

Supplemental Text S1. Protein sequence alignment used to build phylogenetic tree in

Figure1.

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AtJAZ1      1  -----  -----  -----  ----MSS-SM ECSEFVGSRR  -----
AtJAZ10     1  -----  -----  ----MSKATI ELDFLGLLEKK Q--TNNAPKP K-----
AtJAZ11     1  -----  -----  -----  ----MAEVNG D--FPVP---  -----
AtJAZ12     1  -----  -----  -----  ----MTKVKD EPRASVEGGC  -----
AtJAZ2      1  -----  -----  -----  ----MSSFSA ECWDFSG---  -----
AtJAZ3      1  -----  -----  -----M ERDFLGLGSK NSPITVKEET SESSR
AtJAZ4      1  -----  -----  -----M ERDFLGLGSK LSPITVKEET NE---
AtJAZ5      1  -----  -----  -----  --MSSSNEN AKAQAPEK--  -----
AtJAZ6      1  -----  -----  -----  --MSTG---  ---QAPEK--  -----
AtJAZ7      1  -----  -----  -----  ----MIIIIK NCDKPLLN--  -----
AtJAZ8      1  -----  -----  -----  -----  -----  -----
AtJAZ9      1  -----  -----  -----M ERDFLGLSDK QYLSNNVKHE VN---
NaJAZa      1  -----  -----  -----  --MASSEIV DSGKFSAG--  -----
NaJAZb      1  -----  -----  ----MDSSII EIDFMDLNSR P-QSEMAKQQ TK---
NaJAZc      1  -----  -----  -----  ---MGLNSK D--SVVLVKE EP---
NaJAZd      1  -----  -----  -----  --MGLSEIV DSGKVTGQ--  -----
NaJAZe      1  -----  -----  -----  ---MGLTHH VKQEVIEEHI DP---
NaJAZf      1  -----  -----  -----  -----  -----  -----
NaJAZg      1  -----  -----  -----M ERDFMGLA-- VKQEIPPEEQP TD---
NaJAZh      1  -----  -----  -----  ---MSNSQNS FDGGRRAG--  -----
NaJAZj      1  -----  -----  -----  -----  -----  -----
NaJAZk      1  -----  -----MP PEESVSKSLL DKPLQQLTED DISQLTREDK RRYLK
NaJAZl      1  -----  -----  -----  --MYCSSKVA NNFLKIEKFN  -----
NaJAZm      1  -----  -----  -----  -----  -----  -----
NtJAZ1      1  -----  -----  -----  --MGSSEIV DSGKVSGQ--  -----
NtJAZ2      1  -----  -----  -----M ERDFMGLNSK D--SVVVVKE EP---
NtJAZ3      1  -----  -----  -----  --MASSEIV DSGRFAAAAA  -----
OsJAZ1      1  -----  -----  -----  ---MAAAG--  -----
OsJAZ10     1  -----  -----  -----  -----  -----  -----
OsJAZ11     1  -----  -----  ----MSTRAPV ELDFLGLRAA A--ADADDRH AK---
OsJAZ12     1  -----  -----  -----  -----  -----  -----
OsJAZ2      1  -----  -----  -----MA GSSEQQLVAN AAATTVAG--  -----
OsJAZ3      1  -----  -----  -----  --MASTDP--  -----
OsJAZ4      1  -----  -----  -----  ---MAMEG--  -----
OsJAZ5      1  -----  -----  -----  ----M ASAKSGER--  -----
OsJAZ6      1  -----  -----  -----  -----  -----  -----
OsJAZ7      1  -----  -----  -----  ----MAGRAT ATATAAGK--  -----
OsJAZ8      1  -----  -----  -----MER DFLGAIGKDE EQRRHAEERK ESDYF
OsJAZ9      1  -----  -----  -----MQW QFP-ATKVGA ASSAFMSFRS  -----
SlJAZ1      1  -----  -----  -----  --MASSEIV DSGRFAGQ--  -----
SlJAZ10     1  -----  -----  -----  -----  -----  -----
SlJAZ11     1  -----  -----  -----  -----  -----  -----
SlJAZ12     1  MSSGTDNVIG NTHPYEILKN E'TTNIVTLSF ICDEIVEIFN VSRDKAEEIL KFADM
SlJAZ2      1  -----  -----  -----  --MGSENM DSGKVTGQ--  -----
SlJAZ3      1  -----  -----  -----  --MSN---L CDARRRNGNG  -----
SlJAZ4      1  -----  -----  -----  --MSN---  ---RQLCS  -----
SlJAZ5      1  -----  -----  -----M ERDFMGLT-- VKQEVLEEPI DP---
SlJAZ6      1  -----  -----  -----M ERDFMGLNIK D--SLLVVKD EP---
SlJAZ7      1  -----  -----  ----MDS-RM EIDFMDLNSK PKLSEMEKQH KK---
SlJAZ8      1  -----  -----  -----M HWSYS-----  ---NKAHP  -----
SlJAZ9      1  -----  -----  -----  -----  -----  -----

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AtJAZ1	16	-FTGK	VSGMKWPFSS	LADLATHHEH	TFFQNYKSTP	IVS	-----	-----
AtJAZ10	26	-----	-----QYH	LSLKDQ-ENI	IINNNNNNKP	KIG	-----	-----
AtJAZ11	12	-SFAD	---MRRNCNL	ELT-I-MPPS-	-----ISD	NFSS	-----	-----
AtJAZ12	17	-GVAD	-----FDSL	ASTGIVTITT	-TEAVDSSHR	TYSDVTQN--	-----	-----
AtJAZ2	14	----R	-----LSAT	DGVDAGLKRQ	PGELQ	-----	-----	-----
AtJAZ3	27	DSAPN	KPSFSQTCNR	LSQYIK-ENG	SFGDLS-LGM	ACKP-DVNGT	LGN	-----
AtJAZ4	24	DSAPS	-----FQKFL	DRRSFRDIQ	G-AISKIDPE	IIK	-----	-----
AtJAZ5	16	----G	GTG-SVSAGL	DLLVERSIHE	ARSTEPDAST	-----QLTI	IFG	-----
AtJAZ6	10	----G	GDGAAEIGG	TGSVEKSINE	VRSTEQTAE	PTVPPNQLTI	FFG	-----
AtJAZ7	15	---FK	KPSFSQTCNR	LSRYIK-EKG	SFGDLS-LGM	TCKP-DVN--	-GG	-----
AtJAZ8	1	----R	RG-MNWSFSN	KVSASSSQFL	SFRPTQEDRH	RKSGNYHLPH	SGSFMPSV-	-----
AtJAZ9	24	--DDA	RGMDWSFSS	KVGSQP-QFL	SFGTSQQETR	VNTVNDHLLS	S	-----
NaJAZa	16	--GGQ	-SDFTRRCNL	LSRYIK-EKG	SFGNID-LGL	YRKPSSLAL	PG	-----
NaJAZb	28	-----	-SNFSQRCNL	LSRYIK-EKG	SFGNIN-MGL	ARKSD--LEL	AG	-----
NaJAZc	17	--VET	EMEMQTKCDL	ELR-I-LTSS-	-----YDS	DFH	-----	-----
NaJAZd	16	----G	-MKLQQNCNL	ELR-I-FPTS-	-----YDS	DSSD	-----	-----
NaJAZe	19	--APL	VEERGLSTKA	AREWGKSKVF	ATSSFMPSD	FQE	-----	-----
NaJAZf	1	----G	KSHFSQTCNL	LSQYIK-KEKKG	SFGDLS-LGI	HR	-----	-----
NaJAZg	22	--PAM	ASGMKWPFSS	MANLATQAES	RFFQNYNSSP	IVS	-----	-----
NaJAZh	16	-KAPE	CKDSGFRWPL	SSKVGIPPHM	SLNSAQDEKP	FKA	-----	-----
NaJAZj	1	----G	KSQFSQTCNL	LSQYIK-KKG	SFGDLNNGI	YR-SFEPTGN	Q	-----
NaJAZk	38	LKGMR	RSSAMQWSFS	NNISTHPQYL	SFKGAQEDRL	KTG	-----	-----
NaJAZl	19	----K	---MRRNCNL	ELR-I-VPPCV	SVS	---PKD	CTTT	-----
NaJAZm	1	----G	ARISAILQRS	FSNKALPOYL	SFKNAQGNTP	KTG	-----	-----
NtJAZ1	16	----G	RSNFVQTCNL	LSQYIK-GKA	TIRDLN-LGI	AGKSEISGKS	D	-----
NtJAZ2	22	--VET	---RKNL	ELR-I-MPPSF	SFS	---PKS	CTT	-----
NtJAZ3	18	--GGQ	RPSWNSQAL	QQVISLKALL	ETTPDSAGT	RKKLYIPRSD	TKLHHVQ	---
OsJAZ1	6	----S	NFDYQKQINE	SNLKGIGNNG	SHRRMSALEL	AILP	-----	-----
OsJAZ10	1	----G	---MKHRIGL	QLFPLSSS-	-----SSS	EFH	-----	-----
OsJAZ11	28	----G	KSQFSQTCNL	SSQYIK-KKG	SFGDLNNGI	YR-SFEPTGN	Q	-----
OsJAZ12	1	----G	CKDSGFRWQL	SSKVGIPPHM	SLSSAQDEKP	TKA	-----	-----
OsJAZ2	21	----N	KSNFSQTCNL	LSQYIK-KEKKG	SFGDLS-LGI	HR	-----	-----
OsJAZ3	7	----M	SSRFAVTCGL	LSQYMRER--	--QQPQ	---	PPVTVL	---
OsJAZ4	6	----R	-----	-----	-MSSPPPNS	-----QLTI	FYG	-----
OsJAZ5	10	----G	---SGGSSA	SSSSSIRGME	TSAIARIGPH	LLR	-----	-----
OsJAZ6	1	----G	---MPPPAAV	ASLTLQVPGG	-----	-----	-----	-----
OsJAZ7	15	----D	GSRFAVTCGL	LRQYVKEH--	--SGSNGGGG	FLPAVTAMS-	-----	-----
OsJAZ8	29	GAGGG	TRRFVAVACGV	LSQYVKAN--	--SSQP	-----STAA	-----	-----
OsJAZ9	23	SAAAA	SRRFAVACGV	LSQYVRAE--	--QKMAAAAG	AAPARAVTT-	-----	-----
SlJAZ1	16	----G	SSSFAMACNL	LSRYVRQN--	-GAAAGELGL	GIRGEADAN-	-----	-----
SlJAZ10	1	----G	---MACSL	LSRYVRQN--	-GAAAAELGL	GIRGEGEAPR	AAPA	-----
SlJAZ11	1	----G	RSSFVAVTCNL	LSQYIK-KEKKG	GGGGLQGLGL	GLRPAPAAPP	AAGAGGAFRP	---
SlJAZ12	56	SKVVN	AAAAAMDWSF	ASRAALMSFR	SSSAAAAAA	REETREAFP	HFSALDGAKM	---
SlJAZ2	16	----G	REEDPKEAAV	FDRFSLSGFR	PPRPSPGDA	FDGAAAMKQR	QFG-FNGRQQ	---
SlJAZ3	15	-KAPE	KSHFSHTCNL	LSQYIK-KEKKG	SLGDLS-LDM	HRNFDS	-----	-----
SlJAZ4	9	-LDSE	---MRRKCNL	ELT-I-SP	-----SN	-----	-----	-----
SlJAZ5	22	--APL	---MRRNCNL	EFR-I-MPPSL	STFSPNICSN	NNTS	-----	-----
SlJAZ6	22	--VES	DCSSKKPLGL	ETQSOGKKE	KLSTARRNSQ	LRFLEKRKER	ICDVLENG	---
SlJAZ7	28	----G	KSQFSQTCNL	LSQYIK-KKG	SVGDLNNGI	YKTTTFESTGS	QQT	-----
SlJAZ8	12	----G	RSSFVQTCNL	LSQYIK-GKA	TIRDLN-LGI	AGQPEAAGK-	-----	-----
SlJAZ9	1	----G	KSHLMNTCNL	LTQFFN-GKA	NINDLN-LTI	SNNGEAKAS-	-----	-----

