

BAM2_Arabidopsis thaliana	1	-----
BAM7_Arabidopsis thaliana	1	---MATDMHKLLGTSEEDDDEE-MDMDVKEEDDGRNRNRDKHAASGSSSNDEFMFQQ--
BAM7_Amborella trichopoda	1	MAQEMEGNGDDVVGEEEEDEEDMEMEVKEEEDEEAQNQSHHARLQMQQPHHVQSS--
BAM8_Amborella trichopoda	1	----MDYNRGVEMSVKQDLHDHNDHHLQAQIPP-----QLQVQIPS--QAQVQNQLIQTP
BAM8_Arabidopsis thaliana	1	----MHTLNNITTTTTGSQDPNLDPIPDQPFNRRNRNQPSRRPRGFAAAAAASIAPT
BZR-BAM_Abies lasiocarpa	1	-----
BZR-BAM_Pseudolarix amabilis	1	-----
BZR-BAM_Pseudotsuga wilsoniana	1	-----
BZR-BAM_Picea engelmandii	1	-----
BZR-BAM_Tsuga heterophylla	1	-----
BZR-BAM_Wollemia nobilis	1	-----
BZR-BAM_Agathis robusta	1	-----
BZR-BAM_Podocarpus rubens	1	-----
BZR-BAM_Cupressus dupreziana	1	-----
BZR-BAM_Taiwania cryptomerides	1	-----
BZR-BAM_Stangeria eriopus	1	-----
BZR-BAM_Encephalartos barteri	1	-----
BZR-BAM_Ophioglossum vulgatum	1	-----

BZR1-like domain

BAM2_Arabidopsis thaliana	1	-----
BAM7_Arabidopsis thaliana	54	-----SMQDQVCTPGGGGSRRSRPLEEKERTKLREHRRRAITARILGGLRR
BAM7_Amborella trichopoda	59	-----ELQQQGGSVEG--RRRCRPKEEKERTKLREHRRRAITARILAGLRR
BAM8_Amborella trichopoda	50	QNETPRR---LRGFAATAACVTSLSLKGREREKEKERTKLREHRRRAITSRLAGLRQ
BAM8_Arabidopsis thaliana	57	ENDVNNGNIAGIGGGEGSSGCGGGGGGKGREREKEKERTKLREHRRRAITSRLAGLRQ
BZR-BAM_Abies lasiocarpa	1	-----QQVLAPAGNATVKRRIREEREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Pseudolarix amabilis	1	-----EREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Pseudotsuga wilsoniana	1	-----QGNVQQVLVPAAGNATVKRRIREEREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Picea engelmandii	1	-----QQVLLPAGNATVKRRIREEREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Tsuga heterophylla	1	-----QGNVQQVIVAAGNATVKRRIREEREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Wollemia nobilis	1	-----RRIREEREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Agathis robusta	1	-----EREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Podocarpus rubens	1	-----RRVIREEREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Cupressus dupreziana	1	-----EREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Taiwania cryptomerides	1	-----QROCHPVTAARRIREEREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Stangeria eriopus	1	-----EREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Encephalartos barteri	1	-----EREKEKERTKLREHRRRAITSRLSGLRQ
BZR-BAM_Ophioglossum vulgatum	1	-----EKDREKEKERTKLREHRRRAITSRLSGLRQ

