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Yamamoto et al. Site-specific *N*-glycosylation of the S-locus receptor kinase and its role in the self-incompatibility response of the Brassicaceae.

Supplemental Material

Supplemental Table 1. Number of potential *N*-glycosylation sites in the extracellular domains of SRKs from *A. lyrata*, *A. halleri*, *B. oleracea*, and *B. rapa*.

<i>A. lyrata</i>		
SRK Variant	Accession Number	Number of sites
AISRKb	BAB40987	6
AISRKa	BAB40986	5
AISRK6	ACU29642	9
AISRK9	ABF71372	7
AISRK13	AGC54823	7
AISRK16	ABF71373	8
AISRK18	ABF71374	7
AISRK22	ABF71375	4
AISRK25	ACU29643	7
AISRK31	ABF71377	5
AISRK36	AGC55017	6
AISRK37	ABF71379	6
Avg.		6.4

<i>A. halleri</i>		
SRK Variant	Accession Number	Number of Sites
AhSRK4	ACX50424	5
AhSRK13	CCI61482	7
Avg.		6

<i>B. oleracea</i>		
SRK Variant	Accession Number	Number of Sites
BoSRK1	BAC24040	7
BoSRK2	CAC84411	5
BoSRK3	CAA55950	8
BoSRK4	BAF91400	7
BoSRK5	CAB41878	6
BoSRK6	Q09092	7
BoSRK7	BAE95182	8
BoSRK8	BAC24042	8
BoSRK11	BAC24043	7
BoSRK12	BAE95185	8
BoSRK13	BAA83905	8
BoSRK14	BAF91401	8
BoSRK15	BAE95187	7
BoSRK16	BAC24044	8
BoSRK18	BAA92836	8
BoSRK20	BAC24045	7
BoSRK24	BAC24046	8
BoSRK25	BAC24047	7
BoSRK28	BAE92528	7
BoSRK29	CAA82930	7
BoSRK32	BAB79442	8
BoSRK33	BAC24048	9
BoSRK35	BAC24049	7
BoSRK36	BAC24050	6
BoSRK38	BAC24051	8
BoSRK39	BAC24052	8
BoSRK45	BAC24053	6
BoSRK50	BAC24054	7
BoSRK51	BAC24055	7
BoSRK52	BAF91411	9
BoSRK57	BAC24056	7
BoSRK58	BAC24057	8
BoSRK60	BAA92837	7
BoSRK61	BAF91412	6
BoSRK62	BAC24058	8
BoSRK64	BAC24059	9
BoSRK65	BAC24060	7
BoSRK68	BAF91415	7
Avg.		7.4

<i>B. rapa</i>		
Name	Accession Number	Number of Sites
BrSRK8	BAA07576	8
BrSRK9	BAA06285	7
BrSRK11	BAB86340	6
BrSRK12	BAA07577	7
BrSRK21	BAF57003	7
BrSRK22	BAB21001	7
BrSRK25	BAF91385	8
BrSRK26	BAC24025	8
BrSRK27	BAC24026	9
BrSRK29	BAA31252	6
BrSRK30	BAC24027	7
BrSRK32	BAC24028	7
BrSRK33	BAC24029	8
BrSRK34	BAC24030	5
BrSRK35	BAC24031	8
BrSRK36	BAC24032	7
BrSRK37	BAC24033	7
BrSRK40	BAE78539	6
BrSRK41	BAC24034	9
BrSRK44	BAE78540	6
BrSRK45	BAA34911	7
BrSRK46	BAE95180	6
BrSRK48	BAC24035	8
BrSRK49	BAC24036	6
BrSRK52	BAC24037	8
BrSRK53	BAF91394	6
BrSRK54	BAE96737	7
BrSRK55	BAF91395	7
BrSRK56	BAF91396	7
BrSRK60	BAC76056	7
BrSRK61	BAF91397	7
BrSRK99	BAC24038	6
Avg.		7

Supplemental Table 2. Distribution and conservation of potential *N*-glycosylation sites in the extracellular domains of SRKs from *A. lyrata*, *A. halleri*, *B. oleracea*, and *B. rapa*.

SRK sub domain	LLD1								LLD2								EGF-like				PAN					
AISRKb residue	43	61	78	96	112	115	122	149	150	181	197	216	238	241	245	260	270	284	314	326	336	337	360	389	436	439
AISRKb <i>N</i> -glycan site				96			122								245				314			337		389		
Al 12 sequences	11		2	1	3	2	11	4			3			1	10	4			5		1	1	1	12	1	4
frequency %	92		17	8.3	25	17	92	33			25			8.3	83	33			42		8.3	8.3	8.3	100	8.3	33
Ah 2 sequences	2			1			2	2							2				1					2		
frequency %	100			50			100	100							100				50					100		
Bo 38 sequences	38	8	1	7		31	37		5	1	8	2			35	34		1	32	1				38		
frequency %	100	21	2.6	18		82	97		13	2.6	21	5.3			92	89		2.6	84	2.6				100		
Br 32 sequences	28	6		3		30	32		1	1	6	1	1		25	27	1		25	3				31		
frequency %	88	19		9.4		94	100		3.1	3.1	19	3.1	3.1		78	84	3.1		78	9.4				97		
total (84 seq.)	79	14	3	12	3	63	82	6	6	2	17	3	1	1	72	65	1	1	63	4	1	2	1	83	1	4
total frequency %	94	17	3.6	14	3.6	75	98	7.1	7.1	2.4	20	3.6	1.2	1.2	86	77	1.2	1.2	75	4.8	1.2	2.4	1.2	99	1.2	4.8

* The frequencies are expressed as percentages of total number of variants. The frequencies of the highly-conserved sites and the moderately-conserved sites are shown in red and blue, respectively.

** Yellow highlights indicate the hvl (204-219), hvII (269-304), and hvIII (326-340) regions in SRKb.

Supplemental Table 3. Primers used for plasmid construction.

Name	sequence (5'→3')
SRKb-3xFLAG F	GATTATAAAGATCATGATATCGATTACAAGGATGACGATGACAAGTAATTGGAAAGCCAT
SRKb-3xFLAG R	ATCGATATCATGATCTTTATAATCACCGTCATGGTCTTTGTAGTCCCGAGGGTCGATGGC
SRKbCYFP P1	ACGAGACCGAAGCTAACACGAGGAAGG
SRKbCYFP P2	CACAGCTCCACCTCCACCTCCAGGCCCGGCCCGAGGGTTGATGGCCGA
SRKbCYFP P3	TGCTGGTGCTGCTGCGGCCGCTGGGGCCTTGAAAGCCATTGAGCC
SRKbCYFP P4	CGTTCCAACGTGAAGGAGGGTATTGAC
cYFP2 fp	GGCCGGCCTGGAGGTGGAGGTGGAGCTGTGAGCA
cYFP2 rp	GGCCCCAGCGGCCGCAGCAGCACCAGCCTTGTA
SRKb(T98A) F	CCTCTCTACAATTCCGCTGGAAGCTC
SRKb(T98A) R	GAGTTCCAGCGGAATTGTAGAGAGG
SRKb(T124A) F	GACGAATCTAGCCGGAGTTTTGCG
SRKb(T124A) R	CGCAAACTCCGGCTAGATTCGTC
SRKb(T247A) F	CTCCAACCTTCGCGGAGAACAGAG
SRKb(T247A) R	CTCTGTTCTCCGCGAAGTTGGAG
SRKb(S316A) F	GTGATATGAACACGGCACCGATTT
SRKb(S316A) R	CAAATCGGTGCCGTGTTTCATATCAC
SRKb(S339A) F	TGGGGCAATTGGGTGTGTTAGGAAGAC
SRKb(S339A) R	GTCTTCCTAACACACCCAATTGCCCA
SRKb(T391A) F	GGTGTCTCAATGATTGTAATTGTGCAGCATA
SRKb(T391A) R	TATGCTGCACAATTACAATCATTGAGACACC
SRKb(N389Q) F	AATGATTGTCAATGTACAGCATAT
SRKb(N389Q) R	ATATGCTGTACATTGACAATCATT
SRKb(C388S) F	AATGATAGTAATTGTACAGCATAT
SRKb(C388S) R	ATATGCTGTACAATTAATCATT
SRKb(C390S) F	AATGATTGTAATAGTACAGCATAT
SRKb(C390S) R	ATATGCTGTACTATTACAATCATT

Supplemental Figure 1. Amino acid-sequence alignment of SRK variants from *Arabidopsis lyrata* (AlSRKx), *A. halleri* (AhSRKx), *Brassica oleracea* (BoSRKx), and *B. rapa* (BrSRKx).

The sequences were aligned relative to the sequence of the *A.lyrata* SRKb variant used in this study. Potential N-glycosylation sites are shown in red type. Regions delineated by yellow highlights indicate hyper variable regions hvl, hvII, and hvIII.

AlSRKb	MRVVVFNCHHFYIFFVV-----LILIRSVFSSYVHTLSSTESLTISSKQTIIVSPGEVFE	55
AlSRKa	-----PNKHHYYSFSFVF--LFFFLILFPDFSI STNTLSATESLTISSNKTIVSLGDFVE	54
AlSRK6	MRGLVPNCHQSRNFFFLF--VVSIMFRLAFSIYVNTLSPTESLTIASNRTIVSLGDDFVE	58
AlSRK9	-----VVLILFYPTFSISVNTLSSTETLTISSNRTIVSPGYDFVE	40
AlSRK13	MRGLQNI DHHSYTF SFLLVLA VLLL VFP EFVISVNTLSSTESLTISSNRTIVSPGGVFE	60
AlSRK16	-----SIFFFV--LFFALVLFPDFSISANTLSATESLTISSNKTIVSPGGVFE	47
AlSRK18	-----VSILFRHAFSINVNTLSSTESLTISSNRTIVSLGDDFVE	39
AlSRK22	-----TQIHPTYSIYVNTLPSTEILTISSNRTIVSPGDVFE	37
AlSRK25	MRGEVFNKHHSYTFFV--LFFALVLFPDFSISANTLSATESLTISSNKTIVSPGGVFE	58
AlSRK31	---MRGFPRYHHIYTFAYIFVVLILFRRVFSINVNTFSSNSLTLNRTIVSSSDVFE	57
AlSRK36	-----PYTFSFSLVFVVLILFYPTFSISGNTLSSTETLTISSNRTIVSPGNDFVE	50
AlSRK37	MARGVFNKHHSYIFFF--LFFVIVLFPDFSISANTLSATESLTISSNKTIVSPGGVFE	57
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AlSRKb	GFFNPAATSRDGRWYLG IWFKTNLERTYVWVANRDNPLYNSTGTLKISDTNLVLLDQFD	115
AlSRKa	GFFT-----ILGDSWYLG IWKKIPEKTYVWVANRDNPISTSTGILKISNANLVLLNHF	109
AlSRK6	GFFKPAASLREGDRWYLG IWKTI PVRTYVWVANRDNPLSSAGTLKISGINLVLLNQS	118
AlSRK9	GFFKP----GSSSLWYLG IWKKVPDRIYPWVANRDNPLSNSLGLRVSGTNLVLLDHSD	96
AlSRK13	GFFKP----VSNRWYLG IWKKVPQRAYVWVANRDSPLPNSIGILKISDANLVLLDHSN	116
AlSRK16	GFFK-----ILGDSWYLG IWKKNVSEKTYVWVANRDNPLSDSIGILKITNSNLVLI	102
AlSRK18	GFFKPAASLRNGDHWYLG IWKTI SVRTYVWVANRNHPISSSAGTLKISGINLVLLNQS	99
AlSRK22	GFFKL----GSPARWYLG IWKKVP EISYVWVANRDNPLSNSMGLKIVDGNLIIFDHYD	93
AlSRK25	GFFK-----ILGDSWYLG IWKKNVSEKTYVWVANRDKPLSNSIGILKITNANLVLLNHYD	113
AlSRK31	GFFKITTSPPDDDRWYLG IWKKIPERTYVWVANRDDPLSTSSGTLKISDNKLLLLDQVD	117
AlSRK36	GFFKF----DSRSLWYLG IWKKVPQRTYPWVANRDNPLSNPIGTLKISGNLVLLDHSN	106
AlSRK37	GFFR-----ILGDSWYLG IWKKISQRTYVWVANRDNPLSNPIGILKISNANLVILDNSD	112
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AlSRKb	TLVWSTNLTG-VLRSPVVAELLSNGNLVLRDSDSKTN-DKDGILWQSFDPDPTDLLPQMKMG	173
AlSRKa	TPVWSTNLTA-EVKSPVVAELLDNGNFVLRDSDSKTN-GSDEFWQSFDFPDTDLLPQMKLG	167
AlSRK6	ITVWSTNLTG-AVRSQVVAELLPNGNFVLRDSDSKN-GQDVFFWQSFDPDPTDLLPHMKLG	176
AlSRK9	KPVWSTNLTTGNVKS PVVAELLANGNFVLRDSDSKN-DPSGFLWQSFDFPDTDLLPEMKLG	155
AlSRK13	TLVWSTNRTR-DTRSPMVAELLDNGNFVLRVSSNKNDQGGILWQSFDFPDTLLFPQMKLG	175
AlSRK16	TPIWSTNLTG-AVISPVVAELLDNGNFVLRDSDSKTN-DSGFLWQSFDFPDTNLLPQMKLG	160
AlSRK18	ITVWSTNLTG-AVRSPVVAELLSNGNFVLRDSDKPN-EQDRLLWQSFDPDPTDLLPHMKLG	157
AlSRK22	NYVWSTKLTTKDVRSSLVAELLDNGNFVLRVSSNNN-DPDKFLWQSFDPDPTDLLPQMKLG	152
AlSRK25	TPVWSTNLTG-AVRSPVVAELHDNGNFVLRDSDSKTN-ASDRFLWQSFDFPDTNLLPQMKLG	171
AlSRK31	TPIVSWNLSGGGVRSPVVAELLGNGNFVVKDSKAN-NPNGFLWQSFDFPDTDLLPQMKMG	176
AlSRK36	KPVWSTNLTI RNVRSPVVAELLANGNFVMRYSNN--DQGGFLWQSFDPDPTDLLPQMKLG	164
AlSRK37	ISVWTTNLTG-AVRSPVVAELLDNGNFVLRDSDSKIN-ESDEFWQSFDFPDTDLLPQMKLG	170
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hvi