AtJAZ1	52	-----	----ATTTT	TTMNLPMIE	KSSDSSSSSS	S-----	----
AtJAZ10	51	-----	-----TET	ATMDLLTVME	KPSIDLTK--	-----	----
AtJAZ11	38	-----	-----	ATKDLLTNME	ELSTKTTE--	-----	----
AtJAZ12	52	-----	-----	-----	-----	-----	----
AtJAZ2	34	-----	-----	-----	-----	-----	----
AtJAZ3	72	-----	-----INSK	NSLNNYKST	IDPQYF----	-----	----
AtJAZ4	56	-----	-----FESL	ASAGLVTITT	TTELFDTIHR	PYT-----	----
AtJAZ5	52	-----	-----KN	CTE-DQQ--	LENKQ-----	-----	----
AtJAZ6	53	-----	-----	-----	-LITTVNQLP	GAGALV----	----
AtJAZ7	54	-----	-----MKQVLG	-----	-----	-----	----
AtJAZ8	49	-----	-----SRQPT	TTMSLFPCEA	SNMDSMV---	-----	----
AtJAZ9	67	-----	-----SLL	ASTGMNSDSS	AKRSRV----	-----	----
NaJAZa	58	-----	-----GSC	RVFNGVPAQK	VQEIR----	-----	----
NaJAZb	65	-----	-----GSV	TVFDGLPSEK	VQEILR----	-----	----
NaJAZc	44	-----	-----SRQP-	TMMNLFPCEA	SGMDSSAG--	-----	----
NaJAZd	40	-----	-----ADVY	DSRTRKAPYSS	VQGVRFMPNS	NQHEETN-AV	SMSM
NaJAZe	55	-----	-----AAM	DQNQRTYFSS	LQEDRVFPGS	SQQDQTTITV	SMSE
NaJAZf	32	-----	-----KFDPP	GKQAMHKAG	HSK-----	-----	----
NaJAZg	58	-----	-----KFDLK	GQONVIKKVE	TSETRPFKLI	Q-----	----
NaJAZh	53	-----	-----S	SLDESSSSEI	SQPKQE----	-----	----
NaJAZj	40	-----	-----TT	SVVESTSSGN	PQPNEE----	-----	----
NaJAZk	76	-----	-----AKAF	PGAYQWGSVS	AANVF-----	-----	----
NaJAZl	46	-----	-----AGT	TTMDLFPPIE	KSGES-----	-----	----
NaJAZm	34	-----	-----SNSK	SSPLKSYKLT	TK-----	-----	----
NtJAZ1	55	-----	-----QSAA	DGVDSCLKRQ	SGEIQNVHAM	HLLHDVMMLP	FNRS
NtJAZ2	49	-----	-----TTT	TTMNLPMIE	KSGDS-----	-----	----
NtJAZ3	68	-----	-----FDSL	ASTGLVTITT	-TEAVDSSHR	PYSGVTQNNM	MLEK
OsJAZ1	41	-----	-----PY	FSMR--DNQG	TEEKQ-----	-----	----
OsJAZ10	23	-----	-----FDSL	ASAGLVTITT	SHEAVDSNYR	PYTAVTQKNL	MLEK
OsJAZ11	67	-----	-----VTEA	ATMDLLTIME	NPSIETKE--	-----	----
OsJAZ12	34	-----	-----PY	FSMNREDKEN	TEEKE-----	-----	----
OsJAZ2	53	-----	-----RGK	NIDEEFIELA	EETVPDGR--	-----	----
OsJAZ3	36	-----	-----GI	KHDTQLPVLQ	REKSE-----	-----	----
OsJAZ4	23	-----	-----	SSDHVACSS	TR-----	-----	----
OsJAZ5	40	-----	-----TTT	TTMNLPMIE	KSGDS-----	-----	----
OsJAZ6	18	-----	-----LSSA	DGVDSCLKRQ	SGEIQ-----	-----	----
OsJAZ7	51	-----	-----AGT	TTMDLLPMIE	KFGES-----	-----	----
OsJAZ8	60	-----	-----	---EAVAEIII	EEED-----	-----	----
OsJAZ9	63	-----	-----GSV	CVYDSVPPEK	AQAIML----	-----	----
SlJAZ1	52	-----	-----RVI	AAAGP-----	-----	-----	----
SlJAZ10	37	-----	-----TMS	-----AH	DVTSLATSPR	TMAVPG----	----
SlJAZ11	51	-----	-----PPT	-----L	MTGGADAEIII	APEV-----	----
SlJAZ12	111	QQASHVLARQ	-----	P	VAQVSGLMA	AAAA-----	----
SlJAZ2	65	-----	-----YAAA	-----L	SLMPGAEVVV	EEEE-----	----
SlJAZ3	54	-----	-----	-----KGK	ETMELFPQNS	GFG-----	----
SlJAZ4	28	-----	-----	LLPGEAERKK	ETMELFPQSA	GFGQ-----	----
SlJAZ5	55	-----	-----	TMNLLSGLDA	PAVEVEPNTA	ETAA-----	----
SlJAZ6	73	-----	-----	KSFGAESHGI	POYAAAAAVH	GAHRGQPPHV	LNGARVIPAS
SlJAZ7	70	-----	-----	AQHGHRQGV	DSYGVAAPHH	FSPSPSPRH	P-----
SlJAZ8	49	-----	-----	-----AGS	TTMDLLPMIE	KSGE-----	----
SlJAZ9	38	-----	-----	-----	LLME-DKR--	LENEQ-----	----

AtJAZ1	78	-----	-----	-----	-----	-----	-----
AtJAZ10	72	-----	-----	-----	-----	-----	-----
AtJAZ11	56	-----	-----	-----	-----	-----	-----
AtJAZ12	52	-----	-----	LPLIKAPA--	-----	-----DQQ	SDESASEAA
AtJAZ2	34	-----	-ILIFAELLK	MFRVQSSPNL	PNAVAGAGGGA	FKQPPFAMGN	AVAGSTVGV
AtJAZ3	92	-----	-----	-----	-----	-----	-----
AtJAZ4	83	-----	--TQFGAHHV	-----	-----	-----	-----
AtJAZ5	66	-----	-----	-----	-----	-----	-----
AtJAZ6	68	-----	-----VS	-----	-----	-----	-----
AtJAZ7	60	-----	-----GIPVTA	VTDVIPPTKS	Q-----	-----SNVETFSG	GRFWEKQYP
AtJAZ8	71	-----	-----	-----	-----	-----	-----
AtJAZ9	86	-----	-----	-----	-----	-----	-----
NaJAZa	77	-----	-----	-----	-----	-----	-----
NaJAZb	84	-----	-----	PISAVPSSSI	V-----	-----VGT	TDLRGAP--
NaJAZc	66	-----	-----	PHSMLPSRGS	V-----	-----AGT	TEPWFNS--
NaJAZd	77	PGFQSH	HYAPGGRSFM	-----	-----	-----	-----
NaJAZe	92	P-----	-----NYI	-----	-----	-----	-----
NaJAZf	50	-----	-----	-----	-----	-----	-----
NaJAZg	84	-----	-----	-----	-----	-----	-----
NaJAZh	70	-----	-----	-----	-----	-----	-----
NaJAZj	58	-----	-----	NNNNNSQPLV	-----	-----	-----
NaJAZk	95	-----	-----	NSFINHQHLG	-----	-----	-----
NaJAZl	64	-----	-----	-----	-----	-----	-----
NaJAZm	50	-----	-----	-----	-----	-----	-----
NtJAZ1	93	NPSYKT	HFGGTGQISA	-----	-----	-----	-----
NtJAZ2	67	-----	-----	-----	-----	-----	-----
NtJAZ3	105	QGGTHY	TSTTFSPHHY	-----RRCQFG	-----	-----	-----
OsJAZ1	56	-----	-----	-----	-----	-----	-----
OsJAZ10	61	QGITNY	TMTTYPPHKI	-----	-----	-----	-----
OsJAZ11	89	-----	-----	AATMKQQLLG	-----	-----	-----
OsJAZ12	51	-----	-----	-----	-----	-----	-----
OsJAZ2	74	-----	-----	DAHSVHRSHG	VRVLPVSNLA	NQISVSMTMP	GHKSFVS--
OsJAZ3	53	-----	-----	-----	-----	-----	-----
OsJAZ4	35	-----	-----	GTNSVQQSHE	VRVLPVANQT	HQISVSTRNM	HGRQPLISP
OsJAZ5	58	-----	-----	-----	-----	-----	-----
OsJAZ6	37	-----	-----ISA	-----	-----	-----	-----
OsJAZ7	69	-----	-----	-----	-----	-----	-----
OsJAZ8	71	-----	-----	-----	-----	-----	-----
OsJAZ9	82	-----	-----	-----	-----	-----	-----
SlJAZ1	60	-----	-----	-----	-----	-----	-----
SlJAZ10	58	-----	-----	AATMKQQLLG	-----	-----	-----
SlJAZ11	69	-----	-----	-----	-----	-----	-----
SlJAZ12	136	-----	-----	-----	-----	-----	-----
SlJAZ2	84	-----	-----	-----	-----	-----	-----
SlJAZ3	70	-----	-----	-----	-----	-----	-----
SlJAZ4	52	-----	-----	-----	-----	-----	-----
SlJAZ5	79	-----	-----	-----	-----	-----	-----
SlJAZ6	113	-----	-----	-----	-----	-----	-----
SlJAZ7	101	-----	-----	-----	-----	-----	-----
SlJAZ8	66	-----	-----	-----	-----	-----	-----
SlJAZ9	50	-----	-----	-----	-----	-----	-----