BZR1-like domain

BAM2_Arabidopsis thaliana	1	---MAIRNHSVIPVSVKLG-----APTRVSRSSLPFSV
BAM7_Arabidopsis thaliana	100	HGNYNLRVRADINDVIAALAREAGWVVLDPDGTTFPSKSGQTKPTGGSSAVAAGSSASHIA
BAM7_Amborella trichopoda	103	HGNYNLRVRADINDVIAALAREAGWVVLDPDGTTFPSRPHNAR--TAATPSTPTSSPLPA
BAM8_Amborella trichopoda	106	YGNFTLPARADMNDVIAALAREAGWTVEPDGTTRYTS-----PATLTPFP-IRAVE
BAM8_Arabidopsis thaliana	117	YGNFPLPARADMNDVIAALAREAGWSVEADGTTRYRSQ-----QPNHVQFP-TRSIE
BZR-BAM_Abies lasiocarpa	47	YGNYTLPVRADINDVIAALAREAGWTVDSOGTTYRSQ-----TPYPLKVAAPSSTSLAG
BZR-BAM_Pseudolarix amabilis	31	YGNYTLPVRADINDVIAALAREAGWTVDSOGTTYRSQT----HTPYPLKVAAPSSTSLAG
BZR-BAM_Pseudotsuga wilsoniana	51	YGNYTLPARADINDVIAALAREAGWTVDSOGTTYRSQA----HTPYPVKVAALSSTSLAG
BZR-BAM_Picea engelmandii	47	YGNYTLPVRADINDVIAALAREAGWTVDPDGTTRYRSQA----HTPYPVKVAALSSTSLAG
BZR-BAM_Tsuga heterophylla	51	YGNYTLPVRADINDVIAALAREAGWTVDSOGTTYRSQA----HTSYPLKVAAPSSTSLAG
BZR-BAM_Wollemia nobilis	34	YGNYNLPVRADINDVIAALAREAGWTVEPDGTTRYRLHSHS--HTPYPPKVAALSSTSLVG
BZR-BAM_Agathis robusta	31	YGNYNLPVRADINDVIAALAREAGWTVEPDGTTRYRLHSPS--RTPYPPKVAALSSTSLVG
BZR-BAM_Podocarpus rubens	34	YGNYNLPVRADINDVIAALAREAGWTVADGTTRYKLHT-----PYPSKVAALSSTSLAG
BZR-BAM_Cupressus dupreziana	31	YGNYSLPVRADINDVIAALAREAGWTVDSOGTTYRPLSLS--HIAYPPKVAALSSTSHVG
BZR-BAM_Taiwania cryptomerides	44	YGNYSLPVRADINDVIAALAREAGWTVDPDGTTRYRPLSLS--HTPYPPKVAALSSTSLVG
BZR-BAM_Stangeria eriopus	31	YGNYSLPVRADINDVIAALAREAGWTVESDGTTRYRSHS--HTPYPPRVAALSSTSLIG
BZR-BAM_Encephalartos barteri	31	YGNYSLPVRADINDVIAALAREAGWTVESDGTTRYRSHS--HTPYPPRVAALSSTSLVG
BZR-BAM_Ophioglossum vulgatum	32	YGNYNLPARADINDVIAALAREAGWTVADGTTRYRSVR--YPPAPWGNFAGGKEILPS

BAM2_Arabidopsis thaliana	33	GDWR-----GVSTFSGAR-----PLVLAQVKLAEESTEED
BAM7_Arabidopsis thaliana	160	SQQTSP--ALRVSSGLRSPVELSSCRMKGVFTAPSPYD--MPIQSPVLGVSVNKAE
BAM7_Amborella trichopoda	161	SQLPAAALRGGSATGSGFRNSVEYRPCRKGVEVPT-SLAS--PRIVANMGDRGDKNDGS
BAM8_Amborella trichopoda	156	SPLSATS---MKNCSMKSSLDDEPTSAIRLEDLSLPTSPDSG---LVTEKDQK-NDKYRNP
BAM8_Arabidopsis thaliana	169	SPLSSST---LKNCAKAAATESQQHSVLRNDEKLAPVSLDSI---GIAESDHPGNGRYTSV
BZR-BAM_Abies lasiocarpa	101	SPVSSAS---LRSTLVKNPTDHRLSGVRLRDGFTQKSPGST---ILGERGPKKEKIFN--
BZR-BAM_Pseudolarix amabilis	87	SPVSSAS---LRSTLVKNPTDYRPSAVRLRDSFTLKSPGST---ILGEKGPKEKIFN--
BZR-BAM_Pseudotsuga wilsoniana	107	SPGSSAS---LRSTLVKNPTDHRPSGVRLREGFTLKSPGST---MLGEKGPKEKIYN--
BZR-BAM_Picea engelmandii	103	SPGSSAS---LRSTLVKNPTDHRPSGVRLRDGFTLKSPGST---MLGEKGPKEKIYN--
BZR-BAM_Tsuga heterophylla	107	SPVSSAS---LRSTLVKNPTDYRPSGVRLRDGFTLKSPGST---ILGEKGPKEKIFN--
BZR-BAM_Wollemia nobilis	92	S-LSSAS---LRSTLVKNSIDFRPSGLRLKDRFTVKSPVSA---IYAEKGQKKKKTIA--
BZR-BAM_Agathis robusta	89	S-LSSAS---LRSTLVKNSIDFRPSGLRLKDSFTVKSPFSA---IYAEKGQKKKKTIA--
BZR-BAM_Podocarpus rubens	88	TTISSAS---FRSALVKNSMESRPSGLRLKENYKVKTPVSA---ICGDKSQKKEKITN--
BZR-BAM_Cupressus dupreziana	89	SPVSSVS---LRSTLVKHSIDFRPSALRLKDSFTVKSPVSA---MNRDKVQKKEKTIN--
BZR-BAM_Taiwania cryptomerides	102	SPVSSAS---LRSTLVKNSIDFRPAALRLKDSFTVKSPVSA---MYGEKGQKKEKTIN--
BZR-BAM_Stangeria eriopus	87	SPVSATS---LRSTLVKTSVDFRPSGFRKDNFAPKSPVSA---LFGEKGQKKEKTT--
BZR-BAM_Encephalartos barteri	87	SPVSATS---LRSTLVKTSVDFRPSGFRKDNFAPKSPVSA---LFGEK-----
BZR-BAM_Ophioglossum vulgatum	89	QLSSSAS---VFAPSINESDVKPAEPASMKESLTPKDQATFSQKVWVEPCLANSEGVG--