AlSRKb WDVKKGLNRFLRSWKSQYDPSSGDFSYKLETRGFPEFFLLWRNSRVFRSGPWDGLRFSGI 233
 AlSRKa LDHKKRLNKFLRSWKSSFDMSGDYLFKIEITLGLPEFFIWMSDFRVFRSGPWNGIRFSGM 227
 AlSRK6 LDRKTENNRVLT SWKNSYDPSSGYLSYKLEMLGLPEFFMWRSKVPVFRSGPWDGIRFSGI 236
 AlSRK9 YDLKTGVNRFLRSWRSFDDPSSGNFTYKLDITQGLPEFWFRESDFRLQORSGPWDGIQFSGI 215
 AlSRK13 WDLKAGINRYLISWKSPNDPSSGKYSYKLESQGLPEFFLYNRDSPTHRSGPWDGIRFSGI 235
 AlSRK16 LDNKRALNRFLT SWKNSFDPPSSGDYTFKLETRGLTELFGLFTILELYRSGPWDGRRFSGI 220
 AlSRK18 LDLKTGNRNFITSWKNSYDPSSGYLSNKLDILGLPEFLVLRREGVTVYRSGPWDGIQFSGI 217
 AlSRK22 WDLKTGLNRFLRSWKSSDDPSSGNFTCKLETRGFPEFLIRFRFTPIYRSGPWDGIRFSGM 212
 AlSRK25 WDHKRGLNRFLT CWKNSFDPPSSGDYMFRLDTQGLPEFFGLKNFLEVYRTGPDGHRFSGI 231
 AlSRK31 WDRKTANNRFLRSWKSPYDPSSGDYSYKLEIQGLPQFYLTAKRAVFRSGPWDGIRFSGM 236
 AlSRK36 WDRKTGLNRILRSWRSRDDPSSSNYSYELQTRGFPEFFLLDEDVPPHRSGPWDGIQFSGI 224
 AlSRK37 QDHKRGLNRFLT SWKSSFDPPSSGSFMFKLEITLGLPEFFGF'TTFLEVYRSGPWDGLRFSGI 230

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hvil

AlSRKb PEMQOWE--YMVSNFTENREEVAYTFQITNHNIIYSRFTMSSTGALKRFRWISSSEEWNL 291
 AlSRKa LEMQKWD--DIIYNLTENKEEVAFTFRPTDHNLYSRIITINYAGLLQOFTWDPYIKEWNML 285
 AlSRK6 PEMQIWKHINISYNFTENTEVEAYTYRVTTPNVYARIMMDFQGFLOLSTWNPAMSEWNMF 296
 AlSRK9 PEVRQLN--YMSYNFTENREEVTDFTLMTNHSIYSRIITVSAAGSFDRFTWITPSTGWSRY 273
 AlSRK13 PDKQQLD--YMVYNFTENKEEVAYMF SMTNHSIYSRIITLSSIGTFERFTWIPPSWQWNLL 293
 AlSRK16 PEMEQWD--DFIYNFTENREEVFYTFRLTDPNLYSRIITINSAGNLERFTWDP TREEWNR 278
 AlSRK18 PEMQRWKDFNIVYNFTENKEEIAFTYRVTTPKVYARITMNF DGYLQLSRWLPETLEWNVF 277
 AlSRK22 PEMRDLG--YMFNFTANGEVAYTFLMTNKS IYSRIITLSSAGIFERYTWVPTSWEWTLF 270
 AlSRK25 PEMQOWD--DIVYNFTENSEEVAYTFRLTDQTLYSRIITINSVGQLERFTWSPTQOEWNMF 289
 AlSRK31 PEMQRWNNAEIVYNFTDNREETAFTFQIDIPSSYSRIIKMSFSGLLELSTWVPTTLAWDNF 296
 AlSRK36 PEVRQLN--YIINNFKENRDEISYTFQMTNHSIYSRIITVSFSGSLKRFMYIPPSYGWNQF 282
 AlSRK37 PEMQOWD--DIIYNFTENRDEVAYTFRVTEHNSYSRIITINTVGRLEGFMWEPTQOEWNMF 288

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hviil

AlSRKb WNKPNH--HCDMYKRCGP--YSYCDMNTSPICNCIGGFKPRNLHEWTLRNGSITGCVRKTRLN 349
 AlSRKa WSTSTDNACETYNPCGP--YAYCDMSTSPMCNCVEGFKPRNPQEWALGDVVRGRCQRTTPLN 344
 AlSRK6 WLSSTD--ECDTYPSCNPTNSYCDANKMPRCNCIKGFVPGNPQERSLNNSFTTECLRKTQLS 355
 AlSRK9 WSLPTD--ECDSFKSCGP--YAYCDLNTSPVCNCIGGFDPKNQOEWDLREGGTGCVRRTPLS 331
 AlSRK13 WSSPKH--ECDAYERCGP--YSYCDVNTSPICNCIEGFDPMNQOQWDL SNGAGCLRRTQLS 351
 AlSRK16 WFMPKD--DCDMHGICGP--YAYCDTSTSPACNCIRGFQPLSPQEWASGDASGRCCRNRQLN 336
 AlSRK18 WQTSAA--DCEVYMSCTP--NSYCDPTKTTKNCIKGFEPDRDPREGALDTTNTDCVRKTQLS 335
 AlSRK22 SSSPTD--QCDMNEECGP--YSYCDTSTSPVCNCIQGFSPRSQOQWDLADGLSGCVRRTPLS 328
 AlSRK25 WSPHE--ECDVYGTGCGP--YAYCDMSKSPACNCIKGFQPLNQOEWESGDESGRCRRKTRLN 347
 AlSRK31 WLLSTN--PCDMFEVCGS--YSYCDTNTSPMCNCFKGFDPMPNPHDWYSGDWSSGCVRKNPLS 354
 AlSRK36 WSIPTD--DCDMYLGCGP--YGYCDVNTSPICNCIRGFEPRLQEWILRDGSDGCVRKTQLS 340
 AlSRK37 WFMPKD--TCDLYGICGP--YAYCDMSTSPACNCIKGFQPLSQOEWASGDVTGRCRRKTQLT 346

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AlSRKb MRVVVPCNCHHFYIFFVVLILIR--SVFSSYVHTLSSTESLTISSKQIVSPGGEVFEFGFF 58
 AhSRK4 MRGAVPNIHHSYIFFFLFFVIVLFPDFISISANTLSATESLTISSNKTIVSPGGVFELGFF 60
 AhSRK13 MR-ALPNNHHFYIL-VIFFLLR--SALPINVNTLSSTESLTISSNRTIVSLGDFVFEFGFF 56
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AlSRKb NPAATSRDGRWYLGWFKTNLERTYVWVANRDNPLYNSTGTLKISDTNLVLLDQFDTLV 118
 AhSRK4 R-----ILGDSWYLGWYKKSISQRTYVWVANRDNPLSNPIGILKISNANLVILDNSDISV 115
 AhSRK13 NPTPSSRDGRWYLGWYKEIPKRTYVWVANRDNPLSNSTGTLKISDNNLVLDQFNTLV 116
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AlSRKb WSTNLTGVLRSPPVAELLSNGNLVLRKSKTNDKDGILWQSFDPYPTDPLLQMKMGWDVKK 178
 AhSRK4 WTTNLTGAVRSPVVAELLDNGNFVLRDSKINESDEFWQSFDFPTDPLLQMKLGRDHKR 175
 AhSRK13 WSTNVTGAVRSLVVAELLANGNLVLRDSKINETDGFLWQSFDFPTDPLLPEMKLGWDLKT 176
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hvl

AlSRKb GLNRFLRSWKSQYDPSSGDFSFKLETRGFPEFFLLWRNSRVFRSGPWDGLRFSGIPEMQQ 238
 AhSRK4 GLNRFLTWSKSSFDPSGFSFMFKLETRGLPEFFGF'TTFLEVYRSGPWDGLRFSGIPEMQQ 235
 AhSRK13 GVNKFLRSWKSQYDPSSGDFSFKLETRFPEFFLSWSNSPVRSGPWEGFRFSGMPEMQQ 236
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hvl

AlSRKb WEYMVSNFTEENREEVAYTFQITNHNISRF TMSSTGALKRFRWISSSEEWNLWNKPNH 298
 AhSRK4 WDDIYNFTEENRDEVAYTFRVTEHNFYSRI TINTVGRLEGFMWEPTQOEWNMFWMFKDT 295
 AhSRK13 WTNIISNFTEENREEIAYTFRDTONIYSRI TMSSSGYLQRFKWI SNGEDWNQHWYAPKDR 296
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hvl