AtJAZ1	78	-	-----	--VPFGHANP	--E	VGEEE--	-----	-----	AGP	AT-
AtJAZ10	72	-	-----	-----LVQK	AAA	VKETP--	-----	-----	DAR	EQE
AtJAZ11	56	-	-----	-----	-----	AITADSAA--	-----	-----	DAR	EQE
AtJAZ12	72	-	-----	-----GEK	AQQLTIFYGG	SVV	FDDFP--	-----	AEKAGELMKL	AGS
AtJAZ2	82	Y	G-TRDMPKAK	AAQLTIFYAG	KVV	IDRCT-	-----	-----	PAMAAELMRF	ASA
AtJAZ3	92	-	-----	---VETNPQK	MLW	VHSLPNV	-----	AGGSP	YRNQSFVSGN	SVA
AtJAZ4	91	-	-----	-----EEHK	SMN	FPQG--	-----	-----	G--	MKA ESE
AtJAZ5	66	-	-----	-----QDQK	-----	-----	-----	-----	-----	---
AtJAZ6	70	-	-----	SEPLTIFYNG	KVV	FENFP--	-----	-----	STKVKDLLQI	VST
AtJAZ7	94	R	LNSCLKNGII	IAPLTICYDG	SVN	FNNVS-	-----	-----	PEKAQELMFL	ASR
AtJAZ8	71	-	-----	-----	PMN	FPQE--	-----	-----	FDFSKEQSTK	KTE
AtJAZ9	86	-	-----	-----	SVD	V----T	T----	ESSRE	KEAAVNEPST	SKE
NaJAZa	77	-	-----	-----	LID	HVP----	-----	-----	-KSAINKASG	SKE
NaJAZb	105	-	-----	-----KTPPG	PAQLTIFYGG	KLV	VSHVT-	-----	DLQAKAIIYL	ASR
NaJAZc	87	-	-----	-----KGSAA	PAQLTIFYGG	TSVSFNIFS-	-----	-----	-DKVANILEF	AEK
NaJAZd	93	-	-----	-----QDVK	-RGT	FPLLAK	T-----	-----	-----STY	DSR
NaJAZe	96	-	-----	-----PSTP	-----	PTRNG	V-----	-----	-----VGT	TEL
NaJAZf	50	-	-----	-----IA	-----	-----	-----	-----	-----	---
NaJAZg	84	-	-----	-----IA	SVC	YDNVS-	-----	-----	PEKAQAIMLL	AGN
NaJAZh	70	-	-----	-----QEDIK	MVN	FEDIS-	-----	-----	PEKAQAIMFL	AGH
NaJAZj	68	-	-----	-----GVPIMAP	PTN	FPRQ--	-----	-----	PSFSSSSSSL	PKE
NaJAZk	105	-	-----	-----GSPIMAP	RED	QOIPIS	P-----	-----	-----VHA	SLA
NaJAZl	64	-	-----	-----GEP	FAG	KQTKN--	-----	-----	-----VTG	IN-
NaJAZm	50	-	-----	-----KFSIGEA	AKA	ETKN--	-----	-----	-----STS	ISP
NtJAZ1	109	-	-----	-----	PKT	FPRQ--	-----	-----	SSFSSSSSSG	TKE
NtJAZ2	67	-	-----	-----	PIS	LPPGS	I-----	-----	-----VGT	TDI
NtJAZ3	127	-	-----	-----GAFQNA	PVS	FPAP--	-----	-----	-----	TTI
OsJAZ1	56	-	-----	-----NPQK	STSS	GGKVK-	-----	-----	-----DVADL	SES
OsJAZ10	77	-	-----	-----	STST	EDKAIY	-----	-----	-----IDLSEP	AKV
OsJAZ11	99	-	-----	-----GIPVTA	-----	-----	-----	-----	-----	---
OsJAZ12	51	-	-----	-----AEKKSQK	-----	-----	-----	-----	-----	---
OsJAZ2	111	-	-----	-----PLGQNPVAS	TPL	LGGSV	L-----	-----	-----PTH	PSL
OsJAZ3	53	-	-----	-----	PMN	FPQ--	-----	-----	-----TEA	KSE
OsJAZ4	74	A	GQNLISIINQ	NPARGAQISS	-----	-----	-----	-----	-----	DSR
OsJAZ5	58	-	-----	-----QEQK	PHS	LPSSGS	V-----	-----	-----AGI	TEP
OsJAZ6	40	-	-----	-----	PMN	FPQE--	-----	-----	V-----	ISTT KSE
OsJAZ7	69	-	-----	-----TLQD	PIS	AVPTNSA	V-----	-----	-----VGT	TDL
OsJAZ8	71	-	-----	-----	-----	-----	-----	-----	-----	---
OsJAZ9	82	-	-----	-----	SIS	LPNRNG	V-----	-----	-----VGT	TEL
SlJAZ1	60	-	-----	-----AEKNSQK	SID	PVRQSAV	T----	ESSRD	MEVAVNEPST	SKE
SlJAZ10	68	-	-----	-----GIPVTA	-----	-----	-----	-----	-----	---
SlJAZ11	69	-	-----	-----NPQK	KAD	SGDATP	N-----	-----	-----LVAAI	DKS
SlJAZ12	136	-	-----	-----AR	-----	-----	-----	-----	-----	---
SlJAZ2	84	-	-----	-----IA	-----	-----	-----	-----	-----	---
SlJAZ3	70	-	-----	-----	PMN	FPQE--	-----	-----	V-----	ISTA KSE
SlJAZ4	52	-	-----	-----	PHS	LPSSGS	V-----	-----	-----AGI	TEP
SlJAZ5	79	-	-----	-----RK	SMN	FPQ--	-----	-----	-----TEA	KSE
SlJAZ6	113	-	-----	-----AA	TMQ	FPFR--	-----	-----	-----AAA	ADG
SlJAZ7	101	-	-----	-----RR	AAAA	AAAS--	-----	-----	-----ATK	SN-
SlJAZ8	66	-	-----	-----SE	-----	PPP	P-----	-----	-----STA	PVP
SlJAZ9	50	-	-----	-----QD	-----	-----	-----	-----	-----	---

ZIM motif

AtJAZ1	97	-----	-----AP	AAPLTIFYGG	NATQA-----	-----	AVSPVLTR
AtJAZ10	90	-----	-----	KRQLTIFYGG	SVAVFD-VS-	-----	HDKAEAIM
AtJAZ11	70	PE-----	-----	RRQLTIFYGG	SMVKFDNVP-	-----	REKIRYAC
AtJAZ12	107	RD-----	-----	-----	-----	-----	-----
AtJAZ2	124	AQ-----	-----	-----	-----	-----	-----
AtJAZ3	127	GSTVGVY	GGPRDLQNP	VTQMTIFYDG	RMVVFEDFP-	-----	ADKAAEVM
AtJAZ4	110	-----	-----PE	KAQMTIFYGG	KVLVDFDFP-	-----	AEKAKDLM
AtJAZ5	70	-----	-----	SQQLTIFYNG	KVLVDFDFP-	-----	ADKAKGLM
AtJAZ6	102	GDGVDKN	-----	-----	-----	-----	-----
AtJAZ7	137	GSLPSAP	TTVARMPEAH	VFPPAKVTVP	-----	-----	-----
AtJAZ8	92	SWKPD--	-----QPE	KAQMTIFYGG	LVNVFDNIP-	-----	VEKAQELM
AtJAZ9	111	AP-----	-----KEPK	AAQLTMFYDG	QVIVDFDFP-	-----	ADKAKEIM
NaJAZa	95	IPH----	-----KEQK	LAQLSIFYGG	KFV-ASHVT-	-----	QLQAKAII
NaJAZb	141	ETEEKTN	KSL-----	-----	-----	-----	-----
NaJAZc	123	LKFRDAV	SSEKQLFVET	LSGAQPLRR	EVSPKPMML	QKP-----	-----QL
NaJAZd	113	KNYD---	-----NLSPN	ESTLTIFYMG	QVIVDFDFP-	-----	ADKANEIM
NaJAZe	112	RGTP---	-----RSPSG	PAQLTMFYAG	KVIVDFDFP-	-----	ADKARAVM
NaJAZf	52	-----	-----	SQQLTIFYHG	KVVVDFDFP-	-----	AEKARAVM
NaJAZg	108	APPVTPN	ATSTLSPVQA	PIPKSSAIDS	-----	-----	-----
NaJAZh	97	GCAPPNV	VQPRFQLQAS	ASKPAAADGV	NSMIGFSEK-	-----	-----
NaJAZj	96	DVLKMTQ	TTRSVPKESQ	TAPLTIFYAG	EVHIFPGIS-	-----	PEKAELII
NaJAZk	129	RSST---	-----ELVSG	TVPMTIFYNG	SVCVYDNIS-	-----	PEKAQAIM
NaJAZl	80	-----	-----PAL	NRALSFSTVA	KFV-VSDAT-	-----	ELQAKAII
NaJAZm	71	VSS----	-----PAL	NRAPSFSTVS	FVNVQCRN-	-----	-----TT
NtJAZ1	130	DVQMIKE	TTKSVKPEAQ	SAPLTIFYGG	CVNQTPNML-	-----	-----PA
NtJAZ2	84	RSSS---	-----KPIGS	PAQLTIFYAG	QVIVDFDFS-	-----	AEKAKEVI
NtJAZ3	144	RSSS---	-----KPL--	PPQLTIFYAG	SVSVFQ-VS-	-----	RNKAGEIM
OsJAZ1	77	QP-----	-----G	SSQLTIFYGG	DLPARRRSL	QRFLEKRRDR	STKPDGSM
OsJAZ10	96	APE-----	-----SG	NSQLTIFYGG	NVASP-----	-----	AAQP----
OsJAZ11	105	-----	-----	SQILTIFYNG	RMVVFDDFS-	-----	AEKAKEVI
OsJAZ12	58	-----	-----	SQRITIFYNG	SVCVYDDIS-	-----	PEKAKAIM
OsJAZ2	137	VPRV---	-----ASSGS	SPQLTIFYGG	SVLVYQDIA-	-----	PEKAQAIM
OsJAZ3	66	-----	-----SE	KAQMTIFYGG	KVLVNEFP-	-----	VDKAKEIM
OsJAZ4	98	KNSD---	-----HLRKP	ESTLTIFYMG	KVMVNEFP-	-----	EDKAKEIM
OsJAZ5	79	WFNS---	-----KGSAA	PAQLTIFYGG	HMCVSSDLT-	-----	HLEANAIL
OsJAZ6	56	-----	-----PE	KAQMTIFYGG	KMCFSSDVT-	-----	HLQARSII
OsJAZ7	90	RGAP---	-----KTPPG	PAQLTIFYGG	TISVNDIS-	-----	PDKAQAIM
OsJAZ8	71	-----	-----	QQQLTIFYNG	QVIVDFDFP-	-----	ADKAKEIM
OsJAZ9	99	RGAP---	-----KTSAG	PAQLTIFYAG	EVHIFQDIT-	-----	PEKAELIM
SlJAZ1	96	AP-----	-----KEPK	AAQLTMFYDG	TVMVFDDIS-	-----	PEKAQAIM
SlJAZ10	74	-----	-----	PQQLTIFYNG	QVIVDFDFP-	-----	AAKANEIM
SlJAZ11	92	APSRTIG	-----SVDTS	AGQMTIFYSG	SVCVYDNVS-	-----	PEKAQAIM
SlJAZ12	138	-----	-----	SEQLTIFYAG	KVV-VSDAT-	-----	ELQAKAII
SlJAZ2	86	-----	-----	-KHITIFYNA	SVSVYDNIS-	-----	PEKAQAIM
SlJAZ3	86	-----	-----PE	KAQMTIFYGG	KVIVDFDFP-	-----	ADKARAVM
SlJAZ4	69	WFNS---	-----KGSAA	PAQLTIFYGG	KLIV-VSDAT-	-----	ELQAKAII
SlJAZ5	94	-----	-----PE	KAQMTIFYGG	KVMVDDVP-	-----	ADKAQTIM
SlJAZ6	129	VATPS--	-----AG	TAPLTIFYDG	IVHVYDNLP-	-----	VEKAQSIM
SlJAZ7	116	-----	-----AAI	AVKPPVMPAA	QAG-ECDIS-	-----	EVQALAIL
SlJAZ8	78	EEMP---	-----GAAAA	AAPMTIFYNG	QVIVDFDFP-	-----	ADKANEIM
SlJAZ9	52	-----	-----T	TEQLTIFYSG	TVMVFDDIS-	-----	PEKAQAIM

