPPNYGLPAD--AGGHCNPPrNHFLLPISQFEKIALWKAGIMPIQYRRVKCLREGGVRFVSNGRHF

TC298359_ZnEXPA12 GKHYGMATVGLSTALFERGAACGGCYEYKCVEDL---KYCLPGTSIVV-TATNFCPPNYGLPAD--AGGHCNPPrNHFLLPISQFEKIALWKAGIMPIQYRRVKCLREGGVRFVSNGRHF

MEC85804_ZnEXPA13 HIFGYGRYTAGLSAALFGRGGAACGGCYELRCVNHIT---QCLRGSPYVETATDFCPANMGLADDDAGGHCNPREHLELSEAFRLVAKAKAGIVPVQFRRVSCDRAGGMRFITGSAH

TC310902_ZnEXPA6 RTQGYGVQTVAVSTVLFGDGTACGGCYEYRCVDSV---SGCKPDAALVVTVDLCPKDKQ-----HCKPPREHFDLSMPAFLQIAQEKAGIVPISYRRVACAKGGIRYITIGNKY

TC310903_ZnEXPA7 RAQGYGVQTVAVSTVLFGDGTACGGCYEYRCVDSV---SGCKPSAALVVTVDLCPNDQ--QSADSGGHCNPPrEHFDLSMPAFLQIAQEKAGIVPISYRRVACTKGGIRYITIGNKY

TC287543_ZnEXPA8 LGKDYGLTAAVGPSLYTNGTGGACCYELK---GP---KG-----TVVVTATNEAPPPVS-----GQKGEHFDLTIPAFKIAEEKAGIVPITYRKYACERKGGIRYITIGNQH

Consensus ys.yG..taalstaL%.G..CG.C%E.rc.....clpg...vvvTAT#fcpn..lp.dd.ggwnppr.Hfd\$.paFl.!A.yrAGIVP!.%RrV.C.k.GGIR%!ng..y

241 250 260 270 280 290 300 310 320 325

AF332169_ZnEXPA1 FNLVLYTNVAGAGDVQSVSIKGSSTG-WQPHSRNMGQNMQSNLLDQQLSFQVTSADGRTYTSNGVAPAGWQFGQTFEGAQF

AF332173_ZnEXPA5 FNLVLYTNVAGAGDVRSVYIRGSRGT-WQPHSRNMGQNMQSNLYLDRQALSFQVTSADGRTYTSNGVAPAGWQFGQTFEGGQF

AF332171_ZnEXPA3 FELVLYSNVGGCGSISASIKGSRGT-WHAMS RNMGVNMQSNAYLNGQSLSFQVTSADGRTKTFPDVAPASWQFGQTFATSQQFS

AF332172_ZnEXPA4 FNLVLYTNVAGAGDVVRASVKAASGT-WLPHSRNMGQNMQSNAILYQQLSFRVYTSADRTSTSNNAAPSTWQFGQTFEGKNFRV

TC292885_ZnEXPA11 FNLVLYTNVAGAGDVVRASVKAASGTGEWPHSRNMGQNMQSNAILYQQLSFRVYTSADRTSTSNNAAPRDRWQFGQTFEGKNF

AF332170_ZnEXPA2 FLVLYTNVAGAGDVHAYVYKASRGT-WLPHSRNMGQNMQSNLLDQQLSFRVYTSADGRTYTSNGVAPAGWQFGQTFEGAQF

TC292888_ZnEXPA9 FNLVLYTNVAGAGDVHAYVYKASRGTWQALSRNMGQNMQSNLLDQQLSFRVYTSADGRTYTSNGVAPAGWQFGQTFEGAQF

TC298364_ZnEXPA10 FFTVLYSNVGGAGDVRSVYKIKGTELG-WLPHGRNMGVYHINCDMRGQLSFELESDDSKLTSFNVPKDFEYKTYTGKQFL

TC298359_ZnEXPA12 FFTVLYSNVGGAGDVRSVYKIKGTELG-WLPHGRNMGVYHINCDMRGQLSFELESDDGKALTSFNVPKDFEYKTYTGKQFL

MEC85804_ZnEXPA13 FLVLYTNVAGAGDVHAYVYKASRGT-WLPHSRNMGQNMQSNLLDQQLSFEVYTGGRRTYTSNGVAPAGWQFGQTFEGAQF

TC310902_ZnEXPA6 FNMVYITNVGGAGDIARVSVKGSKRVKHTMHRNMGVYQGTGEDLTCESLFRVYTSADHRKATSMHVLPADWQFGVYTYQASKNF

TC310903_ZnEXPA7 FNMVYITNVGGAGDIARVSVKGSKRVKHTMHRNMGVYQGTGEDLTCESLFRVYTSADHRKATSMHVLPADWQFGVYTYQASKNF

TC287543_ZnEXPA8 YSEVKVYTNVGGAGDVVALWVKNKRVKHTMHRNMGVYQGTGEDLTCESLFRVYTSADHRKATSMHVLPADWQFGVYTYQASKNF

Consensus %nlyl!tNVggaG#!.av.!Kgs..g.W.p\$SRnMGQNMqsn..\$.LsFrvt.sdgrt.ts..vaP.dW.FgqT%.g.qf..