AlSRKb CDMYKRCGPYSYCDMNTSPICNCIGGFKPRNLHEWTLRNGSICGVRKTRLNCGGDGFLCL 358
 AhSRK4 CDLYGICGPYAYCDMSTSPACNCIKGFQPLSQEASGDVTGRCCRKTQLTCGEDRFFKL 355
 AhSRK13 CDMYKRCGPYGICDTNSSPECNCIKGFQPRNLQEWSLRDGSKGCVRKTRLSCSEDAFFWL 356
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AlSRKb RKMKLPDSSAAIVDRITIDLGECKKRCLNDCNCTAYASTDIQNGGLGCVIWIIEELDIRNY 418
 AhSRK4 MNMKLPAATTAAVVDKRIGLKECEKCKKTHCNCTAYANSVDRNGSGCIIWIGEFRDIRNY 415
 AhSRK13 KNMKLPTTTAIVDRRLGVKECREKCLNDCNCTAFANADIR--GSGCVIWTGDLVDIRSY 414
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AlSRKb ASGQDLYVRLADVDIGDERNIRGKIIGLAVGASVILFLSSIMFCVWRRKQKLLRATEAP 478
 AhSRK4 AADQDLYVRLAPAEFG-----LIIGISLMLVLSFIMYCFWKKKQRRARAPAAP 464
 AhSRK13 PNGQDLCVRLAAAELE-ERNIRGKIIGLCVIGISLILFLSFCMICFWKRKQKRLIALAAP 473
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AlSRKb -----MRVVVVPNCHHFYIFFVVLILIRSVFSSYVHTLSSTESLTISSKQITIVSPGEVFEL 55
 BoSRK1 -----TSFLLVFVVMILFHPAFSIYINTLSATESLTISSNRRLVSPGNVFEL 47
 BoSRK2 -----YHHSYTF SFLLVFLV LILFHPALS IYVNTLSSSESLTISSNRRLVSPGGVFEL 53
 BoSRK3 ---MQGVRYIYHHSYTLLVFVVMILFRPALS IYVNTLSSSTEYLTISNKRRLVSPGDVFEL 57
 BoSRK4 -----TF-CFLLVFVVLILFHPALS IYFNILSSTETLTISGNRRLVSPGDVFEL 48
 BoSRK5 -----YHHSYTF SFLLVFLV LILFHPALS IYVNTLSSSESLTISSNRRLVSPGGVFEL 53
 BoSRK6 -MKGARNIYHHSYMSFLLVFVVMILIH PALS IYINTLSSSTESLTISSNRRLVSPGSIFEV 59
 BoSRK7 MKGVRNIYHHSYT-SFLLVFVVMILFRPTLS IYFNILSSTESLTISSNRRLVSPGDVFEL 59
 BoSRK8 -----TSILLVFVVMILFHPAFSIYINTLSSADSLTISSNRRLVSPGNIFEL 47
 BoSRK11 -----TFSFLLVFVFLILFHPALS IYFNILSSTETLTISDNRRLVSPGDVFEL 48
 BoSRK12 -MKGVRNIYHHSYSSFLLVFVVTILFHPALS IYINTLSSSTESLTISSNRRLVSPGDVFEL 59
 BoSRK13 MQGVRNIYHHSYTL SFLLVFFVWILFRPAFSI--NTLSSSTESLTISSNRRLVSPGNVFEL 58
 BoSRK14 -----VRNIYSYTSFLLVFFVVMILFHPALS MYFNILSSTEFLLTISNKRRLASPGDVFEL 54
 BoSRK15 MKGVQNIYHHSYTF SFLLVFLV LILFHPALS IYVNTLSSSESLTISSNRRLVSHGGVFEL 60
 BoSRK16 -----TFFLLVFVVMILFHPALS MYFNILSSTESLTISSNRRLASPGDVFQ 47
 BoSRK18 -MKGVRNIYHHSYTSLLL VYVVMILFHPGLAIYITL SATESLTISSNRRLVSPGNVFEL 59
 BoSRK20 -----TFFLLVFFVLILFRPAFS--INALSATESLTISSNRRLVSPGDVFEL 44
 BoSRK24 -----TFSFLLVFVVMILFHPALS MYFNILSSTESLSISNKRRLSPGNVFEL 48
 BoSRK25 -----TFPFFLVLA VLILFYPAHSMYFNILS SRESLTITSNRRLVSPGDVFEL 48
 BoSRK28 -----TF-CFLLVFVVLILVHPALS IYFNILSSTESLTISSNRRLVSPGDVFEL 48
 BoSRK29 -MKGVRNIYHHSYTSILLVFVVMILFHPAFSIYINTLSSADSLTISSNRRLVSPGNIFEL 59
 BoSRK32 -----TSLLVFVVMILFRSALS IYINTLSSSTESLTISSNRRLVSPGGVFEL 46
 BoSRK33 -----TFSFLLVFVAVLILFHPALS IYFNILSSTESLTISSNRRLVSPGNVFEL 48
 BoSRK35 -----TSLFLLVFVVMFLVHPALAIYINTLSSSTESLTISSNRRLVSPGDNFEL 48
 BoSRK36 -----TSLFLLVFFVVMILFRPALS MYFNILSSTESLTISSNRRLVSPGDVFEL 48
 BoSRK38 -----TFSFLLVFVVLILFHPALS IYFNILSSTDTLTISNKRRLVSPSDVFEL 48
 BoSRK39 -----TFFLLFFVVMILFLPALS IYINTLSSSTESLTISSNRRLVSPGDVFEL 46
 BoSRK45 -----TSFLLVFIVMILFHPALS IYFNILSSTETLTISNKRRLVSPSDVFEL 47
 BoSRK50 -----TFSFLLVFVVLILFHPALS IYFNILSSTETLTISGNRRLVSPGDVFEL 48
 BoSRK51 -----TFSFVLA FVVLILFHPALS MYFNILSSTESLTISSNRRLVSPGDVFEL 48
 BoSRK52 -----TSFSAVFFF MILFHPALS IYINTLSSRESLKISSNRRLVSPGSIFEL 47
 BoSRK57 -----TFFLLVFVVMILFLPALS IYINTLSSSTESLTISSNRRLVSPGDVFEL 46
 BoSRK58 -----TFSFVVMILFRPAFS IYINTLSSSTESLTISSNRRLVSPGDVFEL 44
 BoSRK60 MKGVRNIYYHSYT-CFFLVFVVLILFHPAHS IYLNILSSTETFTISGNRRLVSPGDVFEL 59
 BoSRK61 -----DNSYTLYFLLVFFVLILLRPAFS--INTLSSSTESLTISSNRRLVSPGTFFEL 50
 BoSRK62 -----TSLFLLVFVVMILFHPALS MYFNILSSTETLTISNKRRLVSPGDVFEL 48
 BoSRK64 -----TSFSAVFFF MILFHPALS IYINTLSSRESLKISSNRRLVSPGSIFEL 47
 BoSRK65 -----YTFSSLLVFIVLILFHPALS IYINILSSTETLTISGNRRLVSPGDIFEL 49
 BoSRK68 -----TFSYLLVFVFMILFHPALS IYINTLSSSTESLTISSNRRLVSPGSIFEL 48

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AlSRKb GFFNPAATSRDGRWYLGWFKTNLE---RTYVWVANRDNPLYNSTGTLKISDTNLVLLD 112
 BoSRK1 GFFRTNSS-----SRWYLGWYKCLSG---RAYVWVANRDNPLSNSTGTLKISNMNLVLID 100
 BoSRK2 GFFKPLGR-----SRWYLGWYKCAPW---KTYAWVANRDNPLSSSIGTLKISGNNLVLLS 106
 BoSRK3 GFFKTTSS-----SRWYLGWYKTLSD---RTYVWIANRDNPISNSTGTLKISGNNLVLLG 110
 BoSRK4 GFFTPGSS-----SRWYLGWYKVVYF---RTYVWVANRDNPLSNSIGTLKISNMNLVLLD 101
 BoSRK5 GFFKPLGR-----SRWYLGWYKVSQ---KTYAWVANRDSPLTNSIGTLKISGNNLVLLG 106
 BoSRK6 GFFRTN-----SRWYLGWYKVSQ---RTYVWVANRDNPLSNAIGTLKISGNNLVLLD 110
 BoSRK7 GFFKTTSS-----SRWYLGWYKCLPG---RTYVWVANRDNPLSNSIGTLKISNMNLVLLD 112
 BoSRK8 GFFRTNSS-----SRWYLGWYKQLSE---RTYVWVANRDNPLSNSIGTLKISDMNLLLLL 100
 BoSRK11 GFFKITSS-----SRWYLGWYKLYFGSIKTYVWVANRDSPLSNAIGILKISGNNLFILD 104
 BoSRK12 GFFETN-----SRWYLGWYKCLPY---RTYIWWANRDNPLSNSTGTLKISGSNLVILG 110
 BoSRK13 GFFKTTSS-----SRWYLGWYKCFPY---RTYVWVANRDNPLSNDIGTLKISGNNLVLLD 111
 BoSRK14 GFFRTNSS-----SPWYLGWYKVSQ---RTYVWVANRDNPLSSSIGTLKISGNNLVILD 107
 BoSRK15 GFFKPLGR-----SRWYLGWYKVSQ---KTYAWVANRDSPLSNSIGTLKISGNNLVLLG 113
 BoSRK16 GFFRTNSS-----SPWYLGWYKQLSD---RTYVWVANRDSPLSNAIGILKISGNNLVILD 100
 BoSRK18 GFFKTTSS-----SRWYLGWYKCLPD---RTYVWIANRDNPLPNTIGTLKISGNNLVILG 112
 BoSRK20 GFFITNSS-----SRWYLGWYKCLSE---RTYVWVANRDSPLSNAIGTLKISDNNLVLLD 97
 BoSRK24 GFFRTN-----SRWYLGWYKELSE---KTYVWVANRDNPLANAIGTLKISGNNLVVLD 99
 BoSRK25 GFFKTTSS-----SRWYLGWYKCLSE---RTYVWVANRDSPLSNAVGTGLKISNMNLVLLD 101
 BoSRK28 GFFRTTSS-----SRWYLGWYKVVYF---RTYVWVANRDNPLSRSIGTLRISNMNLVLLD 101
 BoSRK29 GFFRTTSS-----SRWYLGWYKCLSD---RTYVWVANRDNPLSNSIGTLKISGNNLVILG 112
 BoSRK32 GFFTLGSS-----SRWYLGWYKCLPY---ITYVWVANRDNPLSNSTGTLKISGNNLFLLG 99
 BoSRK33 GFFRTNSS-----SRWYLGWYKCLISE---RTYVWVANRDRPLSSAVGTGLKISGYNLVLRG 101
 BoSRK35 GFFRTTSS-----SRWYLGWYKVSQ---RTYVWVANRDNPLSSSIGTLKISGNNLVILG 101
 BoSRK36 GFFRTTSS-----SRWYLGWYKCLPF---RTYVWVANRDNPLSNSTGTLKISGNNLVILG 101
 BoSRK38 GFFKTSSS-----SRWYLGWYKTVSY---RTYVWVANRDSPLFSATGTGLKISGNNLVLLG 101
 BoSRK39 GFFRTN-----SRWYLGWYKCLPY---RTYVWVANRDNPLSNSIGTLKISGNNLVILG 97
 BoSRK45 GFFRTNSS-----SGWYLGWYKVSQ---RTYVWVANRDSPLFNAIGTLKISGNNLVLRG 100
 BoSRK50 GFFKTTLS-----SRWYLGWYKVVYF---KTYVWVANRDSPLSNAIGTLKISGSNLVLLD 101
 BoSRK51 GFFKNTLN-----SRWYLGWYKNLSD---RTYVWVANRDSPLSNAIGTLKFSGSNLVLRG 101
 BoSRK52 GFFRTN-----SRWYLGWYKCLPY---RTYVWVANRDNPLSNSTGTLKISGNNLVILG 98
 BoSRK57 GFFRTTSS-----SPWYLGWYKQLSE---RTYVWVANRGNPLPNSIGSLKISGNNLVLLG 99
 BoSRK58 GFFRTNSS-----SRWYLGWYKQLSE---RTYAWVANRDNPLPNSIGTLKISNMNLVLLD 97
 BoSRK60 GFFKTTSS-----SRWYLGWYKVVYF---RTYVWIANRDNPLSSSIGTLKISNMNLVLLD 112
 BoSRK61 GFFRTN-----YRWYLGWYKCLSV---RTYVWVANRDNPIANSIGTLKISGNNLVLLG 101
 BoSRK62 GFFRTN-----SRWYLGWYKCLSE---RAYVWVANRDSPLSNSIGTLKISGNNLVLRG 99
 BoSRK64 GFFRTN-----SRWYLGWYKCLPY---RTYVWVANRDNPLSNSTGTLKISGNNLVILG 98
 BoSRK65 GFFKTTSR-----SRWYLGWYKCLISE---RTYVWVANRDNPLSIAVGTGLKISGNNLVLLG 102
 BoSRK68 GFFRTN-----SRWYLGWYKELSE---RTYVWVANRDNPISNSIGTLKISGNNLVLLG 99
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AlSRKb QFDTLVWSTNLT-GVLRs-PVVAELLSNGNLVLKDSKTNDKDGILWQSFQDYPTDTLLPQM 170
 BoSRK1 QSTKSVWSTNLTRGNERL-PVVAELLANGNFVMRDSNNNNASAFWLQSFQDYPTDTLLPEM 159
 BoSRK2 QSTNTVWSTNLTRGNARS-PVIAELLPNGNFVIRHSNNKDSSGFLWQSFDFPTDTLLPEM 165
 BoSRK3 DSNKPVWSTNLTRRSERS-PVVAELLANGNFVMRDSNNNDASQFLWQSFQDYPTDTLLPDM 169
 BoSRK4 HSNKSVWSTNLTRGNERS-PVVAELLPNGNFVMRFSSNNNDENEFLWQSFQDYPTDTLLPEM 160
 BoSRK5 QSNNTVWSTNITRGNARS-PVIAELLPNGNFVMRYSSNNKDPGFLWQSFDFPTDTLLPEM 165
 BoSRK6 HSNKPVWWTNLTRGNERS-PVVAELLANGNFVMRDSNNNDASEYLWQSFQDYPTDTLLPEM 169
 BoSRK7 HSNKSVWSTNHTRGNERS-LVVAELLANGNFLVRDSNNNDAYGFLWQSFQDYPTDTLLPEM 171
 BoSRK8 HSNKSVWSTNLTRGNERSLVAELLANGNFVMRDSNNNDAGGFLWQSFQDYPTDTLLPEM 160
 BoSRK11 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDSNNNDASGFLWQSFQDYPTDTLLPEM 163
 BoSRK12 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDSNNNDASKFSWQSFQDYPTDTLLPEM 169
 BoSRK13 HSNKSVWSTNVTRGNERS-PVVAELLDNGNFVMRDSNSNNASQFLWQSFQDYPTDTLLPEM 170
 BoSRK14 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDSNNNDASGFLWQSFDFPTDTLLPEM 166
 BoSRK15 QSNNTVWSTNLTRGNERS-PVIAELLPNGNFVMRYSSNNKDSSGFLWQSFDFPTDTLLPEM 172
 BoSRK16 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVVRDSNNNGASGFLWQSFQDYPTDTLLPEM 159
 BoSRK18 HSNKSVWSTNVTRGNERS-PVVAELLANGNFVMRDSNNNDANEFLWQSFDFPTNTLLPEM 171
 BoSRK20 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDSNNNDASGFLWQSFDSPTDTLLPEM 156
 BoSRK24 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDS-----SGFLWQSFQDYPTDTLLPEM 153
 BoSRK25 LSNKSVWSTNLTRGNERS-PVVAELLANGNFVIRYSNKNYATGFLWQSFQDYPTDTLLPDM 160
 BoSRK28 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDSNNNDASGFLWQSFDFPTDTLLPEM 160
 BoSRK29 DSNKSVWSTNITRGNERS-PVVAELLANGNFVMRDSNNNDGSGFLWQSFQDYPTDTLLPEM 171
 BoSRK32 DSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDSNNNDASGFLWQSFDFPTDTLLPEM 158
 BoSRK33 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDSNNNNASQFLWQSFQDYPTDTLLPEM 160
 BoSRK35 HSNKSVWSTNVTRGNERS-PVVAELLANGNFVMRDSNNNDASGFLWQSFNFPTDTLLPEM 160
 BoSRK36 HSNKSVWSTNLTRGSERS-TVVAELLANGNFVMRDSNNNDASAFWLQSFDFPTDTLLPEM 160
 BoSRK38 KSNKSVWSTNLTRRIESS-PVMAELLANGNFVIRDSNNNDASGFLWQSFDFPTDTLLPEM 160
 BoSRK39 HSNKSVWSTNLTRGSERS-PVVAELLGNGNFVIRYSNNNNASGFLWQSFDFPTDTLLPEM 156
 BoSRK45 QSNKSVWSTDLTRGNERF-PVVAELLANGNFVIRYSNKNDASGFLWQSFQDYPTDTLLPEM 159
 BoSRK50 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVIRYFSNNGASGFLWQSFQDYPTDTLLPEM 160
 BoSRK51 RSNKPVWSTNLTRGNERS-PVVAELLANGNFVIRYSDNNDASGFLWQSFDFPTDTLLPEM 160
 BoSRK52 HSNKSVWSTNLTRGSERS-TVVAELLANGNFVMRDSNNNDASGFLWQSFQDYPTDTLLPEM 157
 BoSRK57 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRDSNNNDASGFLWQSFQDYPTDTLLPEM 158
 BoSRK58 HSNKSVWSTNLTRVNERSSPVVAELLANGNFVMRHSNNNDASQFLWQSFQDYPTDTLLPEM 157
 BoSRK60 HSNKSVWSTNLTRGNERS-PVVAELLANGNFVMRFSSNNNDENEFLWQSFDFPTDTLLPEM 171
 BoSRK61 HSSKSVWSTNLTRRNERS-SVVAELLANGNFVMRDSNNNDASRFLWQSFQDYPTDTLLPEM 160
 BoSRK62 NSNKS VWSTNLTRRNERS-PAVAELLANGNFVIRYFNNNNASEFLWQSFDFPTDTLLPEM 158
 BoSRK64 HSNKSVWSTNLTRGSERS-TVVAELLANGNFVMRDSNKNDASGFLWQSFDFPTDTLLPEM 157
 BoSRK65 QSNKSVWSTNLTRGNERS-PMVAELLANGNFVLRDSNNGASGFLWQSFQDYPTDTLLPEM 161
 BoSRK68 HSNKSVWSTNLTRGNERS-PVVAELLSNGNFVMRDS-----SGFLWQSFDFPTDTLLPEM 153
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hvl

