	Additional life 5. Alignment of	
Group	bZIP No. or ID (Published)	Basic region Hinge Leucin zipper
	Pp1s49_161V6.1 PACid_18041314 91900 PACid_15419211	ERRORRMIKNRESAARSRARKOAYTVELEAEVSQLKEENMRL ERRORRMIKNRESAARSRARKOAYTVELEAELTQLKEENTRL
	AmTr_v1.0_scaffold00132.19 OsbZIP66 (TRAB1)	ERRORMIKNRESAARSRARKOAYTMELEAEVOKLKEENMEL ERRORMIKNRESAARSRARKOAYTMELEAEVOKLKEONMEL
	AtbZIP36 (ABF2/AREB1) AtbZIP39 (ABI5)	ERRORRMIK <mark>n</mark> resaars <mark>r</mark> arkoaytveleaevaklkeendel Errorrmik <mark>n</mark> resaars <mark>r</mark> arkoaytveleaelnolkeenaol
	AtbZIP14 (FD)	nrrhkrmik <b>n</b> resaars <b>r</b> arkoaytnelelevahloaenarl
	VvbZIP08 VvbZIP45	ERRORRMIK <mark>NR</mark> ESAARS <b>R</b> ARKOAYTLELEMEVAKLKEANEEL ERRORRMIK <mark>N</mark> RESAARS <b>R</b> ARKOAYTMELEAEVAKLKEKNEEL
Α	VvbZIP19 VvbZIP25	ERRORRMIK <mark>NR</mark> ESAARS <b>R</b> ARKOAYTVELELELNOLKEENTKL ERRORRMIK <mark>NR</mark> ESAARS <b>R</b> ARKOAYTVELEAELNOLKEENTLL
	VvbZIP49	DRRHKRLIKNRESAARSRARKOAYTNELELEVAHLIEENARL
	VvbZIP34 VvbZIP18	ERROKRMIK <mark>n</mark> resaars <b>r</b> arkoaytnelenkvsrleeenerl Errlkrkik <mark>n</mark> resaars <mark>r</mark> arkoaytnelvskvsrleeenvrl
	VvbZIP11 VvbZIP31	ERROKRMIKNWESATRSRARKOAYTNELENKVSRLEEENERL ERROKRMIKNWESATHSRARKOAYTNELENKVSRLEEENERL
	VvbZIP43 VvbZIP51	ERROKRMIK <mark>n</mark> resaars <mark>r</mark> arkoaytnhlehevholkkendll Qokorrmik <b>n</b> resaars <mark>r</mark> erkoayovelessavrleeeneol
	VvbZIP30	QQRQRRMIKNRESAARSRERKQAYTVELESLVTHLEEENARL
	VvbZIP53	EKIRR <u>MIH<mark>N</mark>RES</u> AARS <b>R</b> ARMIAYDAQQQIEIAK <b>L</b> KKE <b>N</b> EF <b>L</b>
	Pp1s355 24V6.1 PACid 18061228	EKRKKAMISINA BAGRSRGARQERLDQISVLTAQIRVENSTI
	270282 PACid_15418897 AmTr v1.0 scaffold00002.534	MKRMRAMISNAESARRSRAKQAHMSDLEMQVAQLRVENSTL VKRVRAMISNAESARRSRAKKQAHLSELETQVAQLRVENSSL
В	OsbZIP33 (REB)	QRLQRRKQS <mark>N</mark> HESARRS <mark>R</mark> SRKAAHLNELEAQVSQLRVENSSL
Ь	AtbZIP9 (BZO2H2) AtbZIP10 (BZO2H1)	LKRIRAMNS <mark>n</mark> fesakrsrafkgeylvd <b>i</b> etqvds <b>l</b> kgdnst <b>l</b> VKKSRAMIS <mark>n</mark> fesaars <mark>r</mark> afkgeqtsd <b>i</b> etqvnd <b>l</b> kgehss <b>l</b>
	VvbZIP09 VvbZIP38	LKRMREMVS <mark>N</mark> RESAFRSRKFKQAHLAD <b>L</b> ELQVEQ <b>L</b> RGENAS <b>L</b> AKRVREMIS <b>N</b> RESAFRS <b>R</b> PFKQAHLTE <b>L</b> ETQVAQ <b>L</b> RLENSS <b>L</b>
	VvbZIP21	EKRARBMISNHE BARRSRABKQEHLSELBTQVSQLGVENSSL
	Pp1s83_243V6.3 PACid_18073560	errokruis <mark>n</mark> resarrs <mark>r</mark> lekoohlde <b>l</b> rsoiao <b>l</b> raenthm