Start of the β -amylase domain

BAM2_Arabidopsis thaliana	63	RVPIDDDLDSTDQLVDEEIVHFEERDFAGTACVPVYVMLPLGVIDMNSEVVEPEELLDQL
BAM7_Arabidopsis thaliana	216	GLVGCSDVDVNSKQILEIPENLTEQDFSGETPYVPVYVMLPLGVINMKCEIADRDLGLKHL
BAM7_Amborella trichopoda	218	PLISSCMECTDDKQVLDVSGRIPERNFAGTPYVPVYVMLPLGVINMKCEVVDLDGLVKHL
BAM8_Amborella trichopoda	209	SPIDSSDSLADQHMROVRGDP-DDFSETPYIPVYVMLPLGIINNFCQLVDPEAVCRDL
BAM8_Arabidopsis thaliana	223	SPITSVGCLLEANQLIQDVHSAEQCNDFTESFYVPVYVAMLPGIINDNFGQLVDPEGVRQEL
BZR-BAM_Abies lasiocarpa	153	VTVDNSVELMDEEQVQEFPLPKEPERDFSGETDVPVYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Pseudolarix amabilis	139	VTIDNSLELMEEQVQEFPLPKEPERDFAGTDFVPVYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Pseudotsuga wilsoniana	159	VTIDNSLELME---VQEFPLPKEPERDFSGETDVPVYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Picea engelmandii	155	VAIDNSLELMEEQVQEFPLPKEPERDFSGETDVPVYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Tsuga heterophylla	159	LTIDNSLELME---VQEFPLPKEPERDFSGETDVPVYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Wollemia nobilis	143	LSIDNSLELMEEQVQEFPLPKEPERDFAGTPYVPVYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Agathis robusta	140	LSIDNSLELMEEQVQEFPLPKEPERDFAGTPYVPVYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Podocarpus rubens	140	MSIDNSLELMEE---QDFPKEPERDFAGTPYVPVYVMLPLGIINDRCQLVDPEGLQKDL
BZR-BAM_Cupressus dupreziana	141	MSIEDSLELMEDERVQEFPLPKEPERDFAGTAFVPVYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Taiwania cryptomerides	154	MSIENFLELMEDEHVQEFPLPKEPERDFAGTFVPVYVMLPLGIINDHCOLVDPEGLRKDL
BZR-BAM_Stangeria eriopus	139	VSVDNSLELFFKDEQVQEFPLPKEPERDFAGTSYIPLYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Encephalartos barteri	130	---DNSLELFFKDEQVQEFPLPKEPERDFAGTSYIPLYVMLPLGIINDRCQLVDPEGLRKDL
BZR-BAM_Ophioglossum vulgatum	144	RMPGKNSSITLVDQVRHGLISSHDNDFAGTECIPVYVMLPLSFFNDKYQVDTGTMLRDYL