AlSRKb	KMGWDVKKGLNRFLRSWKSQYDPSSGDFSYSKLE	TRG-FPEFFLLWR----	NSRV	FRSGP	224
BoSRK1	KLGYDLRTGRNRFLT TSWRSSDDPSTGDFSYSKLE	LRN-IPEFYLLQ----	GDFPE	HRSGP	213
BoSRK2	KLGYDLKTGRNRFLT TSWKGSDDPSSGNFVYKLD	IRRGLPEFILINQFLNQRVET	QRSGP	224	
BoSRK3	KLGYDLKTGLDRFLT TSWRSLDDPSSGNFSYRLE	TRK-FPEFYLR-----	GIFRV	HRSGP	223
BoSRK4	KLGYDLKTGLNRLLT TSWRSSDDPSSGEVSYKLE	NRE-LPEFYLLQ----	NGFEI	HRSGP	214
BoSRK5	KLGYDLKTGRNRFLT TSWKGSDDPSSGNFVYKLD	IRRGLPEFILINTFLNQRVET	QRSGP	224	
BoSRK6	KLGYNLKTGLNRFLT TSWRSSDDPSSGNFSYKLE	TQS-LPEFYLSR-----	ENFPM	HRSGP	223
BoSRK7	KLGYDLKIGLNRSLT TSWRSSDDPSSGDFSYSKLE	SRR-LPEFYLMQ----	GDVRE	HRSGP	226
BoSRK8	KLGYDLKKGLNRFLT TSWRSSDDPSSGEISYKLE	MRR-LPEFYLWN-----	EDFPM	HRSGP	214
BoSRK11	KLGYDLKKGLNRLLT TSWRSSDDPSSGEISYQLD	TQGMPEFYLLI-----	NGSRY	HRSGP	218
BoSRK12	KLGYNLKKGLNRFLV TSWRSSDDPSSGDYSYKLE	PRR-LPEFYLLQ----	GDVRE	HRSGP	223
BoSRK13	KLGYDLKTGLNRFLT TSWRSSDDPSSGDYSYKLE	PGR-LPEFYLWK----	GNIRT	HRSGP	224
BoSRK14	KLSDYDLKTGLNRFLT TSRRSSDDPSSGDFSYSKLE	PRR-LPEFYLSS-----	GVFLL	YRSGP	220
BoSRK15	KLGYDFKTGRNRFLT TSWRSYDDPSSGKFTYELD	IQRGLPEFILINRFLNQRVVM	QRSGP	231	
BoSRK16	KLGYDLKTGLNRFLT TSWKSWDDPSSGDFLYELE	TRR-LPEFYLTI-----	GIFRV	HRSGP	213
BoSRK18	KLGYDLKTGLNRFLT TSWRGSDDPSSGDHLYKLE	PRS-FPEFYIFN-----	DDFPV	HRIGP	225
BoSRK20	KLGYDLKTGLNRFLT TPWRSSDDPSSGDFLYELE	ARR-LPEFYLSS-----	GIFRL	YRSGP	210
BoSRK24	KLGYDLKTGLNRFLI TSWRSLDDPSSGNFSYSLE	KRE-LPEFYLYK----	GDFRV	HRSGP	207
BoSRK25	KLGYDFKKGLNRFLT TSWRNSDDPSSGEISYKLD	TQGMPEFYLLQ----	TGVQV	HRSGP	215
BoSRK28	KLGYNLKTGLNRFLT TAWRNSDDPSSGDYSYKLE	NRE-LPEFYLLK----	SGFQV	HRSGP	214
BoSRK29	KLGYDLITGLNRFLT TSRSLDDPSSGDYSYKFE	SRR-LPEFYLLK-----	SGFRV	HRSGP	226
BoSRK32	KLGYLLKTGLNRFLT TSRSFDDPSSGDYSYKLE	PRR-LPEFYLLL-----	GDVRE	HRSGP	212
BoSRK33	KLGYDLKTGLNRFLT TSWRTSDDPSSGDYLYKLE	PRK-LPEFYLWN-----	EDFPM	HRSGP	214
BoSRK35	KLGYDLKTGLNRFLT TSWRSLDDPSSGDYSYKLO	ARS-YPEFYLIK-----	KVFIG	HRSGP	215
BoSRK36	KLGYDLKTGLNRFLT TSWRSSDDPSSGEFLYELE	TGR-LPEFYLSK-----	GIFPA	YRSGP	214
BoSRK38	KLGYDRKKGLNRFLT TSWRNSDDPSSGEISYQLDA	TPSGMYEFYLLK-----	SGSRA	HRSGP	216
BoSRK39	KLGYDLKKGFNRFLI TSWRSSDDPSSGNYSYKLE	TRR-LPEFYLSS-----	GVFRL	HRSGP	210
BoSRK45	KLGYDLKTEQNRFLT TSWRNSDDPSSGEISYFLD	TESGMPEFYLLK-----	SGLRA	YRSGP	214
BoSRK50	KLGYDHKTGLNRLLT TSWRSSDDPSRGEFSYQLD	TQGMPEFFIMK-----	EGSQG	QRSGP	215
BoSRK51	KLGYLLKTGLNRFLT TSWRNFDDPSSGEFSYKLE	TRR-LPEFYLLK-----	NGSPG	QRSGP	214
BoSRK52	KLGYDLKTGLNRFLT TSWRSSDDPSSGNFSYKLE	NQR-LPEFYLSSH---	GIFRL	HRSGP	212
BoSRK57	KLGYDHKTGLNRFLN TSWRSLNDPSSGNYSYRLE	TRR-FPEFYLWS-----	GVFIL	YRSGP	212
BoSRK58	KLGYDLKTGMNRFLT TSWRSSDDPSSGDFSYSKLE	AQR-LPEFYLSS-----	GVFRL	YRSGP	211
BoSRK60	KLGYNLKTGLNRILT TAWRNLDDPSSGDYYYKLE	KRE-LPEFYVLR-----	NGFEI	HRSGP	225
BoSRK61	KLGYDLKTGLNRFLT TAWRSLDDPSSGEISYKLE	PRR-LPEFYLLKR---	RVFRL	HRSGP	215
BoSRK62	KLGFDLKTGLNRFLT TSWRNYDDPSSGEISYKLD	TERGLPEFYLLK-----	NGLRA	HRSGP	213
BoSRK64	KLGYDLKTGLNRFLT TSWRSSDDPSSGNFSYKLE	NQR-LPEFYLSSH---	GIFRL	HRSGP	212
BoSRK65	KLGYDHKTGQNRFL LSWRSSDDPSSGDYLYKLE	TRR-FPEFYLSS-----	GVFRL	HRSGP	215
BoSRK68	KLGYDLKTRLNRFLV TSWRSLDDPSSGNFSYRLE	TRR-LPEFYLSK-----	RDVPV	HRSGP	207
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AlSRKb	WDGLRFSGIPEMQOWEYMVS	NFTENREEVAYTFQITNHNIYSR	F	TMSSTGALKRFRWISS	284
BoSRK1	WNGIQFSGIPEDQKLSYMVY	NFTENSEEVAYTFLMTNNS	FYSRL	IISSEGYFRRLTWAPS	273
BoSRK2	WNGMEFSGIPEVQGLNYMVY	NYTENSEEIAYSFHMTNQS	IYSRL	TVS-ELTLDRLTWIPP	283
BoSRK3	WNGIRFSGIPDDQKLSYMVY	NFTDNSEEVAYTFRMTNNS	IYSRL	TVSFLGHFERQTWNPS	283
BoSRK4	WNGVRFSGIPDNQKLSYLVY	NFTENSEEVAYTFRITNNS	IYSRL	KVSPDGFQRLTLIPI	274
BoSRK5	WNGIEFSGIPEVQGLNYMVY	NYTENSEEIAYSFHMTNQS	IYSRL	TLT-EFTLDRFTWIPP	283
BoSRK6	WNGIRFSGIPEDQKLSYMVY	NFIENNEEVAYTFRMTNNS	FYSRL	TLISEGYFORLTWYPS	283
BoSRK7	WNGIQFSGIPEDQKLSYMMY	NFTDNSEEVAYTFLMTNNS	FYSRL	KLSSSEGYLERLTWAPS	286
BoSRK8	WNGIEFIGIPEDQKSSYMY	NFTENSEGVAYTFRMTNNS	LYSRL	TVSSEGNFERLTWNPL	274
BoSRK11	WNGVQFNGIPEDQKLSYMVY	NYIENDEEVAYSFRMTNNS	IYSRL	TISFEGFLERYTWTPT	278
BoSRK12	WNGIRFSGILEDQKLSYMVY	NFTENSEEVAYTFRMTNNS	FYSRL	TLSSSTGYFERLTWAPS	283
BoSRK13	WSGIQFSGIPEDQRLSYMVY	NFTENREEVAYTFQMTNNS	FYSIL	TISSTGYFORLTWAPS	284
BoSRK14	WNGIRFSGLPDDQKLSYLVY	NFTENNEEVAYTFQMTNNS	FYSRL	TLNFLGYIERQTWNPS	280
BoSRK15	WNGIEFNGIPEVQGLNYMVY	NYTENSEEIAYTFHMTNQS	IYSRL	TVT-DYALNRYTRIPP	290
BoSRK16	WNGIRFSGIPDDQKLSYLVY	NFTENSEEVYTYTFRMTNNS	IYSRL	IIVSFSGYIQROTWNPT	273
BoSRK18	WNGIEFSGIPEDQKSSYMVY	NFTENSEEVAYSFRMTNNS	IYSRL	IISSEGYLQRLIWTPS	285
BoSRK20	WNGIRFSGIPDDQKLSYMVY	NFTENSEEVAYTFRMTNNS	IYSRL	TVSVSGKFERQTWNPT	270
BoSRK24	WNGIAFSGIPEDQQLSYMVY	NFTENRDEAAYTFRMTNNS	IYSRL	TINSEGRFORLTWTPS	267
BoSRK25	WNGVRFSGIPGDQELSYMVY	NFTENTEEVAYTFRMTDNS	IYSRL	KVSSEGFLERLTWTPN	275
BoSRK28	WNGVRFSGIPENQKLSYMVY	NFTENSEEVAYTFRMTNNS	FYSRL	KVSSDGYLQRLTLIPI	274
BoSRK29	WNGVQFSGMPEDQKLSYMVY	NFTQNSEEVYTYTFRMTNNS	IYSRL	TISSEGYLERLTWTPS	286
BoSRK32	WNGIQFSGIPEDQKLSYMVY	NFTENSEEVAYTFRMTNNS	FYSRL	TINSEGYLERQTWAPS	272
BoSRK33	WNGVRFSGIPEDQKLSYLVY	NFTENSEEVAYTFRMTNNS	FYSRL	TVSSSGYFERLTWNPS	274
BoSRK35	WNGIRFSGIPEDQKLSYMVY	NFTENREEIAYTFRMTNNS	FYSRL	TISSEGYFERLTWTLS	275
BoSRK36	WNGIRFSGIPDDQKLSYLVY	NFTDNSEEVYTYTFRMTNNS	IYSRL	TVSFSGYFERQTWNPS	274
BoSRK38	WNGVRFSGIPGDQELSYMVY	NFTENSEEVSYSFRMTNNS	IYSIL	KVSSDGVLERLTWTPN	276
BoSRK39	WNGIQISGIPEDQNLHYMVY	NFIENNEEVAYTFRMTNNS	IYSRL	TLGFSGDFQRLTWNP	270
BoSRK45	WNGVRFSGIPGDQYLSYMVY	NFTENSEEVAYTFRMTTHS	IYSRL	KISSEGFLERLTWTPN	274
BoSRK50	WNGVQFSGIPEDRKLKSYMVY	NFTENNEEVAYTFRVTNNS	FYSRL	KISPEGVLERLTRTPT	275
BoSRK51	WNGVQFSGIPEDQKLSYMVY	NFTENSEEVAYTFRMTDNS	IYSRL	QISPEGLLERLTWTPT	274
BoSRK52	WNGIGFSGIPEDEKLSYMVY	NFTENSEEVAYTFRMTNNS	IYSRL	TLISFEGDFQRLTWNP	272
BoSRK57	WNGIRFSGILEDQKLSYMVY	NFTENSEEVAYTFRMTNNS	MYTRL	TVSFSGDFERQTWNPS	272
BoSRK58	WNGVRFSGIPDDQKLSYLVY	NFTENSEEVAYTFRMTNNS	IYSRL	MLSFSGYIERQTWNPS	271
BoSRK60	WNGVRFSGIPENLKLKSYMVY	NFTENSEEVAYTFRMTNNS	IYSRL	KVSSDGYLQRLTLIPK	285
BoSRK61	WNGIRFSGIPEDQKLSYMIY	NFTENSEELAYTFRITNNS	IYSIL	TISSEGKLERLMWNPS	275
BoSRK62	WNGVQFYGIPEDLKLKSYMVY	NYTENSEEVAYTFRVTNNS	IYSIL	KVSSGEFLARLTTPS	273
BoSRK64	WNGIGFSGIPEDEKLSYMVY	NFTENSEEVAYTFRMTNNS	IYSRL	TLISKGDFQRLTWDP	272
BoSRK65	WNGIRFSGILDQKLSYLAY	NFTENSEEVAYTFRMINNS	IYSRL	TVSFSGYFERQTWNPS	275
BoSRK68	WNGIEFSGIPEDEKLSYMVY	NFTENSEEAAYTFLMTNNS	IYSRL	TINSEGSFORLTWTPS	267