	17886 PACid_15423144 AmTr_v1.0_scaffold00065.59	DKKQKRMISNRESARRSRLFKQQHMEELRSQLLDLRAQNSHI EKRQRRKISNRLSARRSRMFKQQHLDDLRHTVSRLSYGNDEL
	OsbZIP38 (LIP19) AtbZIP11 (ATB2)	ERKRIPMIS <mark>n</mark> resarrs <mark>r</mark> afkoorleeliaeaarloaenar <b>v</b> orkripmis <mark>n</mark> resarrs <mark>r</mark> mkkokiliddltaqvnhlkkentei
	AtbZIP2 (GBF5)	ERKRKRMISMRESARRSRMRKQKHVDDLTAQINQLSNDNRQI
	VvbZIP14 VvbZIP37	EKKRIPMISMRESARRSRMRKQQHLDDLIKRKSELENQRLEI EKKRIPMISMRESARRSRMKKQKLSEDLISEVSRLQNLNKEI
C	VvbZIP22 VvbZIP47	DRKKKIRMOS <mark>N</mark> RESAKRS <mark>R</mark> IFKQQHLDD <b>L</b> LSKAAQ <b>L</b> QKENGQ <b>I</b> QRKKKIRMIS <mark>N</mark> RESARRS <mark>R</mark> MFKQKHLDD <b>L</b> MAQVAQ <b>L</b> RKENNE <b>I</b>
	VvbZIP07 VvbZIP13	ORKRKRMIS <mark>nre</mark> sarrs <mark>rmeko</mark> khlddLmaqaaqlrkensqi Qrkrkmis <mark>nre</mark> sarrs <mark>rmeko</mark> khlddmmaqmvhlrkennri
	VvbZIP02	ERKORRMISNRESARRSRMRKOKHLDELWSOVVRLRNENHSL
	VvbZIP39 VvbZIP44	ERKORRM SNRESARRSRMRKOKHLDELWSOVVWLRNENHOL
	VvbZIP55	ERKRRRMI <mark>SMR</mark> EBARRS <mark>R</mark> MRMQKHIENLRNQLNQLRIQNREL
	Pp1s33_301V6.1 PACid_18056930 125734 PACid_15409254	VKRORRKOSNRESARRSRIRKQAECEELGNRVETLTAENMTL LKRORRKOSNRESARRSRIRKQAKCEELSTRVDALAVENAAL
	AmTr_v1.0_scaffold00059.69	LKROPRKOS <mark>n</mark> resarr <mark>sp</mark> lrkoaecee <b>l</b> askveo <b>l</b> nnenmt <b>l</b>
	OsbZIPO5 (OSBZ8) AtbZIP41 (GBF1)	SKREFRKÓS <mark>n</mark> resárrs <mark>r</mark> lrkoáeteelarkvelltaentsl lkrokrkosnresárrs <mark>r</mark> lrkoáeceoloorveslsnenosl
D	AtbZIP55 (GBF3) AtbZIP54	LKRERRKÓSNRESARR <mark>SR</mark> LRKÓAETEELARKVEALTAENMAL VKREKRKÓSNRESARR <mark>SR</mark> LRKÓAETEOLSVKVDALVAENMSL
	VvbZIP40	ikrerrkos <mark>n</mark> resarr <mark>sr</mark> lrkoaetee <b>l</b> alkves <b>l</b> ntensv <b>l</b>
	VvbZIP04 VvbZIP12	LKRQRRKÇ <mark>SN</mark> RESARR <mark>SR</mark> LRKQAECDELAQRADALKEENASL LKRQKRKÇ <mark>SN</mark> RESARR <mark>SR</mark> LRKQAECEELQAKVETLSTENTAL
	VvbZIP46 VvbZIP03	LKRORRKOSNRESARRSKLRKOAECEELQSKVEILSNENHVL LKRERRKOANRESAKKSRLRKOAENEELRMRYETLNEENKAL
	Pp1s62 67V6.1 PACid 18047687	PKRAKRILANROSAORSRVRKLOY SEIHRSVTALOSEVSTM
	402651 PACid_15405830	PKRARRIIANRQSAQRS <mark>R</mark> IRKLQYIAEIEKNMEVSTL
	AmTr_v1.0_scaffold00030.119 OsbZIP21	DTRLKGPRRHPGORSRVRKLQYIAEIERTVNAFETLKSEF EKSLKRRSGORSRVRKLQYIADIERTVDSLQNIGADL
Е	AtbZIP61 AtbZIP34	PKRVKRILANRQSAQRSRVRKLQYISEIHRSVTSLQTEVSVL PKRVKRILANRQSAQRSRVRKLQYISEIHLL