BAM2_Arabidopsis thaliana	123	RTLKSINVVGVMVDCWWGIVEHSHTPOQYVWWSGYKKLFQIMRELGLKIQVMSFHECGGNV
BAM7_Arabidopsis thaliana	276	RILKSIHVDGVKVDCCWGWIVEGHSPQEYNWIGYRQLFQMVRLNLNKIQVMSFHECGGNV
BAM7_Amborella trichopoda	278	RILKSINVVGVMVDCWWGIVEHSHSPLEYDWHGYKKLFQIIRELKLKLQVMSFHECGGNV
BAM8_Amborella trichopoda	268	RRLKSINVGVIVECWWGIVEGWSPQKYIWSGYRELFNIVREVKLKLQVMSFHECRANG
BAM8_Arabidopsis thaliana	283	SYMKSINVGVVIDCWWGIVEGWNPKYVWSGYRELFNLIRDFKLKLQVMAFHEYGGNA
BZR-BAM_Abies lasiocarpa	213	RALKSINVVGIMVDCWWGVVEGRTPQKYVWSGYRELFNIVREAKLKLQVMSFHECGGTA
BZR-BAM_Pseudolarix amabilis	199	RALKSINVVGIMVDCWWGVVEGRIPQKYVWSGYRELFNIVREAKLKLQVMSFHECGGTA
BZR-BAM_Pseudotsuga wilsoniana	216	RALKSINVVGIMVDCWWGVVEGRTPQKYVWSGYRELFNIVREAKLKLQVMSFHECGGTA
BZR-BAM_Picea engelmandii	215	RALKSINVVGIMVDCWWGVVEGRTPQKYVWSGYRELFNIVREAKLKLQVMSFHECGGTA
BZR-BAM_Tsuga heterophylla	216	RALKSINVVGIMVDCWWGVVEGRTPQKYIWSGYRELFNIVREAKLKLQVMSFHECGGTT
BZR-BAM_Wollemia nobilis	203	RTLKSINVDGIRVDCWWGVVEGRTSQKYVWSGYRDLFNIVREAKLKLQVMSFHEYGGNV
BZR-BAM_Agathis robusta	200	RTLKSINVDGIRVDCWWGVVEGRTSQKYVWSG-----
BZR-BAM_Podocarpus rubens	198	RTLKSINVDGIMVACWWGIVESTRTPQKYVWSGYRELFNIVREDAKLKLQVMSFHECRGN-
BZR-BAM_Cupressus dupreziana	201	RTLRSINVDGIMVSCWWGIVEGRIPQKYVWSGYRELFDIVQEAKLKLQVMSFHECGGNV
BZR-BAM_Taiwania cryptomerides	214	KTLRSINVDGIMVNCWWGIVEGRTPQKYVWSGYRELFDIVREAKLKLQVMSFHECRGNV
BZR-BAM_Stangeria eriopus	199	RILKSINVVGIMVDCWWGIVEGRTPQKYVWSGYRELFNIVRETKLKLQVMSFHECVGNV
BZR-BAM_Encephalartos barteri	187	RTLKSINVVGIMVDCWWGIVEGRTPQKYIWSGYRELFNIVRETKLKLQVMSFHEYFD--
BZR-BAM_Ophioglossum vulgatum	204	KALKAAAVDGVTVFECWGLIERSIPOQYDWSGYEQFLGLIKREADLKLQVMSFHEYIDG-