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	hvll	hvlll	
AlSRKb	SEEWNLWNKP-NDHCDMYKRCGPYSYCDMNTSPICNCIGGFKPRNLHEWTLRNGS	IGCV	343
BoSRK1	SVIWNVFWSSP-NHQCDMYRMCGPYSYCDVNTQPICNCIQGFNPGNVQOWALRIPISGCK		332
BoSRK2	SRDWSLFWTLP-TDVCDPLYLCCGSYSYCDLITSPNCNCIRGFVPKNPQOWDLRDGTGCV		342
BoSRK3	LGMWNAFWSFILDSDQCDIYKMCGPYAYCDVNTSPICNCIQGFNPSDVEQWDRRSWAGGCI		343
BoSRK4	SIVWNLFWSSPVDIRCDIYKACGPYSYCDGNTSPLCNCIQGFDPNMNHWNMGEAVAGCI		334
BoSRK5	SWGWSLFWTLP-TDVCDPLYLCCGSYSYCDLITSPNCNCIRGFVPKNPQOWDLRDGTGCV		342
BoSRK6	IRIWNRFWSSPVPDQCDTYIMCGPYAYCDVNTSPVCNCIQGFNPRNIQOWDQRVWAGGCI		343
BoSRK7	SGIWNVFWSSP-NHQCDMYRMCGTYSYCDVNTSPSCNCIPGFNPKNRQOWDLRIPISGCI		345
BoSRK8	LGMWNVFWSSPVDQAQCDMYRTC	CGPYAYCDVNTSPVCNCIQGFNPSNVQLWDLRDGAGGCI	334
BoSRK11	SIAWNLFWSSPVDIRCDVYMACGPDAYCNLNTSPLCNCIQGFKRSNEQOWDVRDGSSGCI		338
BoSRK12	SVIWNVFWSSPANPQCDMYRMCGPYSYCDVNTSPSCNCIQGFDPRNLQOWALRISLRGCK		343
BoSRK13	SVVWNVFWSSP-NHQCDMYRICGPYTYCDVNTSPSCNCIQGFNPENVOQWALRIPISGCK		343
BoSRK14	LGMWNRWFAPLDSQCDTYRACGPYSYCDLNTSPICNCIQGFNPSNVEQOWDQRVWANGCM		340
BoSRK15	SWGWSLFWTLP-TDVCDPLYLCCGSYSYCDLNTSPYCNCIRGFVPKNRQOWDLRDGTGCV		349
BoSRK16	LGMWSVFWSPFDSQCDSYRACGPNAYCDVNTSPFCNCIQGFIPSNVQOWDQRVWAGGCI		333
BoSRK18	TKIWQEFWSSPVSLOCDPYRICGPYAYCDENTSPVCNCIQGFDPKNQOWDLRSHASGCI		345
BoSRK20	LGMWNVFWSPFSDSQCDTYRICGPYSYCDVSTSPICNCIQGFNPSNVQOWDQRSWSSGCI		330
BoSRK24	SGAWNFWSSPVNPECDLYMICGPYAYCDLNTSPSCNCIQGFNPGDVQOWDLRDWTSGCI		327
BoSRK25	STTWNLFWYLPLENQCDMYMICGRYAYCDVNTSPLCNCIQGFIPWNKQOWDQRPSSGCK		335
BoSRK28	SIVWNLFWSSPVDIRCDMFRVCGPYAYCDGNTSPLCNCIQGFDPNLQOWDIGEPAGGCV		334
BoSRK29	SGMWNVFWSSPVDLQCDVYKICGPYSYCDVNTSPVCNCIQGFNPLNVHQWDLRDGTSGCI		346
BoSRK32	SVVWNVFWSSP-NHQCDMYRMCGPYSYCDVNTSPSCNCIQGFKPGNVQOWALRNQISGCK		331
BoSRK33	LGIWNVFWSSPVDHFCDLYVSCGPYSYCDVNTSPVCNCIQGFNPNMNHQWDLRVPAGGCI		334
BoSRK35	SNMWSVFWSSPVDLQCDVYKSCGPYSYCDVNTSPVCNCVQGFYPKNQOWDVRVASSGCI		335
BoSRK36	LGMWMMFWAFPMASQCDTYRRCGPYSYCDVSTSPICNCIQGFNPSNVQOWDQRSWSSGCI		334
BoSRK38	SIGWNLFWYLPLENQCDVYMVCGRYSYCDVNTSPLCNCIQGFNRSNEERWDLKDWSSGCM		336
BoSRK39	IGIWILFWSSPVPDQCDTYVMCGPNAYCDVNTSPVCNCIQGFNPNVQLWDQRVWAGGCI		330
BoSRK45	SIQWNLFWYLPVENQCDVYMVCGVYSYCDENTSPVCNCIQGFNPLNEQRWDLRDWSSGCT		334
BoSRK50	TVAWNFWVSPVDTRCDVYMACGPYAYCDMNTSPLCNCIQGFKRFNEQEWEMRDGSSGCI		335
BoSRK51	SGTWNLFWVAPVDIQCDVYMTCGPYAYCDVNTSPVCNCIQGFIPFDMQOWALRDGTGGCI		334
BoSRK52	LELWNLFWSSPVPDQCDSYIMCAAHAYCDVNTSPVCNCIQGFDPRNTQOWDQRVWSSGCI		332
BoSRK57	IGMWNRFWAFPLDSQCDAYTACGPYSYCDVTTSPICNCIQGFNPSNVEQWDLRSWFGGCI		332
BoSRK58	LRMWNVFWSPFPLDSQCDSYRMCGPNAYCDVNTSPICNCIQGFNPSNVQOWDQRVWAGGCI		331
BoSRK60	SILWNLFWSSPVDIRCDVYKVCGRYSYCDGNTSPLCNCIQGFDPNMNEQWNMGEAASGCI		345
BoSRK61	LAMWNVFWFFPVDSQCDTYMMC	CGPYAYCDVNTSPVCNCIQGFNPKYVEEWDLREWSSGCI	335
BoSRK62	SWEWSLFWYSPAEPQCDVYKTCGPYSYCDVNTSPVCNCIQGFNPRNVQOWELRNPSGCI		333
BoSRK64	LEIWNMFWSSPVPDQCDSYIMCGAYAYCDVNTSPVCNCIQGFNPRNIQRWDQRVWAGGCV		332
BoSRK65	LGMWMMFWSPFPLDSQCDGYRMCGPYAYCDANTSPICNCIQGFNPLDAEQWDLRSWSSGCI		335
BoSRK68	SGAWNFWSSPENPECDLYMICGPDAYCDVNTSPSCICIQGFNPRDLPOWDLRDWTSGCI		327