AtJAZ1	122	SL	SLQSTSVATG	-----	-----	-----	-----	---
AtJAZ10	116	RM	A TEATK	-----	-----AKG	-----	-----	---
AtJAZ11	99	RL	RRLYSSLQRS	-----	-----	CVNQTPNML	-----	---
AtJAZ12	109	--	-----	-----	-----	-----	-SPISESSSP	IS
AtJAZ2	126	--	-----	-----	-----	-----	-----	---
AtJAZ3	171	RM	ASSG	-----	-----	-----	-----	---
AtJAZ4	139	QM	ASKSSSTAQN	CVLLPSSA	--	-----	-----	---
AtJAZ5	97	QL	ASKGSPVAPQ	NAAAP	--A	-----	-----	---
AtJAZ6	109	--	-----	-----	-----	AN--ISV	---ETPKIVT	SL
AtJAZ7	164	--	-----	-----	-----	-ATQIQKTAE	SASD	---
AtJAZ8	127	LL	ASRASIPSPP	S-AARKSDSP	ISAAAKLTVP	-----	-----	---
AtJAZ9	144	LM	ASTSKGN-NP	AKPLESAA	--	-----	-----	---
NaJAZa	128	YL	ASREMEEKTN	K	-----	-----	-----	---
NaJAZb	151	--	-----	-----	-----	-----	-----	LQ
NaJAZc	165	VS	SPVPAISKPI	SVVSQATSLP	RSASSSNVDS	-----	-----STAA	AA
NaJAZd	149	KL	ANKQNPT	---	---NNF	---	EALPARQIVV	QKP
NaJAZe	148	LL	ASKGCPQSSF	GTFQAINIDK	INTCS--PAP	-----	-----	---
NaJAZf	79	LL	ASKGISNNSC	AIFQTP	---	-----	-----	---
NaJAZg	135	--	-----	-----	-----	AAVTDNTKAP	MAVPAPVSSL	PT
NaJAZh	133	--	-----G	KERVCGGSKN	AKEISLLTIC	-----	-----TG	TA
NaJAZj	140	DL	VSKSTT	---	---LHMDEILEK	-----	-----	---
NaJAZk	165	LL	AGNTP	---IS	TT-----	-IRNSPSLDH	ASLTSNRTDS	VAP
NaJAZl	109	YL	ASRGMEMKTN	K	-----	-----	-----	---
NaJAZm	97	PT	LASPISTITSH	GGAQARVST	TTNGVTI-IK	-----	---LSEPSS	---
NtJAZ1	168	SG	LSSPMSVSSH	PIGQSDGSSG	NKDDMKMSKT	-----	-SPISEPSS	---
NtJAZ2	120	NL	ASKGTANSLA	KNQTDIRS	--	-----	VMNKEKYE	---
NtJAZ3	177	KV	ANEAAS	---	---KKDESS	HH	-----	---
OsJAZ1	118	IL	PSQLTIIFGG	SFSVFDGIPA	EKVQEI	---	-----	---
OsJAZ10	120	-F	P	-----	-----	TQTNG	-----	---
OsJAZ11	132	DL	ANKGSAKSFT	CFTAEVNN	--	-----	SIGVLPS-PS	LKAEPSKVTS
OsJAZ12	85	LL	AGNGSSMPQV	FSPPTHQVQV	VHHTRASVDS	-----	-----	---
OsJAZ2	173	LL	AGNGPHAKPV	SQP--KPQKL	VHHSPLTTDP	METDLSVI	--	---
OsJAZ3	95	EV	AKQAKPVTEI	NIQTPI	---	-----	-----	---
OsJAZ4	134	EV	AKEANHVAVD	SKNS	-----	-----	-----	---
OsJAZ5	115	SL	ASRDVEEKSL	SL	-----	-----	-----	---
OsJAZ6	85	SL	ASREMKTKS	---	-----	SAMPPSFMP	-----	---
OsJAZ7	126	LC	AGNGLKG	---	---	---ETGDSK	PTMPPSFLP	---
OsJAZ8	98	LM	ASCAKGN-NN	S	-----	-----	-----	---
OsJAZ9	135	DL	ASKSTN	---	---LHMTEILEK	-----	-----	---
SlJAZ1	129	FL	AGNGCVPPNV	VQPRFQVQAS	TPKLAAVDGT	-----	-----	---
SlJAZ10	101	KL	ASKKNNNNNK	QNLATNIF	--	-----	-----	---
SlJAZ11	131	LL	AGNAPPVTPS	ATSTLSPVQA	PIPKSSSVDS	PVREAERMY	--	---
SlJAZ12	164	YL	ASRETEENTK	TS	-----	-----	-----	---
SlJAZ2	112	LL	AGNAQPAGIP	STTSTASPVQ	RIPKSSSVDA	-ANKEKYE	--	---
SlJAZ3	115	LL	ASKGCPQSSF	GTFHTTTIDK	INTSATAAAT	CVNQTSNIL	---	---
SlJAZ4	104	YL	ASREMEKKIK	IR	-----	-----	-----	---
SlJAZ5	123	RV	ASSSLCVPSE	TP	-----	FVVNQSHN	--	---
SlJAZ6	163	DF	ARESSLFSGS	TN	-----	-----	-----	---
SlJAZ7	145	WH	A-RQVKYNN	---	---	FVGKCHRT	---	---
SlJAZ8	114	KL	ATKKTNN	--K	QNLASNIF	--	ASLTCNKTNQ	LKPSTVSIAP
SlJAZ9	80	FL	AGNGCVPPNV	VQPRFQVQAS	TPKLAAVDGT	-----	-----	---