BAM2_Arabidopsis thaliana	183	GDDVHIQLPEWVREIGQSNPDIIYFTDSA	GRRNTECLTWGIDKQ	RVLRGRTALEVYFDYMR
BAM7_Arabidopsis thaliana	336	GDDVCIPLPHWVAEIGRTNPDIYFTDREGRN	PECLSWGIDKERILRGRTALEVYFDYMR	
BAM7_Amborella trichopoda	338	GDDVCIPLPHWVVEIGKSNPDIIYFTDREGRN	PECLTWGIDKERVLRGRTALEVYFDYMR	
BAM8_Amborella trichopoda	328	GSEMSIPLPKWILEIGKDHQDIYFTDRE	RNRNVECLSWGIDKQ	RVLRGRTALEVYFDYMR
BAM8_Arabidopsis thaliana	343	SGNVMTISLQVWLKIGKDNPDIIYFTDREGRS	SFECLNWSIDKERVLRGRTALEVYFDYMR	
BZR-BAM_Abies lasiocarpa	273	GDEVNIPLPKWILEIGKDNPDIIYFTDREGRN	TECLTWGIDKERVLRGRTALEVYFDYMR	
BZR-BAM_Pseudolarix amabilis	259	GDD		
BZR-BAM_Pseudotsuga wilsoniana	276	GDDVNIPL	-----NPDIFFTDREGRNTECLTWGIDKERVLRGRTALEVYFDYMR	
BZR-BAM_Picea engelmandii	275	GDDVNIPLPKWILEIGKDNPDIIYFTDREGRN	TECLTWGIDKERVLRGRTALEVYFDYMR	
BZR-BAM_Tsuga heterophylla	276	GDNVNIPLPKWILEIGKDNPDIIYFTDREGRN	TECLTWGIDKERVLRGRTALEVYFDYMR	
BZR-BAM_Wollemia nobilis	263	GDEVHIPLPKWILEIGKDN	NIFFTDREGRNTECLTWGIDKERVLRGRTALEVYFDYMR	
BZR-BAM_Agathis robusta		-----		
BZR-BAM_Podocarpus rubens	257	GDDVHIPLPKWILEIGKDNPDIIYFTDREGRN	TECLTWGIDKERILRGRTALEVYFDYMR	
BZR-BAM_Cupressus dupreziana	261	RDEVHIPLPRWVLEIGRENADIIFFTDREGR	NTDCLTWGIDKERVLRGRTALEVYFDYMR	
BZR-BAM_Taiwania cryptomerides	274	GDEVHIPLPRWVLEIGRENTDIIFFTDREGRN	TECLTWGIDKERVLRGRTALEVYFDYMR	
BZR-BAM_Stangeria eriopus	259	GNDVNIPLPKWILDIGRDNPDIIFFTDREGRN	TECLT	
BZR-BAM_Encephalartos barteri		-----		
BZR-BAM_Ophioglossum vulgatum	263	--DVIITLFTWALEIGKENPDIIYFTDQH	GRRHSGCLTWGVDKERVFKGRNALEVYYDFMR	

BAM2_Arabidopsis thaliana	243	SFRVEFDEFFEEKIIPLEIVGLGPCGELRYPSYPAQF	GWKYPGIGEFQCYDKYLMNSLKE
BAM7_Arabidopsis thaliana	396	SFRIELAEFLLEDGVISMVEIGLGPCGELRYPS	CPIKHGWRYPGVGEFQCYDKYLSKSLRK
BAM7_Amborella trichopoda	398	SFRVEFDEFFADGVISEIEIGLGPCGELRYPSY	PVRHGWRYPGIGEFQCYDKYLMKSLRK
BAM8_Amborella trichopoda	388	SFRMEFDDLFEVSLISAVEIGLGPSELQYPSF	PERMGWRYPGIGEFQCYDKYLQHSLRK
BAM8_Arabidopsis thaliana	403	SFRSEFDDLFEVGLITAVEIGLGASGELKYPSF	PERMGWRYPGIGEFQCYDKYSQSLQK
BZR-BAM_Abies lasiocarpa	333	SFRMEFDDHFDVDAISEIEIGLGASGELKYPSY	PERHGWRYPGIGEFQCYDKYMQKSLRK
BZR-BAM_Pseudolarix amabilis		-----	
BZR-BAM_Pseudotsuga wilsoniana	326	SFRMEFDDLFDGAISEIEIGLGASGELKYPSY	PERHGWRYPGIGEFQCYDKYMQKSLRK
BZR-BAM_Picea engelmandii	335	SFRMEFDDLFDGAISSIEIGLGASGELKYPSY	PERHGWRYPGIGEFQCYDKYMQKSLRK
BZR-BAM_Tsuga heterophylla	336	SFRMEFDDLFDGAISEIEIGLGASGELKYPSY	PERHGWRYPGIGEFQCYDKYMQKSLRK
BZR-BAM_Wollemia nobilis	323	SFRTEFDDLFDGAISSIEIGLGASGELRYPSYL	ERHGWRYPGIGEFQCYDKYLQKSLRK
BZR-BAM_Agathis robusta		-----	
BZR-BAM_Podocarpus rubens	317	SFRMEFDDLFDGVISEIEIGLGHFGEELRYPSY	PERHGWRYPGIGEFQCYDKYLQKSLRK
BZR-BAM_Cupressus dupreziana	321	SFRMEFDDLFDGAISSIEIGLGASGELRYPSY	PERNGWRYPGIGEFQCYDKYLQKSLRK
BZR-BAM_Taiwania cryptomerides	334	SFRMEFDDLFDGAISEIEIGLGASGELRYPSY	PESHGWRYPGIGEFQCYDKYLQKSLRK
BZR-BAM_Stangeria eriopus		-----	
BZR-BAM_Encephalartos barteri		-----	
BZR-BAM_Ophioglossum vulgatum	321	SFRQNFHNLFEDNTIVCIEIGLGAQGDLO	YPSHARKHGWRYPGIGEFQCYDKYLQKSLKA

