

Supplemental Figure 1. FASTA format multiple alignment of 32 *Arabidopsis* B-box proteins aligned with MUSCLE (Edgar, 2004). B-box B1, B-box B2, and CCT domains are labeled.

AT1G60250 ----- MAQVC HTC-RHVTAV IHCVTEALNF  
 AT1G49130 ----- MTSHQNIK ISEKIMISKY QEDVKQPRAC ELC-LNKHAV WYCASDDAFL  
 AT1G73870 ----- MV VDVESRTASV TGEKMAARGC DACMKRSRAS WYCPADDAFL  
 AT1G25440 ----- MMKSLAN AVGAKTARAC DSC-VKRRAR WYCAADDAFL  
 AT1G68520 ----- MMKSLAS AVGGKTARAC DSC-VKRRAR WYCAADDAFL  
 AT3G07650 ----- MGYMC DFC-GEQRSM VYCRSDAACL  
 AT5G48250 ----- MGYMC DFC-GEQRSM VYCRSDAACL  
 AT3G21880 ----- MEPKC DHC-ATSQAL IYCKSDLAKL  
 AT4G15250 ----- MEARC DFC-GTEKAL IYCKSDSAKL  
 AT2G47890 ----- MEA EEGHQDRRLC DYD-DSSVAL VYCKADSAKL  
 AT1G28050 ----- M----- M----- DFC-GERTAV LFCRADTAKL  
 AT2G33500 ----- MG TSTTESVVC EFC-GERTAV LFCRADTAKL  
 AT1G68190 ----- MLCI I I I ENMERVC EFC-KAYRAV VYCIADTANL  
 AT3G21150 ----- MVSFC ELC-GAEAD LHCAADSAFL  
 AT5G15840 ----- MLKQESNDIG SGENNRARPC DTC-RSNACT VYCHADSAYL  
 AT3G02380 ----- MLKEES NESGTWARAC DTC-RSAACT VYCEADSAYL  
 AT5G15850 ----- ML KVESNWAQAC DTC-RSAACT VYCRADSAYL  
 AT5G57660 ----- MG FGLESIKSI GGGWAAAARS DAC-KSVTAA VFCDVSAFL  
 AT2G24790 ----- MASSSRLC DSC-KSTAAT LFCRADAFL  
 AT5G24930 MDPTWIDSLT RSCEANSNTN HKRKRERETL KHREKKKKRF RERKMASKLC DSC-KSATAA LYCRPDAAFL  
 AT4G27310 ----- MGKKC DLC-NGVAR MYCESDQASL  
 AT5G54470 ----- MGKKKC ELC-CGVAR MYCESDQASL  
 AT3G21890 ----- MC RGL-NNEESR RSDGGGCRSL  
 AT4G15248 ----- MC RGF-EKEEER RSDNNGCQRL  
 AT1G75540 ----- MKIRC DVC-DKEEAS VFCTADEASL  
 AT4G39070 ----- MKIWC AVC-DKEEAS VFCCADEAAL  
 AT1G06040 ----- MKIQC DVC-EKAPAT VICCADEAAL  
 AT2G31380 ----- MKIQC DVC-EKAPAT LICCADEAAL  
 AT2G21320 ----- MRILC DAC-ESAAAI VFCAADEAAL  
 AT4G38960 ----- MRILC DAC-ENAAAI IFCAADEAAL  
 AT4G10240 ----- MKIQC EVC-EKAEAE VLCCSDEAVL  
 AT1G78600 ----- MKIQC NVC-EAAEAT VLCCADEAAL

## B-box B1

71  