AtJAZ1	134	-----	-----	-----	-----	-----	-----	-SPISES
AtJAZ10	127	-----	-----	-----	-----SY	SIGVLTNSPS	NKTEPSK	
AtJAZ11	120	----PASP	HSSPMSVSSH	PIGQSAGNSG	NKDDMKISK	SKTDQLKPVS	TSSASQK	
AtJAZ12	120	EPSSPLLQ	SP----ASDI	SMKRSLQRFL	QKRK---NRI	TSTAPYQICN	KNAASAK	
AtJAZ2	126	-----	----LNATVA	AQHSTCCLQV	ANTKLRPDS	ISASPYDT-S	KQSPECS	
AtJAZ3	177	-----	-----	-----	-----	-----	--VKFPP	
AtJAZ4	159	-----	-----	-----	LARGNAIVGN	-----	-----	
AtJAZ5	115	-----	-----	-----	-----	PMVNNQNSAE	SVTTNFS	
AtJAZ6	123	GPVGATTI	MPA---AVPQ	ARKASLARFL	EKRK---ERV	QATSPYHR--	-----	
AtJAZ7	177	----LVP	QPIISGDLPI	ARRASLTRFL	EKRK---DRL	MVLLPTIQTE	AVENPSS	
AtJAZ8	158	-----	-----	-----	-----	-----	-----	
AtJAZ9	163	-----	-----	-----	-----T	-----	----QPQ	
NaJAZa	141	-----	-----	-----	-----P	-----	-----	
NaJAZb	153	TQDTSMPF	SSSSLHIQTK	RRGYSVIRLL	REMLMVCSS	MNAAPYGL-S	KKSGECS	
NaJAZc	203	VSDAGAAA	GQPCLPDMPI	ARKVSLQRFL	EKRK---NRI	TAKAPYQLSN	TNKQ-AA	
NaJAZd	174	----EASV	PLVSGVSNPI	TIVSQAVTLP	KSFSSSNDSA	-----	-----G	
NaJAZe	178	-----	-----	-----	-----DL	-----	-----	
NaJAZf	97	-----	-----	-----	-----	ATVADNTKVS	-AVPAPA	
NaJAZg	157	AQADAQKP	ARANASDMPI	ARKASLHRFL	EKRK---DRL	RTKPLMVHSD	SIGAQRT	
NaJAZh	158	ATQSLPRP	AHNSLPDLPI	ARRNSLHRFL	EKRK---GRM	VVAEPLPESE	KKEAESS	
NaJAZj	157	-----	-----	-----	-----TY	NVTKSSGPLV	VPPTSLP	
NaJAZk	199	QQHLQIKP	DSCSAAPQQH	KHNSPP----	----LHVCSS	GPKSGGLPLA	VTPLSQA	
NaJAZl	122	-----	-----	-----	-----TT	VVPSFGKTSI	QENQ---	
NaJAZm	134	----PLLQ	P-----Q	TVKKSLQRFL	QKRK---NRI	NAKTPYQASP	SDATPVK	
NtJAZ1	208	----PLLQ	P-----Q	TVKKSLQRFL	QKRK---SRT	NANAPYQANC	TAAP--S	
NtJAZ2	148	-----	-----	----ENKSDP	S--NASTNYA	YSEMVAFYV	TSDKAHD	
NtJAZ3	193	-----	-----HHH	HNNNNNNNNN	STNETTI-IR	PMIKNQKTAD	QSGVSFG	
OsJAZ1	146	-----	-----	-----	-----	TKTDQLKLG	VSSAPLV	
OsJAZ10	127	-----	--SNNFDLPI	ARRSSLYRFL	EKRK---DRD	QITSPYHH--	-----	
OsJAZ11	173	GS-FPASL	VPS---AVPQ	ARKASLARFL	EKRK---ERV	QTTSPYHH--	-----	
OsJAZ12	117	-----	-----	-----	-----N-	AN--ISVTPH	VKLDTSK	
OsJAZ2	211	-----	-----	-----LP	TTLRPKLFQ	KG-----	-----	
OsJAZ3	113	-----	-----	-----	-----LHIA	SIGVLKS---	--HELK	
OsJAZ4	150	-----	-----	-----	-----	-----	---MSEP	
OsJAZ5	129	-----	-----	-----	-----NH	ISASPYPLNS	KQSPECS	
OsJAZ6	105	----TISY	LSPEAGSS--	--TNGLGATK	ATRGLTSTYH	MNLAPYGL-S	KKSPECS	
OsJAZ7	150	----SISY	IVSETRSSGS	NGVTGLGPTK	TKASLASTRN	-----IAT	IANQVPH	
OsJAZ8	110	-----	-----	-----	-----ND	NL-----	-----	
OsJAZ9	152	-----	-----	-----	-----QS	AAAKATETIN	LTSINPA	
SlJAZ1	161	-----	-----	-----	-----	-----	---IQP-	
SlJAZ10	121	-----	-----	-----	-----	SAYSQKEIAS	SPNPVCS	
SlJAZ11	172	----GKQI	HNTAATSSSS	-----AT	HTDNFSRCRD	NN-----	--QANGS	
SlJAZ12	178	-----	-----	-----	-----	NQ-----	--TAAFS	
SlJAZ2	151	-----	-----	----ENKSEP	STPNASTNYA	ENNNNKSSMV	LPDLNEP	
SlJAZ3	156	----PASP	HSSPMSVSSH	PIGQSAGNSG	NKDDMKISK	HMNLDKSNV	IPDLNEP	
SlJAZ4	118	-----	-----	-----	-----SY	-----	--RSSDG	
SlJAZ5	145	----TTPT	LPSPISITSH	CGSQSAGVSS	NTNGVTI-IK	-----	---SSNG	
SlJAZ6	177	-----	-----	-----	-----	TP--VAAT--	---NAMS	
SlJAZ7	164	----TSPS	FSSPIPIITH	GASQSIGVSN	NTNQITMSIR	-TTQIQKTAE	SALD---	
SlJAZ8	154	QKQQQIHV	SYSKSDQLKP	GYNSATPQVL	QQQLVHVSST	KG-----	-----	
SlJAZ9	112	-----	-----	-----	-----	AN--ISV---	---ETPK	

Jas motif

AtJAZ1	140	SS-	-----PLLQ	T-----QTGL	SMKKS LQ RFL	QKRK---NRI	IAKAPYQLSN	T
AtJAZ10	146	VVR	SQES-HPPSH	TLS---AVPQ	ARKAS LAR FL	EKRK---ERI	ITARPYQY-G	E
AtJAZ11	171	QQE	QHQQTQSQTP	GTSSS-ELPI	ARRS LHR FL	EKRK---DRA	MNAAPYGL-S	K
AtJAZ12	168	NE-	-ENKAWLGLG	GKFVPVKTEQ	FF-----	-----	-----	-
AtJAZ2	168	TLG	YGSRSFAKYS	LGSCPPQVIN	LVKET-----	-----	-----	-
AtJAZ3	182	KEA	EPNQKSQVPF	ACKFQAE LPI	ARRK SLKR FF	EKRH---NRI	QETSPYHH--	-
AtJAZ4	169	---	-----	-----GL	SLRK SLQ RFL	QKRRE--RRI	LSASPYDN-S	K
AtJAZ5	132	QEL	RTRT-HVPIS	QSSVA-D LPI	ARRNS LTR FL	EKRK---DRI	TARAPYQVVH	N
AtJAZ6								
AtJAZ7	224	RKA	SVQRYLEKRK	DR-----	-----	-----	-----	-
AtJAZ8	158	-AC	SPPQPAHAAA	----LPE MPI	ARKAS LQ RFL	QKRK---HRI	ISKHPYASPV	I
AtJAZ9	167	VAA	DPSS-----	ICKLQAD LPI	ARRH SLQ RFL	EKRK---DRI	QAANPY----	-
NaJAZa	142	---	-----	----FAKE PL	TRTK SLQ RFL	SKRK---ERI	TSTAPYQICN	K
NaJAZb	207	TPE	SIGVGFSATS	SVGTSPL LAG	KET-----	-----	-----	-
NaJAZc	254	VS-	-ENKVWLGLG	AQFP-VKAEQ	F-----	-----	-----	-
NaJAZd	209	GGG	APEAPP----	---ALVD MPI	ARKAS LKR FL	AKRK---ATP	TTTS---EPY	K
NaJAZe	180	-MA	AAPAQREGAA	----LAD MPI	MRKAS LQR FF	AKRK---DRI	VSKAPYPTKS	S
NaJAZf	113	SAL	PVAQANAPKP	VRPNAAD LPO	ARKAS LHR FL	EKRK---DRI	TSLGPYQVGG	P
NaJAZg	209	GTP	PSRRRIHARG	KSRSCQ EMSH	CW-----	-----	-----	-
NaJAZh	210	KRA	KK-----D	DGGASWLQVN	PT-LS L ----	-----	-----	-
NaJAZj	176	PPA	QPETLATTTA	AAIMPRA VPO	ARKAS LAR FL	EKRK---ERV	ASARSSYVVR	A
NaJAZk	246	SPS	QPIPVATTNA	SAIMPRA VPO	ARKAS LAR FL	EKRK---ERV	AATTPYARPS	P
NaJAZl	138	---	-----MPN	QPIVS-D LPI	ARRAS LTR FL	EKRK---DRI	QAKAPYQOSP	S
NaJAZm	174	KEP	-ESQP----W	LGLGPN AVK	PIERGQ----	-----	-----	-
NtJAZ1	246	KQA	NGDKS----W	LGFGQ EMTIK	QEI-----	-----	-----	-
NtJAZ2	179	ILK	FAETSRVRND	FSPNF GDLSL	TR SISL PRFL	E KPKTRL DYI	TTVAPYPLAK	S
NtJAZ3	232	NKL	IQELPKLSMP	QPSVA-D LPI	ARRNS LTR FL	EKRK---DRV	SSVAPYPSSK	S
OsJAZ1	163	EQE	QHKQIQSQAA	EISSS SELPI	ARRS LHR FL	EKRK---DRA	TAKVPYHREE	A
OsJAZ10								
OsJAZ11								
OsJAZ12	133	IVT	SLGPVGATTI	MTAGMAS VPO	ARKAS LAR FL	EKRK---ERV	MPMTFFYEGN	T
OsJAZ2	225	---	-----	-----A LAM	ARRAT LAR FL	EKRK---HRI	TSIAPYQISN	N
OsJAZ3	129	IVT	SQESRQPPNH	NLS---AV PQ	ARKAS LAR FL	ERRK---ERV	TVRAPYQVVR	N
OsJAZ4	154	SS-	-----PLLQ	P----- Q	TVK KSLO GFL	QKRK---KRV	TARAPYQMH-	-
OsJAZ5	148	TPE	LGSRSLSMNS	SGSCPP HIS	LVK-----	-----	-----	-
OsJAZ6	151	TPE	SNGVGFSATS	----T PLLAG	KET-----	-----	-----	-
OsJAZ7	194	PRK	TTTQEPIQSS	PTPLT-EL LPI	ARRAS LHR FL	EKRK---DRV	IKARPYLY-G	E
OsJAZ8	114	---	-----	----EGD LPI	ARRK SLQ RFL	EKRK---ERI	VSASPYGN-G	K
OsJAZ9	171	LKR	AISFSNASTV	ACVSTAD VPI	ARRR SLQR FF	EKRK---HRF	QATSPYHK--	-
SlJAZ1	164	---	-ISF-----	-CRSTAD LPI	ARRH SLQ RFL	EKRK---DRI	-----	-
SlJAZ10	138	PAK	TAAQEPIQPN	PASLACE LPI	ARRAS LHR FL	EKRK---DRI	-----	-
SlJAZ11	205	NIN	CPVPVSCSTN	VMAPT VALPL	ARKAS LAR FL	EKRK---ERV	TSKAPYQLCD	P
SlJAZ12	185	---	-----	-MAP TVGLPO	TRKAS LAR FL	EKRK---ERV	VSTSPYYPTS	A
SlJAZ2	184	TDN	NHLTKEQQQQ	QEQNQ IVERI	ARRAS LHR FF	AKRK---DRA	VHTKPYSAT	S
SlJAZ3	207	TSS	G--NNEDQET	GQQH QVVERI	ARRAS LHR FF	AKRK---DRA	VNKNPYPTSD	F
SlJAZ4	125	SDP	PTIPNNSTRF	HY-----Q KA	SMKRS LHS FL	QKRS---LRI	TSKAPYQIDG	S
SlJAZ5	182	SDP	---PNKSTSF	HHNQL PNPKA	SMKKS LQS FL	QKRK---IRI	TSVSPYCLDK	K
SlJAZ6	187	MIE	SFN-AAPRNM	IPS---- VPO	ARKAS LAR FL	EKRK---ERI	INVSPYYVDN	K
SlJAZ7	211	---	-----LVP	QPIIS GDLP	ARRAS LTR FL	EKRK---DRI	VARAPYQVNQ	N
SlJAZ8	194	---	-----	-----A LAM	ARRAT LAR FL	EKRK---HRI	VARAPYQVNQ	H
SlJAZ9	121	IMT	SLGPVGASTI	MSA---AV PQ	ARKAS LAR FL	EKRK---ERV	QATSPYHRYR	-