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AlSRKb RKTRLNCGDGF LCLRKMKLPDSSAAIVDRTI--DLGECKKRCLNDCNCTAYASTDIQNG 401
 BoSRK1 RRTPLSCNGDGFTRMKNMKFPDTRMATVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 390
 BoSRK2 RRTQMSCSGDGF LRLNMMNLPDTKTATVDRTM--DVKKCEERCLSDCNCTSFADIVRNG 400
 BoSRK3 RRTRLSCSGDGFTRMKNMKLPETTTMAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 401
 BoSRK4 RRTPLRCSDDGFTRMRKMKLPETTKAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 392
 BoSRK5 RRTQMSCSGDGF LRLNMMNLPDTKTATVDRTI--DVKKCEERCLSDCNCTSFADIVRNG 400
 BoSRK6 RRTQLSCSGDGFTRMKMMKLPETTTMATVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 401
 BoSRK7 RRTRLGCSGDGFTRMKNMKLPDTTMAIVDRSI--SVKECKKRCLSDCNCTAFANADIRNR 403
 BoSRK8 RRTRLSCSGDGFTRMKNMKLPETTTMATVDRSF--GLKECKKRCLSDCNCTAFANADIRNG 392
 BoSRK11 RETRLSCSGDGFTRMKMMKLPETTTAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 396
 BoSRK12 RRLLSCNGDGFTRMKNMKLPETTTMAIVDRSI--GLKECKKRCLSDCNCTAFANADIRNG 401
 BoSRK13 RRTRLSCNGDGFTRMKNMKLPDTTMAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 401
 BoSRK14 RRTRLSCSGDGFTRIKNMKLPETTTMAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 398
 BoSRK15 RRTQMSCSGDGF LRLNMMNLPDTKTATVDRTT--DVKKCEERCLSDCNCTSFATADIVRNG 407
 BoSRK16 RRTRLSCSRDGFTRMKNMKLPETTTMAIVDRST--GVKECKKRCLSDCNCTAFANADIRNG 391
 BoSRK18 RRTWLSRGRDGFTRMKNMKLPDTTAAIVDRSV--GVKECKKRCLSDCNCTAFANADIRNG 403
 BoSRK20 RRTQLSCSGNGFARMKMKLPETIRMAIVDRSIGIGVKECKKRCLSDCNCTAFANADIRNG 390
 BoSRK24 RRTRLRCSGDGFTRMKNMKLPETTTMAIVDRSI--GMKECKKRCLSDCNCTAFANADIVRNG 385
 BoSRK25 RRTRLSCNGDGFTRMKMMKLPETTTMATVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 393
 BoSRK28 RRLLSCSGDGFTRMKMMKLPDTRLAIVDRSI--GLKECKKRCLSDCNCTAFANADIRNG 392
 BoSRK29 RRTRLSCSGDGFTRMKNMKLPETTTMAIVDHSI--GLKECKKWCLSDCNCTAFANTDIRNG 404
 BoSRK32 RRTRLSCNGDGFTRMKNMKLPDTTMAIVDRSM--SVKECKKRCLSDCNCTAFANADIRNR 389
 BoSRK33 RRTKLSCSGDGFTRMKNMKLPETTTMAIVDRSI--GLKECKKRCLSDCNCTAFANADIRNR 392
 BoSRK35 RRTRLSCNGDGFTRMKNMKLPETTTMAIVDRSI--GEKECKKRCLSDCNCTAFANADIRNG 393
 BoSRK36 RRTRLSCSGDGFTRMKNMKLPETTTMAIVDRSI--GVKECKKRCLSDCNCTAFANADVQNG 392
 BoSRK38 RRTQLSCSGDGFTRMTKMKLPETKMAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 394
 BoSRK39 RRTQLSCSGDGFTRMKMMKLPETTTMAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 388
 BoSRK45 RRTRLSCSGDGFTRMRKMKLPETKMANVYRSI--GVKECKKRCLSDCNCTAFANADIRNG 392
 BoSRK50 RGTRLSCSGDGFTRMKMMKLPDTMMAIVDRSI--GMKECKKRCLSDCNCTAFANADIVRNG 393
 BoSRK51 RRTRLSCSSDGFTRMKNMKLPDTKMAIVDRSI--DVKECKKRCLSDCNCTAFANADIRNG 392
 BoSRK52 RRTRLSCSGDGFTRMKNMKLPETTTMAIVDRSI--GVRECKKRCLSDCNCTAFANADIRNG 390
 BoSRK57 RRTRLSCSGDGFTRMKNMKLPETTTMAIVDRSI--GVKECKERCLSDCNCTAFANADIRNG 390
 BoSRK58 RRTRLSCSGDGFTRMKNVKLPETTTIATVDRSI--GVKECKKRCLSDCNCTAFANADIQNG 389
 BoSRK60 RRTPLRCSDDGFTRMRRMKLPETTTNAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 403
 BoSRK61 RRTQLSCSEDGFTRIKNMKLPETTKAIVDRGI--GVKECKKRCLSDCNCTAFANADIVRNG 393
 BoSRK62 RRTQLSCSGDGFTRMKMMNLPETSMVAVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 391
 BoSRK64 RRTRLSCSGDGFTRMKMMKLPETTTMAIVDRSI--GVKECKKRCLSDCNCTAFANADIRNG 390
 BoSRK65 RRTQLSCNGDGFTRMRNMKLPETTTMAIVDRSI--GEKECKKRCLSDCNCTAFANADIRNG 393
 BoSRK68 RRTRLSCRGDGFTRMKNMKLPETTTMAIVDRSI--GIKECKKRCLSDCNCTAFANADIRNG 385
 * * : * : ** : . : : : * * : . : * . : * : : * : : * : : * : : * : : *

AlSRKb GLGCVIWIIEELDIRNYASG---GQDLYVRLADVDIGDER-----NIRGKIIGLAVGASV 453
 BoSRK1 GTGCVIWTGQLEDIRNYAVG---GONLYVRLAAADLVKKT'TVKKSNANGKIIS----- 440
 BoSRK2 GLGCVFWTGELVAIRKFAVG---GQDLYVRLNAADLDISSGEKR-DRTGKIIGWXIGSSV 456
 BoSRK3 GMGCVIWTGRLDDMRNYAA---DGQDLYFRLAAVDLVKKR-----NANWKIISLTVGVTV 453
 BoSRK4 GTGCVIWAGELQDIRTYFAE---GQDLYVRLAAADLVKKR-----NANWKIISLIVGVSV 444
 BoSRK5 GLGCVFWTGELIAIRKFAVG---GQDLYVRLDAADLDISSGEKR-DRTGKIIGWSIGVSV 456
 BoSRK6 GSGCVIWTTERLEDIRNYATDAIDGQDLYVRLAAADI AKKR-----NASGKIISLTVGVSV 456
 BoSRK7 GTGCVIWTGELEDMRNYAEG---GQDLYVRLAAADLVKKR-----NANWKIISLIVGVSV 455
 BoSRK8 GTGCVFWTGHLEDMRNYAAD---GQDLYVVKVAAADL----- 425
 BoSRK11 GTGCVIWT'TGLEDIRTYFAAD-LGQDLYVRLAAADLVKKS-----NANGKIIS----- 443
 BoSRK12 GTGCVIWTGNLADMRNYVAD---GQDLYVRLAVADLVKK-----SNANGKIISLIVGVSV 453
 BoSRK13 GTGCVIWTGELADIRNYADG---GQDLYVRLAAADLVKKR-----DANWKIISLIVGVSV 451
 BoSRK14 GTGCVIWTGRLDDMRNYAA---AGQDLYVRLAAGDLVTKR-----DANWKIISLTVGVTV 450
 BoSRK15 GLGCVFWTGDLVEIRKQAVV---GQDLYVRLNAADL--ASGEKR-DRTKKIIGWSIGVTV 461
 BoSRK16 GTGCVIWTGQFHDMRNYGV---DGONLYVRLAAADL----- 424
 BoSRK18 GTGCVIWTGELEDIRNYVAD---GQDLYVRLAAADLVKK-----RNSNGKIIGLIVGVSV 455
 BoSRK20 GTGCVIWTGRLDDMRNYAS---DGQDLYVRLAAADLVKKR-----NPNNGKIIS----- 435
 BoSRK24 GTGCAIWTAQLDDVVRNYG---ADGQDLYVRLAAADLVKRR-----NANGKIIS----- 428
 BoSRK25 GTGCVIWTGALEDIRNYAD---GQDLYVRLAAADLVKKR-----NANWKIISV----- 439
 BoSRK28 GTGCVIWTGHLQDIRTYFAD---GQDLYVRLAAADLVKKK-----NANWKIISLIVGVSV 444
 BoSRK29 GTGCVIWTTERLEDIRTYFTD---GQDLYVRLAAADLVKK-----RNANGKIASLIVGASV 456
 BoSRK32 GTGCVIWTGELEDMRNYAES---GQDLYVRLAAADL----- 422
 BoSRK33 GTGCVIWTGRLADMRNFVDPH--GQDLYVRLAADDLVKK-----RNGNGKIIS----- 438
 BoSRK35 GTGCVIWTGELEDIRNYAAD---GQDLYVRLAAADL----- 426
 BoSRK36 GTGCIIRTGELEDIRNYAA---DSQDLYVRLAAADL----- 425
 BoSRK38 GTGCVIWTGQLYDIRNYAD---GQDLYVRLAAADLVKKR-----NANGKIIT----- 439
 BoSRK39 GTGCVIWTQQLDDMRNYGTGATDGQDLYVRLAAADI----- 424
 BoSRK45 GTGCVIWTGRLDDIRNYAD---GQDLYVRLAAADLVN----- 427
 BoSRK50 GTGCVIWTGQLDDMRNYFAAD-LGQDLYVRLAAADLVKER-----NANGKIIT----- 440
 BoSRK51 GTGCVTWNRELEDIRSYISN---GQDLYVRLAAADL----- 425
 BoSRK52 GTGCVIWTGLLYDMRNYAIGAIDGQDLYVRLAAADI AKKR-----NANGKIISLTVGVSV 445
 BoSRK57 GTGCVIWTGELIDMRNYVA---DGQDLYVRLAAADLVTKR-----NANWKIIS----- 435
 BoSRK58 GMGCVIWTGRFHDMRNYAA---DGQDLYVRLAAADL----- 422
 BoSRK60 GTGCVIWTGELEDIRTYDD---GQDLYVRLAAADLVKKR-----NANWKIISLIVGVTV 455
 BoSRK61 GTGCVIWTGKLEDMRNYG---ADGQDLYVRLAAADIIDKKG-----NVNGKIISLTVGVSV 446
 BoSRK62 GTGCVIWTGELEDIRNYFDD---GQDLYVRLAAADL----- 424
 BoSRK64 GTGCVIWTGQLDDMRNYAIGATDGQDLYVRLAAADI AKKR-----NANGEIIS----- 438
 BoSRK65 GTGCVIWAGELIDMRNYGA---DGQDLYVRLAAADLVEKR-----NANWKIIS----- 438
 BoSRK68 GTGCVIWTGQLDDIRNYG-----TRR-----NANGKIISLIIGVSV 421

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AlSRKb -----MRVVVVPNCHHFYIFFVVLILIRSVFSSYVHTLSSTESLTISSKQTIVSPGEVFEL 55
 BrSRK8 -MQGVRYIYHH-FYTSLLVFVVMILFRSALSIIYINTLSSTESLTISN**NR**TLVSPGDVFEL 58
 BrSRK9 ----GVRNIYHHSYTFLLVFFVMILFRPAFS--LSTLSSTESLTISS**NR**TLVSPGNIFEL 54
 BrSRK11 -----TSFLLVFVVMILFRPTLSIYFNTLSSTESLTISNSRTLVS**PGD**VFEL 47
 BrSRK12 MKCVRNIYYQSYTFSFVLAFLVVLILFHPAISMHFNTLLSTESLTISG**NR**TLVSPGHVFEL 60
 BrSRK21 MKGVRKTYDNSYTLSFLLVFFVMILFRPALSMYFNTLSSTESLTISN**NR**TLVSPGDVFEL 60
 BrSRK22 -----IYFNTLSSTETLTISS**NR**TLVSPGDVFEL 29
 BrSRK25 -----FLLVFFVMILFHPALSMYINTLSSTESLTISN**NR**TLAS**PGD**VFEL 45
 BrSRK26 -----TFSFLIVLAVLILFHPALSIYVNTLLSTESLTISS**NR**TLVSPGNVFEL 48
 BrSRK27 -----TSILLVFVVMILFHPAFSIYINSLSSAGSLTISS**NR**TLVSPGNIFEL 47
 BrSRK29 MKRVQNIYHH-SYTSFLLVFLVVLILFHPALSIYVNTMSSSES**LT**ISS**NR**TLVSPGGVFEL 59
 BrSRK30 -----TFSFLLVFVVMILFHPALSIYFNTLSSTESLTIST**NR**TLVSPGDVFEL 48
 BrSRK32 -----TFSYLLVFVVMILFHPALSIYINTLSSTESLTISS**NR**TLVSPGSIFEL 48
 BrSRK33 -----TFSFLLVFVVLILFHPALSIYFNILSSTETLTISG**NK**TLVSPGDVFEL 48
 BrSRK34 -----IFSFLLVFVLLILFHPVLSIYINTLSSTESLTISG**NR**TLAS**PGD**DFEL 48
 BrSRK35 -----TFSVLLVFVVMFLFHPALSIYINTLSSTESLTISS**NR**TLVSPGDVFEL 48
 BrSRK36 -----TLVLLVFVVMILFHPALSIYINTLSSTESLTISS**NR**TLVSPGNIFEL 48
 BrSRK37 -----IFSFVVMILFHPALSIYINTLSATESLTISSKRTLVS**PGN**VFEL 44
 BrSRK40 -----S-YTFSFLLVFLVVLILFHPALSIYVNTMSSSES**LT**ISS**NR**TVVSPGGVFEL 50
 BrSRK41 -----TFSFLLVFVVMILFHPALSIYINTLSSTESLKISS**NR**TLVSPGSIFEL 48
 BrSRK44 -----YTFSFLLVFLVVLILFHPALSIYVNTMSSSES**LT**ISS**NR**TLVSPGGVFEL 49
 BrSRK45 MKGVRNIYHHSYTLSFLLVFLVMILFRPAFS--INTLSPTESLTISS**NR**TLVSPGDVFEL 58
 BrSRK46 -MKGVRNIYHHSYTSFLLVFVVMILFRPTLSIYFNTLSSTESLTISNSRTLVS**PGD**VFEL 59
 BrSRK48 -----TFSFLLVFVVLNLFHPALSIYFNILSSTETLTISG**NR**TLVSPGNVFEL 48
 BrSRK49 -----TLYFLLVFFVLILPRPAFS--INTLSSTESLTISS**NR**TLVSPGNFFEL 46
 BrSRK52 -----TSFLLVYVVMILFHPALAIYINTLSATESLTISS**NR**TLVSPGNVFEL 47
 BrSRK53 -----TFLLVFVVMILFLPALSIYINTLSSTESLTISS**NR**TLVSPGDVFEL 46
 BrSRK54 -----TFCFLLVFVVLILVHPALSIYFNILSSTESLTISG**NR**TLVSPGDVFEL 48
 BrSRK55 -----TFSFLLVFVVLILFHPALSIYFNILSSTETLSISG**NR**TLVSPGDVFEL 48
 BrSRK56 -----IFSFLLVFVVMILFHPALSIYFNTLSSTESLTIST**NR**TLVSPGDVFEL 48
 BrSRK60 MKGVHNIYHHSYTFSLVFLALILFHPALSTYVNTMSSSES**LT**ISS**NR**TLVSPGGVFEL 60
 BrSRK61 -----TSLFLLVFFVLILFR--LAFSINTLSSTESLTISS**S**RTLVS**PGN**VFEL 46
 BrSRK99 -----TFSFLLVFVVSIIIFHPALSIYINTLSSTESLTISG**NR**TLVSPGD**DF**EL 48