 AT1G60250 CLTCDNLRHH -NNIHAEHVR YQL----- CD NCSMYP SILF ----- CYEDGMV  
 AT1G49130 CHVCDES VHS ANHVATKHER VCL----- R TNEISNDVRG GTTLTSVWHS GFRRKARTPR SRYEKKPQOK  
 AT1G73870 QSCDAS IHS ANHLAKRHER VRL----- QSSSPTET ADKTTSVWYE GFRRKARTPR SKSCAFEKLL  
 AT1G25440 CQSCD SIVHS ANPLARRHER VRLKTASPAV VKHSNHSSAS PPHEVATWHH GFTRKARTPR GSGKKNSS I  
 AT1G68520 CHACDGS VHS ANPLARRHER VRL----- KS ASAGKYRHAS PPHQ-ATWHQ GFTRKARTPR G-GKKSHTMV  
 AT3G07650 CLSCDR S VHS ANALSKRHSR TLV----- CE RCNAQPATVR ----- CVEERVS  
 AT5G48250 CLSCDR N VHS ANALSKRHSR TLV----- CE RCNAQPASVR ----- CSDERSV  
 AT3G21880 CLNCDV H VHS ANPLSHRHIR SLI----- CE KCFSQPAAIR ----- CLDEKVS  
 AT4G15250 CLNCDV N VHS ANPLSORHTR SLL----- CE KCSLOPTAVH ----- CMENVS  
 AT2G47890 CLACDKQ VHV ANQLFAKHFR SLL----- CD SCNESPSSLF ----- CETERSV  
 AT1G28050 CLPCDQ QVHT ANLLSRKHVR SQI----- CD NCGNEPVSVR ----- CFTDNL I  
 AT2G33500 CLPCDQ H VHS ANLLSRKHVR SQI----- CD NCSKEPVSVR ----- CFTDNL V  
 AT1G68190 CLTCD A VHS ANSLSGRHLR TVL----- CD SCKNQPCVVR ----- CFDHKMF  
 AT3G21150 CRSCDA K FHA SNFLFARHFR RVI----- CP NCKSLTQNFV SGPLLPWPPR TTCSESSSS  
 AT5G15840 CMSCDA Q VHS ANRVASRHKR VRV----- CE SCERAPAAFL ----- CEADAS  
 AT3G02380 CTTCDAR VHA ANRVASRHER VRV----- CQ SCESAPAAFL ----- CKADAAS  
 AT5G15850 CSSCDA Q VHA ANRLASRHER VRV----- CQ SCERAPAAFF ----- CKADAAS  
 AT5G57660 CIACDTR IHS ----- FTRHER VWV----- CE VCEQAPAAVT ----- CKADAAA  
 AT2G24790 CGDCD GKIHT ANKLASRHER VWL----- CE VCEQAPAHVT ----- CKADAAA  
 AT5G24930 CLSCD S KVHA ANKLASRHR VWM----- CE VCEQAPAHVT ----- CKADAAA  
 AT4G27310 CWDCD GKVHG ANFLVAKHTR CLL----- CE ACQSLTPWKA ----- TGLRLGP  
 AT5G54470 CWDCD GKVHG ANFLVAKHMR CLL----- CS ACQSHTPWKA ----- SGLNLGP  
 AT3G21890 CTRPSV PVR ----- CE LCDGDAS-VF ----- CEADSAF  
 AT4G15248 CTESHKAP VS ----- CE LCGENAT-VY ----- CEADAAF  
 AT1G75540 CGGCDH QVHH ANKLASKHLR FSL----- LYPS SSNTSSPLCD ICQDKKALF ----- CQQDRAI  
 AT4G39070 CNGCDR HVHF ANKLAGKHLR FSL----- TS PTFKDAPLCD ICGERRALLF ----- CQEDRAI  