AtJAZ1	179	NKQ-AAVS-	-ENKAWLGLG	AQFP-VKAEQ	F-----	-----	-----
AtJAZ10	192	KTPKFPPFEM	HQ-EEETASS	SVHWES----	-----	-----	KIEEGQ
AtJAZ11	220	KSGECSTPE	SNGVGFSA	SVGTSPLIAG	KET-----	-----	--KEGQ
AtJAZ12		-----	-----	-----	-----	-----	-----
AtJAZ2		-----	-----	-----	-----	-----	-----
AtJAZ3	230	-----	-----	-----	-----	-----	-----
AtJAZ4	199	QSSQYSTPG	SSWSFFVNS	SGSSTVLPAT	I-----	-----	-----
AtJAZ5	181	NP-LPSSN	NNGESSKDC	EDQLDLNFKL	-----	-----	-----
AtJAZ6		-----	-----	-----	-----	-----	-----
AtJAZ7		-----	-----	-----	-----	-----	-----
AtJAZ8	204	TQHEDECND	QSGNYSLKEK	NS-----	-----	-----	-----
AtJAZ9		-----	-----	-----	-----	-----	-----
NaJAZa	176	KIADSKNE-	-ENKAWLGLG	AKFVPVKTEQ	FF-----	-----	-----
NaJAZb		-----	-----	-----	-----	-----	-----
NaJAZc		-----	-----	-----	-----	-----	-----
NaJAZd	250	KAVASPAP	EK-----S	FAVAPVKDEP	ATWLGL----	-----	-----
NaJAZe	226	EGMEASGME	VTAEGKAQ--	-----	-----	-----	-----
NaJAZf	164	AAVGATTST	TTKSFLAKEE	EHTAS-----	-----	-----	-----
NaJAZg		-----	-----	-----	-----	-----	-----
NaJAZh		-----	-----	-----	-----	-----	-----
NaJAZj	227	AAEEEEQPP	AK-----	-KAKAAVERR	EDWLALGSLG	HMHSR-----	-----
NaJAZk	297	AETKASEPE	EKKTPTSWLD	LAASASAAAR	RDSLTIAL--	-----	-----
NaJAZl	178	DASPVKKEL	QESQP----W	LGLGPQVAAP	DLSLRQESSQ	-----	-----
NaJAZm		-----	-----	-----	-----	-----	-----
NtJAZ1		-----	-----	-----	-----	-----	-----
NtJAZ2	233	PLESSDTMG	SAND-NKSSC	TDIALSSN-R	DESLSLGQPR	TISFCE-ESP	-----
NtJAZ3	282	PLESSDTIG	SPSTPSKSSC	TDITPSTNNC	EDSLCLGQPR	NISFSSQEPP	-----
OsJAZ1	214	AAP-KKEE-	-HKAPWLGLG	GQFA-VKTEQ	Y-----	-----	-----
OsJAZ10		-----	-----	-----	-----	-----	-----
OsJAZ11		-----	-----	-----	-----	-----	-----
OsJAZ12	184	TTLNVSIDK	AVNILAFVER	SNFGDACPSG	KKFPAEILSG	DQHLARRNSV	-----
OsJAZ2	257	KKS--KNE-	-DNKAWLGLG	AQFV--KTEQ	YF-----	-----	STKLQI
OsJAZ3	177	NPLLPSSN	TNGESSKDS	EDQLDLNFKL	-----	-----	STKLQI
OsJAZ4	188	NP-LQSSR	TRG-----	-DHFDLNF--	-----	-----	-----
OsJAZ5		-----	-----	-----	-----	-----	-----
OsJAZ6		-----	-----	-----	-----	-----	-----
OsJAZ7	243	NLSKFPPDI	QQQEEETASS	SVHWEN----	-----	-----	LGFSEK
OsJAZ8	147	QSSQHMMN-	----FTINS	SGSSTSLPAA	N-----	-----	-----
OsJAZ9		-----	-----	-----	-----	-----	-----
SlJAZ1		-----	-----	-----	-----	-----	-----
SlJAZ10		-----	-----	-----	-----	-----	-----
SlJAZ11	256	AKASSNPQT	TGNMSWLGLA	AEI-----	-----	-----	-----
SlJAZ12	222	-----	-----	-----	-----	-----	-----
SlJAZ2	235	EADKNETSP	IVT-----	-----	-----	-----	-----
SlJAZ3	256	KKTDVPTGN	VSIKEEFPTA	-----	-----	-----	-----
SlJAZ4	171	AEASSKP--	-TNPWLSSR	-----	-----	-----	-----
SlJAZ5	230	SSTDCRRSM	SECISSSLSS	AT-----	-----	-----	-----
SlJAZ6	233	SSIDCRTLM	SECVSCPPAH	HLH-----	-----	-----	-----
SlJAZ7	252	AGHHRYPPK	PEIVTGQPLE	AGQSSQRPPD	NAIGQMAHI	KSDGDKDDIM	-----
SlJAZ8	226	GSH--LPPK	PEMVAPS-IK	SGQSSQHIAT	PPKKAHNHM	PMEVDK----	-----
SlJAZ9		-----	-----	-----	-----	-----	-----

AtJAZ1	205	----	-----	-----	-----	-----	-----
AtJAZ10	222	SSKD	LDLRL	-----	-----	-----	-----
AtJAZ11	256	SSKN	LELKL	-----	-----	-----	-----
AtJAZ12		-----	-----	-----	-----	-----	-----
AtJAZ2		-----	-----	-----	-----	-----	-----
AtJAZ3	230	----	-----	-----	-----	-----	-----
AtJAZ4		-----	-----	-----	-----	-----	-----
AtJAZ5		-----	-----	-----	-----	-----	-----
AtJAZ6		-----	-----	-----	-----	-----	-----
AtJAZ7		-----	-----	-----	-----	-----	-----
AtJAZ8		-----	-----	-----	-----	-----	-----
AtJAZ9		-----	-----	-----	-----	-----	-----
NaJAZa		-----	-----	-----	-----	-----	-----
NaJAZb		-----	-----	-----	-----	-----	-----
NaJAZc		-----	-----	-----	-----	-----	-----
NaJAZd		-----	-----	-----	-----	-----	-----
NaJAZe		-----	-----	-----	-----	-----	-----
NaJAZf		-----	-----	-----	-----	-----	-----
NaJAZg		-----	-----	-----	-----	-----	-----
NaJAZh		-----	-----	-----	-----	-----	-----
NaJAZj		-----	-----	-----	-----	-----	-----
NaJAZk		-----	-----	-----	-----	-----	-----
NaJAZl		-----	-----	-----	-----	-----	-----
NaJAZm		-----	-----	-----	-----	-----	-----
NtJAZ1		-----	-----	-----	-----	-----	-----
NtJAZ2		-----	-----	-----	-----	-----	-----
NtJAZ3		-----	-----	-----	-----	-----	-----
OsJAZ1		-----	-----	-----	-----	-----	-----
OsJAZ10		-----	-----	-----	-----	-----	-----
OsJAZ11		-----	-----	-----	-----	-----	-----
OsJAZ12		-----	-----	-----	-----	-----	-----
OsJAZ2	288	----	-----	-----	-----	-----	-----
OsJAZ3	212	----	-----	-----	-----	-----	-----
OsJAZ4		-----	-----	-----	-----	-----	-----
OsJAZ5		-----	-----	-----	-----	-----	-----
OsJAZ6		-----	-----	-----	-----	-----	-----
OsJAZ7	274	QKDR	LCDGSKNGLR	TALLTICYWG	MVGNFNVSND	EANEILKFAK	RSITNDVFSS
OsJAZ8		-----	-----	-----	-----	-----	-----
OsJAZ9		-----	-----	-----	-----	-----	-----
SlJAZ1		-----	-----	-----	-----	-----	-----
SlJAZ10		-----	-----	-----	-----	-----	-----
SlJAZ11		-----	-----	-----	-----	-----	-----
SlJAZ12	222	----	-----	-----	-----	-----	-----
SlJAZ2		-----	-----	-----	-----	-----	-----
SlJAZ3		-----	-----	-----	-----	-----	-----
SlJAZ4		-----	-----	-----	-----	-----	-----
SlJAZ5		-----	-----	-----	-----	-----	-----
SlJAZ6		-----	-----	-----	-----	-----	-----
SlJAZ7	301	----	-----	-----	-----	-----	-----
SlJAZ8		-----	-----	-----	-----	-----	-----
SlJAZ9		-----	-----	-----	-----	-----	-----