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AlSRKb GFFNPAATSRDGRWYLGWFKTNLER--TYVWVANRDNPLYNSTGTLKISDTNLVLLDQ 113
 BrSRK8 GFFTPGSSSR----WYLGWYKLPYI--TYVWVANRDNPLSNSTGTLKISGNNLFLLDG 112
 BrSRK9 GFFRTN--SR----WYLGWYKLSGR--TYVWVANRDNPLSNSIGTLKISNMNLVLLDH 106
 BrSRK11 GFFKTSSSR----WYLGWYKLPGR--TYVWVANRDNPLSNSIGTLKISNMNLVILDH 101
 BrSRK12 GFFKNTLNSR----WYLGWYKNSDR--TYVWVANRDSSLSNAIGTLKFSGSNLVLRGR 114
 BrSRK21 GFFRTNSSSP----WYLGWYKQLSER--TYVWVANRDSPLSNAMGILKISGNNLVILDH 114
 BrSRK22 GFFRTNSSSG----WYLGWYKVSYSR--TSVWVANRDSPLFNAIGTLKISSNNLVLRGQ 83
 BrSRK25 GFFRTNSSSP----WYLGWYKVSYSR--TYVWVANRDNPLSSSIGTLKISGNNLVILDH 99
 BrSRK26 GFFTPGSSSR----WYLGWYKLSDR--TYVWVANRDSPLSSSIGTLKISNMNLVLLDH 102
 BrSRK27 GFFRTNSSSR----WYLGWYKQLSER--TYVWVANRDNPLSNSIGTLKISDMNLLLVDH 101
 BrSRK29 GFFKTLERSR----WYLGWYKVPWK--TYAVVANRDNPLSNSIGTLKISGNNLVLLGQ 113
 BrSRK30 GFFRTN--SR----WYLGWYKLPYR--TYVWVANRDNPLSSSIGTLKISGNNLVLLGH 100
 BrSRK32 GFFRTN--SR----WYLGWYKLSER--TYVWVANRDNPISNSIGTLKISGNNLVLLGH 100
 BrSRK33 GFFTPRSSSR----WYLGWYKLYFRIKTYVWVANRDSPLFNAIGTLKISGNNLVLLDH 104
 BrSRK34 GFFKTISRSR----WYLGWYKISQR--TYVWVANRDSPLFNAVGTLLKISGNNLVILGD 102
 BrSRK35 GFFKTNSSSR----WYLGWYKLPYR--TYVWVANRDNPLSNSIGTLKISDMNLVLLDH 102
 BrSRK36 GFFRTN--SR----WYLGWYKELTEI--TYVWVANRDNPISNSIGILKISGNNLVLLGH 100
 BrSRK37 GFFKTTLSSR----WYLGWYKVSYSR--TYVWVANRDNPLSNSIGTLKISGNNLVLLGH 98
 BrSRK40 GFFTPLGRSR----WYLGWYKEVPRK--TYAVVANRDNPLSNSIGTLKVSNNLVLLGQ 104
 BrSRK41 GFFRTN--SR----WYLGWYKLPYR--TYVWVANRDNPLSNSTGTLKISGNNLVILGH 100
 BrSRK44 GFFKPLGRSR----WYLGWYKVPWK--TYAVVANRDNPLSSSIGTLKISGNNLVLLGQ 103
 BrSRK45 GFFRTNSR-----WYLGWYKVSYSR--TYVWVANRDNPISNSIGSLKILGNNLVLRGN 110
 BrSRK46 GFFKTSSSR----WYLGWYKLPGR--TYVWVANRDNPLSNSIGTLKISNMNLVILDH 113
 BrSRK48 GFFKTTSNSR----WYLGWYKLYFR--TYVWVANRDSPLS--TGTLKISGNNLVLLGH 100
 BrSRK49 GFFRTNSR-----WYLGWYKLSVR--TYVWVANRDNPVANSVGTLLKISGNNLVLLGH 98
 BrSRK52 GFFITNSSSR----WYLGWYKLTDR--TYVWVANRDNPLSSSTGTLKISGNNLVIFGH 101
 BrSRK53 GFFRTN--SR----WYLGWYKLPYR--TYVWVANRDNPLSNSIGTLKISGNNLVILGH 98
 BrSRK54 GFFRTSSSR----WYLGWYKVFYFR--TYVWVANRDNPLSRSIGTLRISNMNLVLLDH 102
 BrSRK55 GFFTTSSSR----WYLGWYKVFYFK--TYVWVANRDSPLSNATGTLKITGNNLVLLDF 102
 BrSRK56 GFFRTN--SR----WYLGWYKLPYR--TYVWVANRDNPLSSSIGTLKISGNNLVILGH 100
 BrSRK60 GFFKPSGRSR----WYLGWYKVSQK--TYAVVANRDNPLSNSIGTLKISGNNLVLLGQ 114
 BrSRK61 GFFKTSSSR----WYLGWYKFPYR--TYVWVANRDNPLSNDIGTLKTSGNNLVLLDH 100
 BrSRK99 GFFKTTSRSR----WYLGWYKISER--TYVWVANRDSPLSNAVGTLLKISGNNLVLLDH 102
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AlSRKb FDTLVWSTNLT-GVLRs-PVVAELLsNGNLVLKDSKTNDKDGILWQsFDYPTDTLLPQMK 171
 BrSRK8 SNKSIWSTNLTRGNERs-PVVAELLANGNFVMRDSNNNDASGFLWQsFDYPTDTLLPEMK 171
 BrSRK9 SNKSVWSTNLTRENVRS-PVVAELLANGNFVVR-----DPSGFLWQsFDYPTDTLLPEMK 160
 BrSRK11 SNKSVWSTNHTTRGNERs-LVVAELLANGNFVLRDSNSNDAYGFLWQsFDYPTDTLLPEMK 160
 BrSRK12 SNKfVWSTNLTRGNERs-PVVAELLANGNFVIRYSYNNNDASGFLWQsFDfPTDTLLPEMK 173
 BrSRK21 SNKSVWSTNLTRGNERs-PVVAELLANGNFVMRDSNNNDASGFLWQsFDYPTDTLLPEME 173
 BrSRK22 SNKSVWSTNLTRGNERf-PVVAELLANGNFVIRYSNKNDASGFLWQsFDYPTDTLLPEMK 142
 BrSRK25 SNKSVWSTNLTRGNERs-PVVAELLANGNFVMRDSNNNDASGFLWQsFNfPTDTLLPEMK 158
 BrSRK26 SNKpVWSTNLTRGNERs-PVVAELLANGNFVMRYsNNNDSSGFLWQsFHYPDTLLPEMK 161
 BrSRK27 SNKSVWSTNLTRGNERsSLVVAELLANGNFVMRDSNNNDAGGFLWQsFDYPTDTLLPEMK 161
 BrSRK29 SNNTVWSTNfTRGNARs-PVIAELLpNGNFVMRHSNNKDSNGFLWQsFDfPTDTLLPEMK 172
 BrSRK30 SNKSVWSTNLTRGNERs-PVVAELLANGNFVMRDSNINDASGFLWQsFDfPTNTLLPEMK 159
 BrSRK32 SNKSVWSTNLTRENERs-PVVAELLANGNFVVR-----DSSGFLWQsFDfPTDTLLPEMK 154
 BrSRK33 SNKSVWSTNLTRGNERs-LVVAELLANGNFVMRDSINDATGFLWQsFDYPTDTLLPEMK 163
 BrSRK34 SNNSVWSTNHTTRGNERs-PVVAELLANGNFVIRYSNNNDASGFLWQsFDYPTDTLLPEMK 161
 BrSRK35 SNKSVWSTNLTRGNERs-PVVAELLpNGNFVIRYFNNDASGFLWQsFDYPTDTLLPEMK 161
 BrSRK36 SNKSVWSTNLTRENERs-PVVAELLANGNFVVR-----DSSGLLWQsFDYPTDTLLPEMK 154
 BrSRK37 SNKSVWSTNLTRGNERs-PVVAELLANGNFVMRDSNNNDASGFLWQsFDYPTDTLLPEMK 157
 BrSRK40 SNNTVWSTNITRGNARs-PVIAELLpNGNFVMRYsNNKDPsGFLWQsFDfPTDTLLPEMK 163
 BrSRK41 SNKSVWSANLTRGSERs-TVVAELLANGNFVMRDSNKND--ILWQsFDfPTDTLLPEMK 157
 BrSRK44 SNNTVWSTNLTRGNARs-PVIAELLpNGNFVIRHSNNKDSGFLWQsFDfPTDTLLPEMK 162
 BrSRK45 SNKSVWSTNITRRNERs-LVLAELLGNGNFVMRDSNNKDASEYLWQsFDYPTDTLLPEMK 169
 BrSRK46 SNKSVWSTNHTTRGNERs-LVVAELLANGNFVLRDSNSNDAYGFLWQsFDYPTDTLLPEMK 172
 BrSRK48 SNKSVWSTNLTRRNERs-PVMAELLANGNFVMRDSNNNDASGFLWQsFDfPTDTLLPEMK 159
 BrSRK49 SSKSVWSTNLTRRNERs-SVVAELLANGNFVMRDSNNNDASRFLWQsFDYPTDTLLPEMK 157
 BrSRK52 SNKSVWSTNLTIgNERs-PVVAELLANGNFVMRDPNNNEASGFLWQsFDYPTDTLLPEMK 160
 BrSRK53 SNKSVWSTNLTRGSERs-TVVAELLANGNFVIRYSNNNDASGFLWQsFDfPTDTLLPDMK 157
 BrSRK54 SNKSVWSTNLTRGNERs-PVVAELLANGNFVMRDSNNNDASGFLWQsFDfPTDTLLPEMK 161
 BrSRK55 SNKSVWSTNLTRGNERs-PVVAELLANGNFVMRDSNNNDASEFLWQsFDfPTDTLLPEMK 161
 BrSRK56 SNKSVWSTNLTRGSERs-TVVAELLGNGNFVMRDTNNNDASEFLWQsFDYPTDTLLPEMK 159
 BrSRK60 SNNTVWSTNLTRENVRS-PVIAELLpNGNFVMRYsNNKDSGFLWQsFDfPTDTLLPEMK 173
 BrSRK61 SNKSVWSTNVTRGNERs-PVVAELLANGNFVMRDSNNNNASQFLWQsFDYPTDTLLPEMK 159
 BrSRK99 FNKSVWSTNLTRGNERs-PVVAELLANGNFVIRYFSNNNDASGFLWQsFDYPTDTLLPEMK 161