 AT1G06040 CQCDIE IHA ANKLASKHOR LHL----- N SLSTKFPCCD ICQEKAAFIF ----- CVEDRAL  
 AT2G31380 CAKCDVE VHA ANKLASKHOR LFL----- D SLSTKFPCCD ICLEKAAFIF ----- CVEDRAL  
 AT2G21320 CCSCDEK VHK CNKLASRHLR VGL----- ADPSNAPSCD ICENAPAFFY ----- CEIDGSS  
 AT4G38960 CRPCDEK VHM CNKLASRHRV VGL----- AEPNAPCCD ICENAPAFFY ----- CEIDGSS  
 AT4G10240 CKPCD IKVHE ANKLFQRHHR VALQKDAASA TTASGAPLCD ICQERKGYFF ----- CLEDRAI  
 AT1G78600 CWACDEKI HA ANKLAGKHQR VPL----- S ASASSIPKCD ICQEASGFFF ----- CLQDRAL





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AT1G60250	CELC	VAS	NSNAVVCPT	HNQILCDS	CDRMIH	SHEDAVPPHS	RCKLCVICR	
AT1G49130	TEEI	EDC	YENNARHRLN	YENVIAAW	DKQESP	RDVKNTSSSF	QLVPPGIEEK	
AT1G73870	EASN	DKD	RKTSFLRLD	YGAVISAW	DNHGSP	WKTGIKPECM	LGGNTCLPHV	VGGYEKLMSS
AT1G25440	VKVK	EEE	HKNVLMRLN	YDSVISTW	GGQGP	WSSGEPERD	MDISGWPAFS	MVENGGESTH
AT1G68520	GGIK	EEK	KEKALMLRLD	YESVISTW	GGQGIP	WTARVPSEID	LDMVCFPHT	MGESGAEAAH
AT3G07650	SNDS	FMS	SKTEPIICFA	SKPAHSNI	SFSGVT	GESSAGDFQE	CGASSSIQLS	GEP
AT5G48250	SADS	FMT	CRTEPIICYS	SKPAHSNI	SFSGIT	GESNAGDFQD	CGASSMKQLS	REPO
AT3G21880	ASPP	GQQ	MNINTGLQLP	LSPVLFQ	IHPSLNIT	GENNAADYQD	CGMSPGFIMS	
AT4G15250	YEDS	FKE	ENNIGLPSLL	LPTLSGNVVP	NMSLSMSNLT	GESNATDYQD	CGISPGFLIG	
AT2G47890	LESG	LKW	FDQODHEDFP	YCSLLKLN	SEDEKP	ENVDRESSVM	VPVSGCLNRC	EETVM
AT1G28050	GVKE	IKK	DDYKRSTSGQ	VQPTKSES	NNRPIT	FGSEKGSNSS	SDLHFTEHIA	GTSC
AT2G33500	AFKE	SYQ	QEDSVHSTST	KGQETS	NNIPAA	IHSHKSSNDS	CGLHCTEHIA	ITSNR
AT1G68190	DTIC	SDD	DFQIPDIDL	FRNFEEQF	GADPEP	IADSNVFFV	SSLDKSHEMK	
AT3G21150	VSYA	SLA	LAVETRPRAT	KRVFLAAA	F	WFGVKNTTTW	QNLKKVEDVT	
AT5G15840	IKYG	SSG	THYNDNGSIN	HNAYISSM	ETGVVP	ESTACVTTAS	HPRTPKGTVE	Q
AT3G02380	INYG	FSSGAH	YNNNSLKDNL	HSASVSSM	DISVVP	ESTASDITVQ	HPRTTKETID	
AT5G15850	INCG	SWG	ALRSSNGSL	HMVNVSSM	DLGVVP	ESTTSDATVS	NPRSPKAVTD	
AT5G57660	FCRS	KLS	AFTYPSQSVS	HSVSTSSI	EYGVVP	DGNTNNSVNR	STITSSTTGG	
AT2G24790	GVVP	VQN	KLFLNEDYFN	FDLASAKI	SOQGFN	FINQTVSTRT	IDVPLVPESG	GV