	VvbZIP32 VvbZIP54	TKRAKQQFAQRSRVRKLQYIAEIBRNVQALKAEGSEV AKRAKQQFAQRSRLRKLQYIAEIBMSVQVLQAEGCEI
	VvbZIP29	PKRVKRILANRQSAQRSRVRKLQYISELERSVTSLQTEVSVL
	VvbZIP52	PKRVKRILANRQSAQRSRVRKLQYJSEIHRSVTSLQTEVSAL
	Pp1s20_118V6.1 PACid_18057370 77868 PACid_15421625	PKRAKRILA <mark>N</mark> RQSAARSKERKMRYISHIHRKVQGIQTHATTI PKRAKRILA <mark>N</mark> RQSAARSKERKMRYISHIHRKVQTIQTHATTI
	AmTr_v1.0_scaffold00077.51 OsbZIP30 (RF2b)	PKRAKRILA <mark>n</mark> rosaarsmerharyiseilerkvotloteattl PKRAKRILA <mark>n</mark> rosaarsmerharyiteilerkvotloteattl
	AtbZIP59 (PosF21) AtbZIP51 (VIP1)	PKRAKRIMA <mark>N</mark> ROSAARSKERMTRYIHEILERKVOTLOTEAITL PKRAKRILA <mark>N</mark> ROSAARSKERMIRYTGELERKVOTLONGAITL
F	VvbZIP33 VvbZIP17	PKRAKRI A <mark>n</mark> rosaarskermarmiielerkvotloteantl PKRAKRI A <b>n</b> rosaarskermarmiielerkvotloteantl
•	VvbZIP16	PKRAKRIMANRQSAARSKERMRYIAEIERKVQTIQTEATSI
	VvbZIP50 VvbZIP05	PKRAKRILA <mark>N</mark> RQSAARSKERKIRYTNELERKVOTLOTSANTL PKRAKRILA <mark>N</mark> RQSAARSKERMRYISELEHKVOTLOTSANTL
	VvbZIP48	PKRAKRILIA <mark>N</mark> RQSAARSNERHVRYMABIIBHKVHTIGTBITTI
	Pp1s80_72V6.1 PACid_18053259 99404 PACid 15416436	HKRLKRLIF <mark>n</mark> rvsaqqa <mark>r</mark> erkraylge <b>ib</b> vrske <b>l</b> ehfnael Hkrlkrlif <b>n</b> rvsaqqa <mark>r</mark> erkrayvve <b>lb</b> akard <b>l</b> elfnael
	AmTr_v1.0_scaffold00081.79	HKRLKRLLFNRVSAQQARERKKAYLNEIEVKVKQMEKKNSEL
G	OsbZIP01 AtbZIP56 (HY5)	QNRLKRILH <mark>N</mark> RVSAQQA <b>R</b> ERKKAYMTEIHAKAKD <b>L</b> ELFNAE <b>L</b> NKRLKRILH <mark>N</mark> RVSAQQA <b>R</b> ERKKAYISEIHNRVKD <b>L</b> ENKNSE <b>L</b>
	AtbZIP64 (HYH) VvbZIP10	YRSLKRLLH <mark>n</mark> rvsaqqa <mark>r</mark> erkrvyvsdiesranelqnnndql nkrlkrllh <mark>n</mark> rvsaqqa <b>r</b> erkraylnelevrvkdlerknsel
	VvbZIP15	LVLES <u>RLLH<b>n</b>RVSAQQA<mark>r</mark>erkkVYVNDI<b>H</b>SRAQE<b>L</b>QDR<b>N</b>SK<b>L</b></u>
	D-1-05 04446 44	
	Pp1s25_341V6.1 PACid_18074558 73198 PACid_15404652	krr-arlmenhesaqusrorkkvyvdelegklrtmtatvadl krk-arlmenhesaqusrorkkayvddicervrtinatvael
П	AmTr_v1.0_scaffold00101.96 OsbZIP50	KKK-ARLMENTESACISRORKKHYVDELEDKVRAMHSTIAEL SKKKRROMENTISAMKSRERKKMYVKDLETKSKYLEAECRRL
11	AtbZIP28 AtbZIP49	KRKLIRQIENHESAQISRIRKKQQTEELERKVKSMNATIAEL KKKNVRLVENHESAHISRQRKKHYVEELEDKVKNMHSTISEL
	VvbZIP24	KKK-ARIM <mark>an</mark> hesaqis <mark>r</mark> qrkkhyvee <b>ls</b> ekirs <b>m</b> hstiqd <b>l</b>