BAM2_Arabidopsis thaliana	303	AAEVRGHSFWGRGPDNTETYNSTPHGTGFFR	DGGDYDSYYGRFFLNWYSRVLIHDHGRVL
BAM7_Arabidopsis thaliana	456	AAESRGHLFWARGPDNTCSYNSQPQGTGFFC	DGGDYDGLYGRFFLKWYSQVLIDHADQIL
BAM7_Amborella trichopoda	458	AAETRGRHFWARGPDNAGQYNSRPDHTSFFC	DGGDYDSYYGRFFLGWYSQVLIDHADRVL
BAM8_Amborella trichopoda	448	AAKLRGHSFWARGPDNAGQYNSQPHETGFFC	DRGDYDSYYGRFFLQWYSQVLIDHADHVL
BAM8_Arabidopsis thaliana	463	EAKSRGFIWFVGKGPENAGQYSSHPHETVFFC	ERGEYDSYYGRFFLNWYSQLLIGHAENVL
BZR-BAM_Abies lasiocarpa	393	AAEARGHSFWARGPDNAGYNSQPHDTGFFR	DGGDYNSYYGRFFLRWYSQGLIEHGRVL
BZR-BAM_Pseudolarix amabilis		-----	
BZR-BAM_Pseudotsuga wilsoniana	386	AAEARGHSFWARGPDNAGYNSQPHDTGFFR	DGGDYNSYYGRFFLRWYSQGLIEHGRVL
BZR-BAM_Picea engelmandii	395	AAEARGHSFWARGPDNAGYNSQPHDTGFFR	DGGDYNSYYGRFFLRWYSQGLIEHGRVL
BZR-BAM_Tsuga heterophylla	396	AAEARGHSFWARGPDNAGYNSQPYDTGFFR	DGGDYNSYYGRFFLRWYSQGLIEHGRVL
BZR-BAM_Wollemia nobilis	383	AAEARGHSFWARGPDNAGYNSQPOETGFFC	DGGDYDSYYGRFFLRWYSQVLEHCDRVL
BZR-BAM_Agathis robusta		-----	
BZR-BAM_Podocarpus rubens	377	AAEARGHSFWARGPDNAGYNSQPDGTGFFC	CNGGDYDSYYGRFFLRWYSQVLEHCDRVL
BZR-BAM_Cupressus dupreziana	381	AAEARGHSFWARGPDNAGYNSQPRDTEFFC	DGGDYDSYYGRFFLRWYSQVLEHCDRVL
BZR-BAM_Taiwania cryptomerides	394	AAEARGHSFWARGPDNAGYNSQPHGTDFC	DGGDYDSYYGRFFLRWYSQVLEHCDRVL
BZR-BAM_Stangeria eriopus		-----	
BZR-BAM_Encephalartos barteri		-----	
BZR-BAM_Ophioglossum vulgatum	381	AAVARGHPWVGIGPLNTGHYNLCQD	IRFFCDGGDYDSFFGRFFLGWYSEVLIDH----