AT5G24930	FTGG	SKG	FTYGGGYNCI	SHSVSSSS	MEVGVV	PDGGSVADVS	YPYGGPATSG	
AT4G27310	EEDE	DEE	YSDEDEDED	EDGDDEEA	ENQVVP	WSAAAQVPPV	MSSSSSDGGS	
AT5G54470	SDED	EEE	EEVENQVPPA	AVEQELPV	VSSSSS	VSSGEGDQVV	KRTRLDLDLN	
AT3G21890			DHD	FHVVLPSV	TTVGET	TVENRSEQDN	HEVPLVFL	
AT4G15248			DN	FNVVLPEI	RMIA	RIEEHSSDHK	IPFVFL	
AT1G75540	FSKS	GDD	DGVLPYMEPE	DDNNTKRN	NNNNNN	NNNNTVSLPS	KNLGIWVPOI	
AT4G39070	GIEE	NYH	HVSDSGSGSG	CTGISEY	LMETLPG	WRVEDLLEHP	SCVSYEDNII	
AT1G06040	FHFS	DI	ESTDKKGQLD	LGAGELDW	FSDMG	FFGDQINDKA	LPAAEVPELS	
AT2G31380	FSYS	DL	CSNKEKEQLD	LGELDW	LAEMG	LFGDQPDQEA	LPVAEVPELS	
AT2G21320	KASS	GRG	QESNGNDHD	HNMIDLNS	NPQRVH	EPGSHNQEEG	IDVNNANNHE	
AT4G38960	GEAN	GKI	QDEMIDLNAN	PQRVHEPS	SNNNGI	DVNNENNHEP	AGLVPVGPFK	
AT4G10240	FSSE	TYQ	IQSKVSLNSQ	YSSEETEA		GNSGEIVHKN	PSVILSP	
AT1G78600	ENNG	SSK	ADTSRRGSD	SSSMRSA	E	EDGEDNNCL	GGETSWAVPQ	

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AT1G60250	PSRRFLIGG	YQFNFPVHP	PAAEGIPVTP	PTELPQODIN	YDYLDDVDDF	SWFGR		
AT1G49130		RVRSERE	ARVWRYRDKR	KNRLFEEKIR	YEVKVNADK	RPRMKGRFVR	RSLAIDS	
AT1G73870	DGSVTRQOGR	DGGGSDGERE	ARVLYREKR	RTRLFSKKIR	YEVKLNAEQ	RPRIKGRFVK	RTSLLT	
AT1G25440	QKQYVGGCLP	SSGFGDGGRE	ARVSRYREKR	RTRLFSKKIR	YEVKLNAEK	RPRMKGRFVK	RASLAAAASP	
AT1G68520	HNHFRGLGLH	LGDAGDGGRE	ARVSRYREKR	RTRLFSKKIR	YEVKLNAEK	RPRMKGRFVK	RSSIGVAH	
AT3G07650	PWYPTLQDN	IACSHSVTRN	NAVMYRKEKK	KARKFDKVR	YASRKARADV	RRRVKGRFVK	AGEAYDYDPL	
AT5G48250	PWCHPTAQDI	IASSHATRN	NAVMYRKEKK	KARKFDKVR	YVSRKERADV	RRRVKGRFVK	SGEAYDYDPM	
AT3G21880	EAPWETN	FEVSCPQARN	EAKLRYKEKK	LKRSFGKQIR	YASRKARADT	RKRVKGRFVK	AGDSYDYDPS	
AT4G15250	DSPWESNV	EVSFNPKLDR	EAKKRYKQKK	SKRMFGKQIR	YASRKARADT	RKRVKGRFVK	SGETFEYDPS	
AT2G47890	VPVITSTRSM	THEINSLERN	SALSRYKEKK	KSRRYEKHIR	YESRKVRAES	RTRIRGRFAK	AADP	
AT1G28050	KTTRLVATKA	DLERLAQNRG	NAMQRYKEKR	KTRRYDKTIR	YESRKARADT	RLRVKGRFVK	ASEAPYP	
AT2G33500	ATRLVAVTNA	DLEQMAQNRD	NAMQRYKEKK	KTRRYDKTIR	YETRKAET	RLRVKGRFVK	ATDP	
AT1G68190	TFSSSFNN	PIFAPKPASS	TISFSSSETD	NPYSHSEVI	SFCPSLSNNT	RQKVITRLKE	KKRARVEEKK	