AtJAZ1	205	-----	-----	-----	-----	-----	-----
AtJAZ10		-----	-----	-----	-----	-----	-----
AtJAZ11		-----	-----	-----	-----	-----	-----
AtJAZ12		-----	-----	-----	-----	-----	-----
AtJAZ2		-----	-----	-----	-----	-----	-----
AtJAZ3	230	-----	-----	-----	-----	-----	-----
AtJAZ4		-----	-----	-----	-----	-----	-----
AtJAZ5		-----	-----	-----	-----	-----	-----
AtJAZ6		-----	-----	-----	-----	-----	-----
AtJAZ7		-----	-----	-----	-----	-----	-----
AtJAZ8		-----	-----	-----	-----	-----	-----
AtJAZ9		-----	-----	-----	-----	-----	-----
NaJAZa		-----	-----	-----	-----	-----	-----
NaJAZb		-----	-----	-----	-----	-----	-----
NaJAZc		-----	-----	-----	-----	-----	-----
NaJAZd		-----	-----	-----	-----	-----	-----
NaJAZe		-----	-----	-----	-----	-----	-----
NaJAZf		-----	-----	-----	-----	-----	-----
NaJAZg		-----	-----	-----	-----	-----	-----
NaJAZh		-----	-----	-----	-----	-----	-----
NaJAZj		-----	-----	-----	-----	-----	-----
NaJAZk		-----	-----	-----	-----	-----	-----
NaJAZl		-----	-----	-----	-----	-----	-----
NaJAZm		-----	-----	-----	-----	-----	-----
NtJAZ1		-----	-----	-----	-----	-----	-----
NtJAZ2		-----	-----	-----	-----	-----	-----
NtJAZ3		-----	-----	-----	-----	-----	-----
OsJAZ1		-----	-----	-----	-----	-----	-----
OsJAZ10		-----	-----	-----	-----	-----	-----
OsJAZ11		-----	-----	-----	-----	-----	-----
OsJAZ12		-----	-----	-----	-----	-----	-----
OsJAZ2		-----	-----	-----	-----	-----	-----
OsJAZ3		-----	-----	-----	-----	-----	-----
OsJAZ4		-----	-----	-----	-----	-----	-----
OsJAZ5		-----	-----	-----	-----	-----	-----
OsJAZ6		-----	-----	-----	-----	-----	-----
OsJAZ7		-----	-----	-----	-----	-----	-----
OsJAZ8		-----	-----	-----	-----	-----	-----
OsJAZ9		-----	-----	-----	-----	-----	-----
SlJAZ1		-----	-----	-----	-----	-----	-----
SlJAZ10		-----	-----	-----	-----	-----	-----
SlJAZ11		-----	-----	-----	-----	-----	-----
SlJAZ12	222	NSGDLSLPKI	NSSLRFSEKP	QIRLGCESEN	GVKVEPLTIF	YDGKIVVYDV	SIEKA
SlJAZ2		-----	-----	-----	-----	-----	-----
SlJAZ3		-----	-----	-----	-----	-----	-----
SlJAZ4		-----	-----	-----	-----	-----	-----
SlJAZ5		-----	-----	-----	-----	-----	-----
SlJAZ6		-----	-----	-----	-----	-----	-----
SlJAZ7	301	-----	-----	-----	-----	-----	-----
SlJAZ8		-----	-----	-----	-----	-----	-----
SlJAZ9		-----	-----	-----	-----	-----	-----

AtJAZ1	205	-----	-----	-----	-----	-----	-----
AtJAZ10		-----	-----	-----	-----	-----	-----
AtJAZ11		-----	-----	-----	-----	-----	-----
AtJAZ12		-----	-----	-----	-----	-----	-----
AtJAZ2		-----	-----	-----	-----	-----	-----
AtJAZ3	230	-----	-----	-----	-----	-----	-----
AtJAZ4		-----	-----	-----	-----	-----	-----
AtJAZ5		-----	-----	-----	-----	-----	-----
AtJAZ6		-----	-----	-----	-----	-----	-----
AtJAZ7		-----	-----	-----	-----	-----	-----
AtJAZ8		-----	-----	-----	-----	-----	-----
AtJAZ9		-----	-----	-----	-----	-----	-----
NaJAZa		-----	-----	-----	-----	-----	-----
NaJAZb		-----	-----	-----	-----	-----	-----
NaJAZc		-----	-----	-----	-----	-----	-----
NaJAZd		-----	-----	-----	-----	-----	-----
NaJAZe		-----	-----	-----	-----	-----	-----
NaJAZf		-----	-----	-----	-----	-----	-----
NaJAZg		-----	-----	-----	-----	-----	-----
NaJAZh		-----	-----	-----	-----	-----	-----
NaJAZj		-----	-----	-----	-----	-----	-----
NaJAZk		-----	-----	-----	-----	-----	-----
NaJAZl		-----	-----	-----	-----	-----	-----
NaJAZm		-----	-----	-----	-----	-----	-----
NtJAZ1		-----	-----	-----	-----	-----	-----
NtJAZ2		-----	-----	-----	-----	-----	-----
NtJAZ3		-----	-----	-----	-----	-----	-----
OsJAZ1		-----	-----	-----	-----	-----	-----
OsJAZ10		-----	-----	-----	-----	-----	-----
OsJAZ11		-----	-----	-----	-----	-----	-----
OsJAZ12		-----	-----	-----	-----	-----	-----
OsJAZ2		-----	-----	-----	-----	-----	-----
OsJAZ3		-----	-----	-----	-----	-----	-----
OsJAZ4		-----	-----	-----	-----	-----	-----
OsJAZ5		-----	-----	-----	-----	-----	-----
OsJAZ6		-----	-----	-----	-----	-----	-----
OsJAZ7		-----	-----	-----	-----	-----	-----
OsJAZ8		-----	-----	-----	-----	-----	-----
OsJAZ9		-----	-----	-----	-----	-----	-----
SlJAZ1		-----	-----	-----	-----	-----	-----
SlJAZ10		-----	-----	-----	-----	-----	-----
SlJAZ11		-----	-----	-----	-----	-----	-----
SlJAZ12	277	TNILK	-----	-----	-----	-----	-----
SlJAZ2		-----	-----	-----	-----	-----	-----
SlJAZ3		-----	-----	-----	-----	-----	-----
SlJAZ4		-----	-----	-----	-----	-----	-----
SlJAZ5		-----	-----	-----	-----	-----	-----
SlJAZ6		-----	-----	-----	-----	-----	-----
SlJAZ7	301	FVERDAISSK	KEFSMESLSG	DLHLAKRNF	M HGVLENRNER	FCPPGFEDIK	-----
SlJAZ8		-----	-----	-----	-----	-----	-----
SlJAZ9		-----	-----	-----	-----	-----	-----

AtJAZ1	205	-----	KLAIQDVRSY	KVDEILKFAE	SSKQQTLSQD	VLTRKSSVR	FLEK
AtJAZ10		-----	-----	-----	-----	-----	----
AtJAZ11		-----	-----	-----	-----	-----	----
AtJAZ12		-----	-----	-----	-----	-----	----
AtJAZ2		-----	-----	-----	-----	-----	----
AtJAZ3	230	-----	APENKK	-----	-----	-----	----
AtJAZ4		-----	-----	-----	-----	-----	----
AtJAZ5		-----	-----	-----	-----	-----	----
AtJAZ6		-----	-----	-----	-----	-----	----
AtJAZ7		-----	-----	-----	-----	-----	----
AtJAZ8		-----	-----	-----	-----	-----	----
AtJAZ9		-----	-----	-----	-----	-----	----
NaJAZa		-----	-----	-----	-----	-----	----
NaJAZb		-----	-----	-----	-----	-----	----
NaJAZc		-----	-----	-----	-----	-----	----
NaJAZd		-----	-----	-----	-----	-----	----
NaJAZe		-----	-----	-----	-----	-----	----
NaJAZf		-----	-----	-----	-----	-----	----
NaJAZg		-----	-----	-----	-----	-----	----
NaJAZh		-----	-----	-----	-----	-----	----
NaJAZj		-----	-----	-----	-----	-----	----
NaJAZk		-----	-----	-----	-----	-----	----
NaJAZl		-----	-----	-----	-----	-----	----
NaJAZm		-----	-----	-----	-----	-----	----
NtJAZ1		-----	-----	-----	-----	-----	----
NtJAZ2		-----	-----	-----	-----	-----	----
NtJAZ3		-----	-----	-----	-----	-----	----
OsJAZ1		-----	-----	-----	-----	-----	----
OsJAZ10		-----	-----	-----	-----	-----	----
OsJAZ11		-----	-----	-----	-----	-----	----
OsJAZ12		-----	-----	-----	-----	-----	----
OsJAZ2		-----	-----	-----	-----	-----	----
OsJAZ3		-----	-----	-----	-----	-----	----
OsJAZ4		-----	-----	-----	-----	-----	----
OsJAZ5		-----	-----	-----	-----	-----	----
OsJAZ6		-----	-----	-----	-----	-----	----
OsJAZ7		-----	-----	-----	-----	-----	----
OsJAZ8		-----	-----	-----	-----	-----	----
OsJAZ9		-----	-----	-----	-----	-----	----
SlJAZ1		-----	-----	-----	-----	-----	----
SlJAZ10		-----	-----	-----	-----	-----	----
SlJAZ11		-----	-----	-----	-----	-----	----
SlJAZ12		-----	-----	-----	-----	-----	----
SlJAZ2		-----	-----	-----	-----	-----	----
SlJAZ3		-----	-----	-----	-----	-----	----
SlJAZ4		-----	-----	-----	-----	-----	----
SlJAZ5		-----	-----	-----	-----	-----	----
SlJAZ6		-----	-----	-----	-----	-----	----
SlJAZ7	351	-----	IAPLSIIYNG	-----	-----	-----	----
SlJAZ8		-----	-----	-----	-----	-----	----
SlJAZ9		-----	-----	-----	-----	-----	----

AtJAZ1	249	RQERMT	MVSPYGFPHA
AtJAZ10		-----	-----
AtJAZ11		-----	-----
AtJAZ12			
AtJAZ2			
AtJAZ3			
AtJAZ4		-----	-----
AtJAZ5		-----	-----
AtJAZ6			
AtJAZ7			
AtJAZ8			
AtJAZ9		-----	-----
NaJAZa		-----	-----
NaJAZb			
NaJAZc			
NaJAZd		-----	-----
NaJAZe		-----	-----
NaJAZf		-----	-----
NaJAZg			
NaJAZh			
NaJAZj		-----	-----
NaJAZk		-----	-----
NaJAZl		-----	-----
NaJAZm			
NtJAZ1			
NtJAZ2		-----	-----
NtJAZ3		-----	-----
OsJAZ1		-----	-----
OsJAZ10			
OsJAZ11			
OsJAZ12		-----	-----
OsJAZ2		-----	-----
OsJAZ3		-----	-----
OsJAZ4		-----	-----
OsJAZ5			
OsJAZ6			
OsJAZ7		-----	-----
OsJAZ8		-----	-----
OsJAZ9		-----	-----
SlJAZ1			
SlJAZ10			
SlJAZ11		-----	-----
SlJAZ12		-----	-----
SlJAZ2		-----	-----
SlJAZ3		-----	-----
SlJAZ4			
SlJAZ5			
SlJAZ6		-----	-----
SlJAZ7		-----	-----
SlJAZ8		-----	-----
SlJAZ9		-----	-----

Supplemental Text S2. Nucleotide sequence alignment of *NaJAZ* genes that are regulated by silencing of *NaJAZh* against sequence of inverted repeat (ir) construct used in irJAZh plants.