BAM2_Arabidopsis thaliana	363	AMANLAFEGTCTIAAKLSGIHWWYKTASHAAELTAGFYNS	SNRDGYGPIAAMFKKHDAALN
BAM7_Arabidopsis thaliana	516	CLAKLVFDSSCIAAKLPDVHWWYRTASHAAELTAGFYNP	SNRDGYSIAIASTLKKHGATLS
BAM7_Amborella trichopoda	518	ALANLAFEGTRIAAKISGIHWWYKTASHAAELAAGFYNP	PCNRDGYSPIAQMLKKHEVALN
BAM8_Amborella trichopoda	508	ALANLAFEGTRIVAKIPAVYWWYRTASHAAELTAGFYNP	SNQEGYTLLNLKKHSATFR
BAM8_Arabidopsis thaliana	523	SLANLAFEBTKIIVKIPAIYWSYKTASHAAELTAGYYP	SNRDGYSLVFETLKKYSVTVK
BZR-BAM_Abies lasiocarpa	453	DLANLAFEGTRIAVKVSGIHWWYKTASHAAELTAGFYNS	SNLDGYGPICQIVKKHNATFN
BZR-BAM_Pseudolarix amabilis		-----	-----
BZR-BAM_Pseudotsuga wilsoniana	446	GLANLAFEGTRIAVKVSGIHWWYKTASHAAELTAGFYNS	SNLDGYGPICQIMKKHNATFN
BZR-BAM_Picea engelmandii	455	DLANLAFEGTRIAVKVSGIHWWYKTASHAAELTAGFYNS	SNLDGYGPVCQIMKKHNATFN
BZR-BAM_Tsuga heterophylla	456	DLANLAFEGTRIAVKVSGIHWWYKTASHAAELTAGFYNS	SNLDGYGPICQIVKKHNATFN
BZR-BAM_Wollemia nobilis	443	TLANLAFEGTPIAVKVSIGIHWYKTASHAAELVAGFYNS	SNMDGYAPICQVILKKHDATLN
BZR-BAM_Agathis robusta		-----	-----
BZR-BAM_Podocarpus rubens	437	SLANLAFEGTQIAVKLSGIHWWYKTS	SSHAAELAAGFYNS
BZR-BAM_Cupressus dupreziana	441	AFANFAFEGTQIAVKV	
BZR-BAM_Taiwania cryptomerides	454	AFANLAFEGTQIAVKVSGIHWWYKTASHAAELAAGFYNS	SNMDGYAPICQVILKKHDATFN
BZR-BAM_Stangeria eriopus		-----	-----
BZR-BAM_Encephalartos barteri		-----	-----
BZR-BAM_Ophioglossum vulgatum		-----	-----

BAM2_Arabidopsis thaliana	423	FTCVELRTLD--QHEDFPEALADPEGLVWQVLNAAWDAS	IPVASENALPCYDREGYNKIL
BAM7_Arabidopsis thaliana	576	FVSGEVQVLN--RPDDFSGALGEPEAVAWQVLNAAWDS	GTPVARENSLACHDRVGYNKML
BAM7_Amborella trichopoda	578	FTCAELRTLD--QHEDFPEALADPEGLVWQVLNAAWDV	GIPVASENALPCYDREGYNKVL
BAM8_Amborella trichopoda	568	FIFSGQLTTP---QDNDETADPEGLTWQVLNAAWDQK	UNIASQNAVPCYDREGFNRIIL
BAM8_Arabidopsis thaliana	583	FVCPGPGQMSF---NAHEEALADPEGLSWQVLNAAWDK	GLGGENAITCFDRDGCMLRI
BZR-BAM_Abies lasiocarpa	513	FSCVELNNLD--HEQGFLEAMEDPHGLVWQVMNAAWD	AGIPVASVNPVPCYDRDGYNRIL
BZR-BAM_Pseudolarix amabilis		-----	-----
BZR-BAM_Pseudotsuga wilsoniana	506	FSCVDLNNLD--HEQGFLEAMEDPHGLVWQVMNAAWD	AGIPVASVNPVPCYDRDGYNRIL
BZR-BAM_Picea engelmandii	515	FSCVDLNSLD--HEQGFLEAMEDPHGLVWQVMNAAWD	AGIPVASVNPVPCYDRDGYNRIL
BZR-BAM_Tsuga heterophylla	516	FSCVDLNDLDHHEQGFLEAMEDPHGLVWQVLNAAWD	AGIPVASVNPVPCYDRDGYNRIL
BZR-BAM_Wollemia nobilis	503	FTCVELHNLG--QEEGFLEAMEDSQGLLWQVLNAAWD	ARISVASINALPCYDRETYNRIL
BZR-BAM_Agathis robusta		-----	-----
BZR-BAM_Podocarpus rubens	497	FTCLEWHNLG---HEGFLLEAMEESHGLTWQVLNAAWD	SGIPVASTNTLPCYDRDSYNRIL
BZR-BAM_Cupressus dupreziana		-----	-----
BZR-BAM_Taiwania cryptomerides	514	FTCVFEPNLD--RDERLLEAMEDSQGLVWQVLNASWD	AGIPVASVNALPCYDRDSYNRIL
BZR-BAM_Stangeria eriopus		-----	-----
BZR-BAM_Encephalartos barteri		-----	-----
BZR-BAM_Ophioglossum vulgatum		-----	-----