AT3G21150		GVS	AGMIRAVESK	LARAMTQQLR		RWRVDSEEGW	AENDNV	
AT5G15840	QPDPASQMIT	VTQLSPMDRE	ARVLYREKR	KTRKFEKTIR	YASRKAYAEI	RPRVNGRFAK	REIEAEEQGF	
AT3G02380	QLSGPPTQV	VQQLTPMERE	ARVLYREKK	KTRKFDKTIR	YASRKAYAEI	RPRIKGRFAK	RIET-EAEAE	
AT5G15850	QPPYPP	AQMLSPRDRE	ARVLYREKK	KMRKFEKTIR	YASRKAYAEK	RPRIKGRFAK	KKDV-DEEAN	
AT5G57660		DHQASSMDRE	ARVLYREKR	KNRKFEKTIR	YASRKAYAES	RPRIKGRFAK	RTETENDDIF	
AT2G24790	TAEMTNTETP	AVQLSPAERE	ARVLYREKR	KNRKFEKTIR	YASRKAYAEM	RPRIKGRFAK	RTDSRENDGG	
AT5G24930	ADPGTOR	AVPLTSAERE	ARVMRYREKR	KNRKFEKTIR	YASRKAYAEM	RPRIKGRFAK	RTDTNESNDV	
AT4G27310		GGSV	TKRTRARENS	DLICSDDEIG	SSSAQGSNYS	RPLKRSFAKS	TVVV	
AT5G54470		LSDEENQ	SRPLKRLSRD	EGLSRSTVVM	NSSIVKLGHG	RRKAEGCDTS	SSSSFY	
AT3G21890								
AT4G15248								
AT1G75540	PQTLPSYP	NQYFSQDNNI	QFGMYNKETS	PEVVSFAPIQ	NMKQOQONNK	RWYDDGGFTV	PQITPPPLSS	
AT4G39070		TNN	NNSESYRVYD	GSSQFHQGF	WDHKPFS			
AT1G06040		VSHL	GHVHSYK-PM	KSNVSHKKPR	FETRYDDDEE	EHFIVPDLG		
AT2G31380		FSHL	AHAHSYNRPM	KSNVFNKKQR	LEYRYDDEEE	HFLVPDLG		
AT2G21320		HE						
AT4G38960			RESE	K				
AT4G10240								
AT1G78600		IQSPPTA	SGLNWPKHFH	HHSVFPDIT	SSTPYTGSSP	NQRVGKRRRR	F	

CCT

AT1G60250	-----	-----
AT1G49130	-----	-----
AT1G73870	-----	-----
AT1G25440	LGVNY-----	-----
AT1G68520	-----	-----
AT3G07650	TPTRSY-----	-----
AT5G48250	SPTRSY-----	-----
AT3G21880	SPTTNN-----	-----
AT4G15250	LVM-----	-----
AT2G47890	-----	-----
AT1G28050	-----	-----
AT2G33500	-----	-----
AT1G68190	A-----	-----
AT3G21150	-----	-----
AT5G15840	NTMLMY---N	TGYGIVPSF
AT3G02380	EIFSTSLMSE	TGYGIVPSF
AT5G15850	QAFSTMITFD	TGYGIVPSF
AT5G57660	LSHVYASAAH	AQYGVVPTF
AT2G24790	DVGVYG----	-GFGVVPSF
AT5G24930	VGHGGI---F	SGFGLVPTF
AT4G27310	-----	-----
AT5G54470	-----	-----
AT3G21890	-----	-----
AT4G15248	-----	-----
AT1G75540	NKKFRSFW--	-----
AT4G39070	-----	-----
AT1G06040	-----	-----
AT2G31380	-----	-----
AT2G21320	-----	-----
AT4G38960	-----	-----
AT4G10240	-----	-----
AT1G78600	-----	-----