

Supplementary Table S1: The list of tobacco genes retrieved from assembly of the *Nicotiana tabacum* genome, and primer sequences used for expression analysis, Race PCR reactions and cloning. The names of genes were designated according to NCBI terminology. Their sequences are given in Supplementary Figure S1.

Gene name	Accession no. of scaffold	Gene ID in GenBank	Primer FOR		Primer REV		
			Name	Sequence	Name	Sequence	
EXPRESSION ANALYSIS							Primers efficiency
PP2A	-	AJ007496	PP2A_for	GCACATTCATTTCAGTTTGAACC	PP2A_rev	GTAGCATATAAAGCAGTCAGC	1.940
NtMTP2-X1	AWOK01S500825	XM_016593653	Nt0825_for	AGA CGG CGA GAG GAT TTT CC	Nt0825_rev	ACG ACA ACA ATG CCA CTC CA	1.756
NtMTP2-X1*	AWOK01S048943	XM_016603324	Nt8943_for	TCGGAGATTTCGCATTTTCA	Nt8943_rev	GCC TCG AAA AAC CGA TGA CG	1.997
NtMTPC2-like-X1	AWOK01S314055	XR_001649367	Nt4055_for	AGAATGCTGAAGTCTTATGTTGGGACT	Nt4055_rev	CAC GAG ATG AAA CCT GTC T	1.968
NtMTP2-X2	AWOK01S036376	XM_016593654	Nt6376_for	GAT GTT ATT GTT GAG GTT GAC CC	Nt6376_rev	TCT TGG GGG CCA CAC ATT G	1.933
NtMTP4-like-X2	AWOK01S262320	XM_016623041	Nt2320_for	CGA CGT TGG ATT CAT TAC TTG ATC	Nt2320_rev	CAC AGC CTG CAC TAA GAC TTG	1.971
NtMTP4-like	AWOK01S035670	XM_016626487	Nt5670_for	ATG AAC TTT TCT GGT TGT ATG CTA	Nt5670_rev	TCG ATC CAC CAG TAG AAC TTA T	1.902
NtNramp2-like	AWOK01S295926	XM_016621575	Nt5926_for	TTC CAC TAT GGC ATT ATC TTT CGC C	Nt5926_rev	TGC ACC AAA GCA GAG TAT AGG A	1.855
NtNramp3-like	AWOK01S026429	XM_009618066	Nt6429_for	AGT TCA TAT CAT CGG AGT CG	Nt6429_rev	TGA ACA AGT AGC CCA ATA GCC G	1.880
NtNramp6-like	AWOK01S066652	XM_016619903	Nt6652_for	GGG GTG GTT ACA GGA AGC AT	Nt6652_rev	ACC ACA CCA TAT TGG TAT TCT GA	1.964
NtZIP1-like	AWOK01S302253	XM_016652513	Nt2253_for	TGC TGC TGG TGT CAT TCT AG	Nt2253_rev	GCT GGC ATG ACT ATG ACT GTG	1.949
NtZIP1-like*	AWOK01S276597	XM_016577112	Nt6597_for	GC ACT TCT AAG GAT GAT ACC T	Nt6597_rev	CTC CAC AAG CAA TTC CCA T	1.902
NtZIP4	AWOK01S102052	XM_016586154	Nt2052_for	TCT GTT TCC AAT ATT ACC TGC	Nt2052_rev	TTC TTG CCA ACT AAC GGG	1.882
NtZIP5-like	AWOK01S346858	XM_016648479	Nt6858_for	AGG TTA CAA TGA GCA AAG CTG	Nt6858_rev	AAC AAG TGA TAC ATT GGC AAG	1.702
NtZIP11-like	AWOK01S219909	XM_016644574	Nt9909_for	CTG ACA CAG ATT CCG ACT CA	Nt9909_rev	CAC AAT CAG CCA ACA TAG TAA GC	1.930
NtZIP11-like*	AWOK01S001304	XM_016650095	Nt1304_for	CAA TGG GAT TGT CAC ACA AG	Nt1304_rev	GCT TGG CGA TAG CAT CC	1.834
NtMRP2-like	AWOK01S069080	XM_009799201	Nt6861_for	CAG AAG GTC CCG CCA TAA TTG	Nt6861_rev	CTG CCA ACT ACT CCG ACT TTG	1.790
NtMRP3-like	AWOK01S246455	XR_001973770	Nt6455_for	GCT GGC TTA GCT GTT ACA TAT GG	Nt6455_rev	GGA GGT TCA CTT GGA AGA GC	1.782
NtMRP5-like	AWOK01S453903	XM_016603310	Nt3903_for	GAG TTG CAG GAA GAT GCC AC	Nt3903_rev	CTA CCC TTA GTT GTA TGC CTG C	1.859
NtMRP10-like	AWOK01S246861	XM_016648918	Nt9080_for	AGG TGG AAC ATA ATT GGC TAT GG	Nt9080_rev	GGC CAA TGC AGA TAA GAT TCG	1.550
NtMRP14-like	AWOK01S250584	XM_016641186	Nt0584_for	GTG GAG CCA CTG CTT ATG TTG	Nt0584_rev	GCT GAG GTT GAT TCC TCG TTC	1.727
NtMRP15-like	AWOK01S055307	XM_016590897	Nt5307_for	CAT CGG CAT GTC CCA CAG	Nt5307_rev	CAA ATG ATG CCC GCA CTA GC	1.639
NtZIP1-like	AWOK01S302253	XM_016652513	RACE PCR Reaction				
			Nt2253race5	<u>GATTACGCCAAGCTT</u> AGG CAT GAA CCC TTG GGG GAA ATT CC	Nt2253race3	<u>GATTACGCCAAGCTT</u> GAC CTT GGC TAT GTG AAA GTG CCT G	
			AMPLIFICATION of full NtZIP1-like sequence for yeast experiment				
			Nt2253For35	<u>TCTAGA</u> ATGAATAACCACAATGTC	Nt2253rev35	<u>GGATCC</u> AGC CCA TTT AGC CAT CAC	
			Nt2253For36	<u>TCTAGA</u> AAT AAC CAC AAT GTC CAA	Nt2253rev36	<u>GGATCC</u> TCA AGC CCA TTT AGC CAT CAC	
			AMPLIFICATION of full NtZIP1-like sequence for pENTR/D-TOPO cloning				
			2253pEntSTART	<u>CACC</u> ATG AAT AAC CAC AAT GTC CAA GT	2253pEntSTOP	TCA AGC CCA TTT AGC CAT CAC AGA C	