BAM2_Arabidopsis thaliana	481	ENAKPLTPDPGRHLSCFTYLRLNPILMESQ-NFKEFE
BAM7_Arabidopsis thaliana	634	ESVKFRNDPDRKHLSSFAYSRLVLPALMEGH-NIVEFE
BAM7_Amborella trichopoda	636	ENAKPAHDPDGRHLSAFTYLRLSPALMERQ-NFLEFE
BAM8_Amborella trichopoda	624	ETAKPRNDPDRHHLSSFAVQRMSPSLIQASEFSEFD
BAM8_Arabidopsis thaliana	639	DIAKPRNHDPDGYHFSFFTYRQFSP-LVQGSTCFDLD
BZR-BAM_Abies lasiocarpa	571	ENAKPRNDPDGRHLIAFTYLRLSPTLMERE-NFCEFD
BZR-BAM_Pseudolarix amabilis		-----
BZR-BAM_Pseudotsuga wilsoniana	564	ENAKPRNDPDGRHLIAFTYLRLSPTLMERA-NFCEFD
BZR-BAM_Picea engelmandii	573	ENAKPRNDPDGRHLIAFTYLRLSPTLMERA-NFCEFD
BZR-BAM_Tsuga heterophylla	576	ENAKPRNDPDRRHLIAFTYLRLSPTLMERA-NFCEFD
BZR-BAM_Wollemia nobilis	561	ENAKPRNDPDRRHLVTFYTLRLSPTLMERT-YFSEFD
BZR-BAM_Agathis robusta		-----
BZR-BAM_Podocarpus rubens	554	ENAKPMDDPDRRHLVTFYVRLSPTLMERT-YFCEFD
BZR-BAM_Cupressus dupreziana		-----
BZR-BAM_Taiwania cryptomerides	572	ENAKPRNDPDRRHLVAFYTLRLSPTLMERT-YFYEFD
BZR-BAM_Stangeria eriopus		-----
BZR-BAM_Encephalartos barteri		-----
BZR-BAM_Ophioglossum vulgatum		-----

BAM2_Arabidopsis thaliana	518	RFVLRMHGEAVLPDLGLAPGTQETNPE
BAM7_Arabidopsis thaliana	671	RFVKKLHGEAVMNNHHHHHHQQV---
BAM7_Amborella trichopoda	673	RFVLRMHGEAVPDPQL-----
BAM8_Amborella trichopoda	661	RFVKS MHGEAVTDAQV-----
BAM8_Arabidopsis thaliana	639	YFVLRMHGD-TRDKQF-----
BZR-BAM_Abies lasiocarpa	676	RFVLRMHGEAVLNHFV-----
BZR-BAM_Pseudolarix amabilis		-----
BZR-BAM_Pseudotsuga wilsoniana	601	RFVLRMHGEAVLNLFHV-----
BZR-BAM_Picea engelmandii	610	RFVLRMHGEAVLNHFV-----
BZR-BAM_Tsuga heterophylla	613	RFVLRMHGEAVLNLFHV-----
BZR-BAM_Wollemia nobilis	598	RFVLRMHGEAVLDLQ-----
BZR-BAM_Agathis robusta		-----
BZR-BAM_Podocarpus rubens	591	RFVLRMHGEAVLDLR-----
BZR-BAM_Cupressus dupreziana		-----
BZR-BAM_Taiwania cryptomerides	609	RFVLRMHGEAVLHFQ-----
BZR-BAM_Stangeria eriopus		-----
BZR-BAM_Encephalartos barteri		-----
BZR-BAM_Ophioglossum vulgatum		-----

Additional File 7: Protein alignment of 13 BZR-BAM fusion proteins of conifers (highlighted in blue), cycads (yellow) and ferns (green). BZR-BAMs of *Arabidopsis thaliana* and *Amborella trichopoda* have been included for comparison, as well as the closest *Arabidopsis* ortholog lacking a BZR domain (BAM2). The position of the BZR1-like domain as well as the start of the β -amylase domain are indicated in the alignment.