A. Sequence alignment of NaJAZe and ir-construct of NaJAZh

NaJAZe	1	TTATGGGTTTGACTCATCATGTGAAGCAAGAAGTAATTGAAGAACATATAGATCCAGCAC	60
ir construct		-----	
NaJAZe	61	CTCTGAGAAGTTCAGCAATGCAGTGGTCATTCTCGAACAACATCTCGACTCATCCTCAAT	120
ir construct		-----	
NaJAZe	121	ACCTCTCTTTCAAGGGTGCTCAAGAGGATAGGCTGAAAACCTGGTTTTGATTCACTTGCAT	180
ir construct		-----	
NaJAZe	181	CAACTGGATTGGTGACTATAACCACAACCTGAAGCTGTGCGACTCAAGTCATCGACCGTACT	240
ir construct		-----	
NaJAZe	241	CTGGTGTACACAGAATAATATGATGCTTGAAAAGCAAGGTGGAACGCACTACACGTCGA	300
ir construct		-----	
NaJAZe	301	CAACTTTCTCTCCTCATCACTATGATGCTCACTCCGTGCATCGATCTCATGGAGTCAGAG	360
ir construct		-----	
NaJAZe	361	TGCTCCCAGTTTCCAACCTAGCAAATCAGATTTCTGTATCTATGACTATGCCTGGTCATA	420
ir construct		-----	
NaJAZe	421	AGTCCTTTGTTTCTCCTCTTGGACAGAATCCAGTTGCTAGCCCCATTTAGCTGTTCCAA	480
ir construct		-----	
NaJAZe	481	CTAACAGCGCTGTCGTGGGCACAACCTGATTTAAGGGTGCTCCGAAAACCTCCCCAGGTC	540
ir construct		-----	
NaJAZe	541	CTGCTCAGTTGACCATCTTTTATGGTGGTTCCGTCTGTGTTTATGATAATGTTTCGCCAG	600
ir construct		-----	

NaJAZe 601 AGAAGGCTCAAGCTATTATGTTGCTTGCTGGAAATGCACCACCTGTTACACCAAGTGCAA 660

ir construct -----

NaJAZe 661 CATCTACTCTATCTCCAGTTC--AGGC-GCCTATACCCAAGTCCTCTTC-TGTTGACTCT 716
TCTA T A C CCA C A GC GC A C AA TTC TGTT TC

ir construct 1 --TCTATTGCACCACCACAACAAAAGCAGC----AGCAAA-----TTCATGTT---TC- 44

NaJAZe 717 TTTGTTGTAAATCAGTCCCACAACACAA--CA-CCTACTCTTC--CCA-GCC-CCATTTTC 769
TT T GTAAA AGT C CAAC CAA CA TA TTC C A GCC C A T C

ir construct 45 -TTATAGTAAA--AGTGAC-CAACTCAAGCCAGGGTATAATTCTGCTACGCCGCAAGTAC 100

NaJAZe 770 TATAACATCTCATTGTGGATCTCAATCTGCTGGAGTGTCTAGTAATACAAATGGAG--TA 827
T A CA C T GT AT T T CT AGT CTAGTAA AC AT AG TA

ir construct 101 TGCAGCAGCAGCTAGTCCATGT-----TTCT--AGTA-CTAGTAAAAGTATGAT-CAGCTTA 151

NaJAZe 828 A-CTATTATCAAATCAACTGGGGTCTACCATCTCCTTCT-AATAA-AGCAGGACTTTCC 884
A C A T ATCAACT TC T TCT C TC AA AA AGCAGGA C

ir construct 152 AGCCAGT-----ATCAACT----TC-T----TCTGCGTCGCAAAAACAGCAGGA----GC 193

NaJAZe 885 AA-ATTTTCCAGTTCCATAGGATCTGTTTCTGCCACCTTTGTTCCATCAGCTGTACCGCA 943
AA AT CAG CA A G C GT C G CACCT G C A CAGCT C G A

ir construct 194 AACAT----CAG---CAAACG--CAGTCACAGACACCTG-GAAGTACAGCT---CTG-A 239

NaJAZe 944 GGCACGCAAGGCATCATTGGCTCGGTTCTTGAGAAAGCGCAAAGAAAGGGTAATAAGTGC 1003
G

ir construct 240 G----- 240

NaJAZe 1004 ATCACCTTACGACACCAGCAAGCAATCCCCAGAATGTAGCACTCTTGGATATGGAAGCAG 1063

ir construct -----

NaJAZe 1064 AAGTTTCGCTAAATATTCTTTAGGCTCTTGTCTCCCAAGTAATCAATTTGGTCAAGGA 1123

ir construct -----

NaJAZe 1124 GACGTGAAGTGCCAACGGTGGCAAAATAATGTAGACACAAGATGAAGACTGTACCAGATT 1183

ir construct -----

NaJAZe 1184 AGATTATTAAAGCTAAATTTGGTGTTCATTTTGACTTCAATACTTCAGTTCTCTCTTAGAT 1243

ir construct -----

NaJAZe 1244 GCGATATATTATCTAGGTTGTTTTCTTGTAAATGTGATCAGAGCCTTTT 1294

ir construct -----

B. Sequence alignment of NaJAZm and ir-construct of NaJAZh

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NaJAZm      1 ATGAAGCACAGAATTGGCCTTCAACTTTTCCCTCTATTGTCGTCTTCTTCTTCTCAGAG  60
ir construct -----

NaJAZm     61 TTCCACAGTAGTGATCACTCTGTGGCCTGCTCGTCTACAAGAAAGCATATCACAATTTTC 120
ir construct -----

NaJAZm    121 TACAACGCACAAGCTGGAGAATGTGATATATCTGAAGTGCAGGCCTTAGCCATCTTATGG 180
ir construct -----

NaJAZm    181 CATGCAAGACAAGTAAAATATAATAATGGGCTGTCCCTGAGAAAATCCCTACAGAGGT-- 238
ir construct  1 -----TC  2

NaJAZm    239 TTCTGCA-AAAGAGAAGAGAAAGGAGGATTCAAGCAGCTAATCCAT-----ACTAGCT 290
           T  TGCA  A  A AA A AAAG           C AGCAGC AAT CAT           A TAG T
ir construct  3 TATTGCACCACCACAACA-AAAG-----C-AGCAGCAAATTCATGTTTCTTA-TAG-T  51

NaJAZm    291 AAAAG-----AA-----ATGATATGATGTTGGTGATA-GGCGAATTCAGAATTG--- 333
           AAAAG      AA           A G TAT A  TT  TG TA G CG A  AG ATG
ir construct  52 AAAAGTGACCAACTCAAGCCAGGGTATAA--TTC-TGCTACGCCGCA--AGTACTGCAG 105

NaJAZm    334 -AGAATTTAGT-----TATCTAGAATGTGTATGATTTTGTGATATGCGGATAGGTCACTA 387
           AG A  TAGT      T TCTAG A  GTA  A      TGAT  GC  TA G CA TA
ir construct 106 CAGCAGCTAGTCCATGTTTCTAGTACTAGTAAAA----CTGATCAGC--TTAAGCCAGTA 159

NaJAZm    388 --ATTTTTTCTGCATATGTATCTGCATTTCCAACGGGAACAGTGATTTTCAGC----- 438
           A  TT TTCTGC      GT  C GCA      CA C GGA CA  A  TCAGC
ir construct 160 TCAACTTCTTCTGC----GT--C-GCAAAAACAGCAGGAGCA---ACATCAGCAAACGCA 209

NaJAZm    439 -TGA-ATTTACC--GAACTAGCTATATATGTGTTGATTCCCTAATTATCGAAATTTTGATT 494
           T A A  ACC  GAACTAGC A  T TG G
ir construct 210 GTCACAGACACCTGGAAGTACG-AGCTCTGAG----- 240

NaJAZm    495 CTCTCGTCCTAACT 508
ir construct -----

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C. Sequence alignment of NaJAZf and ir-construct of NaJAZh

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NaJAZf      1 ATGAGAAGAAACTGTAACCTGGAAGCTTGTCCCTCCTTGTGTTTCTGTTTCTCCT  60
ir construct -----

NaJAZf      61 AAAGATTGCACTACGACCCCTTACTTCTCCATGAGGGATAACCAGGGCACAGAAGAGAAG 120
                                     C A GCAC A A AA
ir construct  1 -----TCTATTGCACC-ACCACAA-  18

NaJAZf      121 CAACAGCAGCAGCTAACAATATTCTACAATGGAAAAGTTGTGGTTTCTGATGCTACA--- 177
      CAA AGCAGCAG   CAA ATTC   AT           GTTTCT AT TA A
ir construct  19 CAAAAGCAGCAG----CAA-ATTC----AT-----GTTTCTTATAGTAAAAGT  57

NaJAZf      178 GAGCT--TCAGGCGAAAGCAATAATATAT-CT----CGCAAGTAGAGAAACGGAGGAG-- 228
      GA C   TCA GC A G ATAAT T T CT   CGCAAGTA G A G AG AG
ir construct  58 GACCAACTCAAGC-CAGGGTATAAT-TCTGCTACGCCGCAAGTACTGCA--GCAGCAGCT 113

NaJAZf      229 AATACAAAGACTTC-ATCACCAATTCAGAATCATCATCACCATTGTTA---CAAACCTCA 284
      A T CA G TTC A AC A T   A AA C T ATCA C   TTA CA TCA
ir construct  114 AGTCCA-TGT-TTCTAGTACTAGT---AAAA-C-TGATCAGC----TTAAGCCAGTATCA 162

NaJAZf      285 AACTGGTCTT-TCCAT-GAAGAAATCTCTGCAAAGATTTCTGCAA-AAGAGAAAAAATAG 341
      ACT TCTT T C T G A AAA   C GC A GA   GCAA A AG AAA   G
ir construct  163 -ACT--TCTTCTGCGTCGCAAAAA---CAGC-AGGA-----GCAACATCAGCAAA---CG 207

NaJAZf      342 AATTCA-AGAACTTCTCCA--TATCATCACT-AGCTAGTTGATACTATTTGTACTGATT 397
      A TCA AGA AC CT A TA CA C CT AG
ir construct  208 CAGTCACAGACAC--CTGGAAGTAGCAGCTCTGAG----- 240

NaJAZf      398 TCTGATAACCTTTTATTAATTTGTTTTTTCATTCTTTTTGCCCTTCTTTATCTGGTGTGG 457
ir construct -----

NaJAZf      458 TCTTGGGGGTATAAAGAAGGAGAACCTTTTCGTGTCATTACTGATGACATGCTCTCAGAT 517
ir construct -----

NaJAZf      518 ATGTAAATTAGTACTATCATATAT 541
ir construct -----

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