	Pp1s34_90V6.1 PACid_18072449	HNSKREIC <mark>N</mark> REAVRKY <mark>R</mark> EKKKAHTAYIEECMHHLRGINGCL
	409920 PACid_15406219 AmTr_v1.0_scaffold00152.6	QOKKKRFIC <mark>N</mark> KEAVRKY <mark>R</mark> EKKKARANS <b>L</b> EDEWYOLLARINGCL
I	OsbZIP53 AtbZIP19	naskkreso <mark>n</mark> raavrky <mark>r</mark> ekkkahtasleeewyhlrainool kkgekreio <mark>n</mark> reavrky <mark>r</mark> ekkkakaasledewarlraynool
	AtbZIP23 VvbZIP06	SSGKKREIC <mark>n</mark> reavrky <mark>r</mark> ekkkakaasledemmrlkavnnol kkskkreic <mark>n</mark> reavrky <mark>r</mark> ekkkaraasledemvrlrsingol
	VvbZIP36	ISKVRRESG <mark>N</mark> REAVRKY <mark>R</mark> EKKKAHTAY <b>I</b> EEEMKK <b>I</b> RLINCG <b>I</b>
	Pp1s30_324V6.1 PACid_18038859 231344 PACid_15416054	SHALRRIMOREAARKSPLRKKAYVQQLESSRIMLOQIBIBL SHTIRRIMOREAARKSPLRKKAYVQQLESSRIMLOQIBIGEL
	AmTr_v1.0_scaffold00010.267	UNVURRIHONREAARKSELRKKAYVOOLESSRIKLTQIEGEL
	OsbZIP11 AtbZIP20 (AHBP-1b/TGA2)	AKTERRIAG <mark>N</mark> REAARKS <mark>R</mark> LRKKAYVONIETISRVELQQIEGEL QKTIRRIAGNREAARKS <mark>R</mark> LRKKAYVOOIENSRIKITOIEGEL
	AtbZIP26 (OBF5/TGA5) AtbZIP57 (OBF4/TGA4)	detirriagnreaarkskirkkayvgolensrieltoiegel irigrriagnreaarkskirkkayvgoletsrielihiegel
J	VvbZIP20	AKTURRIAGNREAARKS <mark>K</mark> URKKAYVQQLESSRIKLTQLEQQL
	VvbZIP27 VvbZIP35	CHTIRRINCNREAARKS <mark>R</mark> IRKKAYVOQIENSRMMLTQIECEL CHTIRRINCNREAARKS <mark>R</mark> IRKKAYVOQIESSRMMLTQIECEL
	VvbZIP01 VvbZIP28	QMTLRRIAGNREAARKSELRKKAYVQQLEGSQIHLTQIEGEL HKTLRRIAGNREAARKSELRKKAYVQQLESSRIKLTQIEGEL
	VvbZIP42 VvbZIP23	INTORRIAC <mark>N</mark> REAARKS <mark>R</mark> LRKKAYVQOLETSRIKLTELEGEL LWORRIAC <mark>N</mark> REAARKS <mark>R</mark> LRKKAYVQELESSRVKLMOLEGEL
		ARRIENVANRESAROTIREKOVLCHILARRAGELQAEKDNL
HC	Pp1s150_133V6.1 PACid_18057493 439314 PACid_15423134	IRRIRRIEANRESARQTIRRKOKMCEENTIKANELSSANDRC
UC	OsbZIP80 (OsZIP-2a) AtbZIP62	AKRIRHVIA <mark>n</mark> resarqtiirrqairielarkvad <b>i</b> ssonetm errirhiia <mark>n</mark> resarqtibrrqamceelskkaadltyenenl
	VvbZIP26	ARRIENVIANRESAROT <mark>IRREC</mark> ALCONISERMAAD <b>I</b> SLENET <b>I</b>
	Pp1s447_20V6.1 PACid:18054017 AmTr v1.0 scaffold00022.112	PRILIBLEKNREARSCSRANDESYMBLIEVECRMIERHVAHL SKRKRQIRNBOSALBSREBBREFVELIEIKSKYLEAECRRL
UC	AtbZIP60	SKKRKRQIRNRDSALRSRERRKEFVKTILE IMSKYLEAECRRL AKKRRRVRNRDAAVRSRERKKEYVQDIEKKSKYLERECLRL SKKKRROMRNRDSAMKSRERKKMYVKDIETKSKYLEAECRRL
	OsbZIP50 VvbZIP41	SKKKRROMRNADSAMKSRERKKMYVKUTETKSKYLEAECRI SKKRROQLRNADAAVRSRERKKYYVHUTETKSKYLESECRI