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hvl

AlSRKb	MGWDVKKGLNRFLRSWKSQYDPSSGDFSYKLE	TRG-FPEFFLLWR----	NSRV	FRSGPWD	226
BrSRK8	LGYDLKTGLNRFLTSSRNFDPPSSGDYSYKLE	PRRLPEFYLLL----	GDVRE	HRSGPWN	226
BrSRK9	LGYDLKTGLNRFLVSWRSSDDPSSGDFSYKLD	IQRGLPEFYTFK----	DNTLV	HRTGPWN	216
BrSRK11	LGYDLKIGLNRSLTSWRSPDDPSSGYFSYKLE	GSRRLEPFYLMQ----	GDVRE	HRSGPWN	216
BrSRK12	LGYDLKTGLNRFLTSSRNFDPPSSGDFSYKLE	TRR-LPEFYLLK----	NGSPG	QRSGPWN	228
BrSRK21	LGYDLKTRLNRFLTSSWKSDDPSSGEISYKLD	TQRGLPEFYLLK----	DGLRA	QRSGPWN	229
BrSRK22	LGYDLKTEQNRFLTSSWRNSDDPSSGEISYFLD	TESGMPEFYLLK----	SGLRA	YRSGPWN	198
BrSRK25	LGFKLKTGLDRFLTSSWRSSDDPSSGDFLYKLD	TRR-FPEFYLLS----	GVFLY	YRSGPWN	213
BrSRK26	LGYDRKTRLNRFLTSWRNSDDPSSGEISYFLD	IQTGMPEFYLLQ----	SGARM	HRSGPWN	217
BrSRK27	LGYNLKKGLNRFLTSSWRSSDDPSSGEISYKLE	MRR-LPEFYLWN----	EDFPM	HRSGPWN	216
BrSRK29	LGYNLKTGRNRFLTSSWKSDDPSSGNFAYKLD	LRRGLPEFILINTFLNQRVET	QRSGPWN		232
BrSRK30	LGFKLKTGLNRFLTSSWRSSNDPSSGNFSYKLE	AQR-LPEFYLWN----	EKFPW	HRSGPWN	214
BrSRK32	LGYDLKTRLNRFLVSWRSLNDPSSGNFSYRLE	TRR-LPEFYLSK----	RDVPV	HRSGPWN	209
BrSRK33	LGYDRKKGLNRFLTSSWRNSDDPSSGETSYKLD	TQRGLPEFYLLI----	NGSRG	QRSGPWN	219
BrSRK34	LGYDLKKGMNRFLTSSWRNSDDPSSGNIKYQLD	TQRGMPEFYLLK----	EGSRA	HRSGPWN	217
BrSRK35	LGYDLKKGLNRFLTSSWRSSDDPSSGDFSYKLE	PRR-LPEFYIFI----	EDIPV	HRSGPWN	216
BrSRK36	LGYDLKTGLNRFLISWRSLDDPSNGNFSYSLE	KRE-LPEFYLYK----	GNFRV	HRSGPWN	209
BrSRK37	LGYDLKTGLNRFLISWRSSNDPSSGNFSYKLE	NRELPEFYLOQ----	NDIRA	HRSGPWN	212
BrSRK40	LGYDLKTGRNRFLTSSWKSDDPSSGNFVYKLD	IRRGLPEFILINTFLNQRVET	QRSGPWN		223
BrSRK41	LGYDLKTGLNRFLTSSWRSSDDPSSGNFSYKLE	NQR-LPEFYLSSH---	GIFRL	HRSGPWN	213
BrSRK44	LGYDLKTGRNRFLTSSWKSDDPSRGNFVYKLD	IRRGLPEFILINQFLNQRVET	QRSGPWN		222
BrSRK45	LGFQPKTGLNRFLTSSWRSSDDPSSGDFSYKLE	AQR-LPEFYLWNK---	ELFRV	HRSGPWN	225
BrSRK46	LGYDLKIGLNRSLTSWRSPDDPSSGYFSYKLE	GSRRLEPFYLMQ----	GDVRE	HRSGPWN	228
BrSRK48	LGYDHKKRLNRFLTSSWRNSDDPSSGDFSYQLD	TQRGMPEFLVLK----	EGYPG	HRSGPWN	215
BrSRK49	LGYDLKTGLNRFLTAWRSSDDPSSGEISYKLE	PRR-LPEFYLLKR---	RVFRL	HRSGPWN	213
BrSRK52	LGYDLKTGLNRFLISWRSSDDPSSGEITYKLE	PRR-FPEFYIFS----	DDFRV	HRIGPWN	215
BrSRK53	LGYDLKKGFNRFLISWRSSDDPSSGNYSYKLE	TRR-LPEFYLLS----	GVFRL	HRSGPWN	212
BrSRK54	LGYDLKTGLNRFLTAWRNSDDPSSGDYSYKLE	NRE-LPEFYLLK----	SGFOV	HRSGPWN	216
BrSRK55	LGYDLKTGHKRFLTSSWRNSDDPSSGEISYILD	TQRGMPEFFLLE----	NGFII	HRSGPWN	217
BrSRK56	LGYNLKKGLNRLLISWRSSDDPSSGDYSYKLE	PRR-LPEFYLLKR---	GVFRV	QRSGPWN	215
BrSRK60	LGYDFKTGRNRFLTSSWRSYDDPSSGKFTYELD	IQTGLPEFILINRFLNQRVVM	QRSGPWN		233
BrSRK61	LGYDLKTGLNRFLTSSWRSSDDPSSGDYSYKLE	LRRLPEFYLWK----	GSIRT	HRSGPWS	214
BrSRK99	LGYDIKTGLNRFLTSSWRSYDDPSSGEIVYKLD	TQRGMPEFFLLK----	NDFPA	HRSGPWN	217

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ALSRkb GLRFSGIPEMQOWEYMVSNFTENREEVAYTFQITNHNIIYSRFTMSSTGALKRFRWISSSE 286
 BrSRK8 GIQFSGIPEDQKLSYMVYNFTKNSEEVAYTFRMTNNSFYSLRTINSEGYLERLTWAPSSV 286
 BrSRK9 GIRFSGIPEEQQLSYMVYNFTENSEEVAYTFLVLTNNSIYSRLTINFSGFFERLTWTPLSV 276
 BrSRK11 GIQFIGIPEDQKSSYMMYNFTDNSEEVAYTFVMTNNGIYSRLKLSSDGYLERLTWAPSSG 276
 BrSRK12 GVQFSGIPEDQTL SYMVYNFTENSEEVAYTFRMTDNSIYSRIQLSPEGLLERLTWTPTSG 288
 BrSRK21 GVKFSGIPEDQKLSYMVYNFIENSEEVAYTFRMTNNSIYSRIQVSPAGFLARLTTTPTAW 289
 BrSRK22 GVRFSGIPGDQYLSYMVYNFTENSEEVAYTFRMTTHSIYSRLKISSKGFLELRLTWTPTSI 258
 BrSRK25 GIRFSGLPDDQKLSYLVYNFTKNNEEVAYTFRMTNNSFYSLRTLNLFLGYIERQTWNPSLG 273
 BrSRK26 GVRFSGMPGDQKLSYMVYNFTENSEDVAYTFRMTNKS IYSRLKVSSEGFLELRLTWTPN SI 277
 BrSRK27 GIEFSGIPEDQKSSYMAYNFTENSEGVAYTFRMTNNSIYSRLTVSSEGNFERLTWNPLLG 276
 BrSRK29 GMEFSGIPEVQGLNYMVYNFTENSEEISYSFHMTNQS IYSRLTVS-ELTLNRFWTWIPSS 291
 BrSRK30 GIEFSGIPEDKELSYMVYNFTENSEEVAYTFLMTNNSIYSRLTINSAGYFQRLTWDPLLG 274
 BrSRK32 GIRFSGIPEDEKLSYMVYNFTENSEEAAAYTFLMTNNNIYSRLTISSDGSFQRLTWTWIPSSG 269
 BrSRK33 GIRFSGIPEDLRLSYMVYNFIENSEEVAYTFRMTNNSIYSRLTISSEGLLERLTWAPASF 279
 BrSRK34 GVQFYGIPEDQKLSYMAYNFIENSEEVAYTFRMTNNSIYSRLKINSDEYLDRLTWTPTST 277
 BrSRK35 GIRFSGILEDQKLSYMVYNFTENSEEVAYAFRMTNNSIYSRLTISSEGYFQRLTWTWIPSSV 276
 BrSRK36 GIAFSGIPEDQKLSYMVYNFIENSEEAAAYTFRMTNNSIYSKLTINSEGRFQRLTWTWIPSSG 269
 BrSRK37 GIGFSAIPEDRKL SYMVYNFTENSEEVAYTFLMTNDSIYSRIQMSSEGLRRLMWTPTSW 272
 BrSRK40 GIEFSGIPEVQGLNYMVYNFTENSEEIAYSFQMTNQS IYSRLTVS-EFTLDRFTWIPPSW 282
 BrSRK41 GIGFSGIPEDEKLSYMVYNFTENSEEVAYTFRMTNNSIYSRLTLSSKGFQRLTWDPSLE 273
 BrSRK44 GMEFSGIPEVQGLNYMVYNFTENSEEISYSFHMTNQS IYSRLTVS-EFTFDRLTWIPPSR 281
 BrSRK45 GIRFSGIPEDQKLSYMVYNFTENSEEVAYTFLLTNNSIYSRLTVSSEGYIERQTWNPTLG 285
 BrSRK46 GIQFIGIPEDQKSSYMMYNFTDNSEEVAYTFVMTNNGIYSRLKLSSDGYLERLTWAPSSG 288
 BrSRK48 GVRFSGIPEDQKLSYMVYNFTENSEEVAYSFRVTNNSIYSRLKINSEGFLELRLTWTWIPASS 275
 BrSRK49 GIRFSGIPEDQKLSYMIYNFTENSEELAYTFRITNNSIYSILTVSSEGKLERLMWNP SLA 273
 BrSRK52 GIGFIGIPEDQNSTYIVYNFTENSEEVAYSFRMTNNSIYSRLIITSEGYFQRLMWTWIPSTE 275
 BrSRK53 GIQISGIPEDQNLHYMVYNFIENSEEVAYTFRMTNNSIYSRLTLGFSGDFQRLTWNPSIG 272
 BrSRK54 GVRFSGIPENQKLSYMVYNFTENSEEVAYTFRMTNNSFYSLRKVSSDGYLQRLTLIPISI 276
 BrSRK55 GVQFSGIPDDQKLSYMVYNFIENSEEVAYTFRVTNNSIYSRLKISSEGFLELRLTLTPMSS 277
 BrSRK56 GIQFNGIPEDQTL SYMVYNFTENSEEVAYTFLMTNNSFYSLRTINFEQDFQRLT WAPSSI 275
 BrSRK60 GIEFSGIPEVQGLNYMVYNFTENSEEIAYSFQMTNQS IYSRLTVS-DYTLNRFTRIIPPSW 292
 BrSRK61 GIQFSGIPEDQRLSNMVYNFTENSEEVAYTFQMTNNSFYSTLTISSTGYFERLTWAPSSV 274
 BrSRK99 GIGFSGLPEDHKLGYMAYNFIENSEEVAYSFRMTNNSIYSRLEINSDGDLERLIWTWIPTSW 277

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	hvII	hvIII		
AlSRKb	EWNQLWKNP-NDHCDMYKRCGPYSYCDMNTSPICNCIGGFK	PRNLHEWTLRNGS	IGCVRK 345	
BrSRK8	VWNVFWSSP-NHQCDMYRMCGPYSYCDVNTSPSCNCIOGFN	PGNVQOWALRNQIS	GCKRR 345	
BrSRK9	IWNPIWSSPASFOCDPYMICGPGSYCDVNTLPLCNCIOGFK	PLNVQEWDMRDHTR	GCIRR 336	
BrSRK11	AWNLFWSSP-NHQCDMYRMCGTYSYCDVNTSPSCNCIPGFN	PKNRQOWDLRIPIS	GCKRR 335	
BrSRK12	TWNLFWAPVDIQCDVYMTCGPYAYCDVNTSPVCNCIOGFM	PFDMQOWALRDGTG	GCIRR 348	
BrSRK21	EWNWFYAPEDPQCDVYKTCGPYAYCDLNTSPLCNCIOGFK	PFDEQOWDLRNPSTG	GCIRR 349	
BrSRK22	AWNLIWYLPVENQCDVYMCVYSYCDENTSPMCNCIOGFM	PLNEQRWDLRDWSS	GCTRR 318	
BrSRK25	MWSRFWAFPLDSQCDTYRACGPYSYCDLNTSPICNCIOGFN	PSNVEQWDQRVWANG	GCMRR 333	
BrSRK26	TWNMFWYLPLENQCDIYMICGRYAYCDVNTSPLCNCIOGFN	RSNEERWDLKDWSS	GCIRR 337	
BrSRK27	MWNVFWSSPVDAQCDMYRTC	CGPYAYCDVNTSPVCNCIOGFN	PSNVQLWDLRDGAG	GCIRR 336
BrSRK29	AWSLFWTLP-TDVCDPLYL	CGSYSYCDLITSPNCNCIRGFV	PKNPQOWDLRDGTQ	GCVRT 350
BrSRK30	MWNVFWSSPVDLQCDSYRRCGPYAYCDVTTSPVCNCIOGFN	PRFVERWDIRDWSA	GCIRR 334	
BrSRK32	AWNLFWSSPVNPECDLYMICGPDAYCDVNTSPSCNCIOGFN	PKDLPOWDLRDWTS	GCIRR 329	
BrSRK33	SWNLFWSLPADTWCDVYMACGPYAYCDVNTSPECNCIOGFN	RSNEEQOWDLRDGSA	GCVRG 339	
BrSRK34	AWNLFWSAPVDIRCDVYMACGPDAYCDVSTSPVCNCIOGFK	RSDEQOWDLRDPSS	GCIRG 337	
BrSRK35	VWNLFWSSPANVECDLYRVC	CGPNGYCDMNTSPSCNCIOGFN	PRNMQOWDLRDPSS	GCIRR 336
BrSRK36	AWNLFWSSPENPECDLYMICGPYAYCDLNTSPSCNCIOGFN	PGDVEQOWDLRDWTS	GCIRR 329	
BrSRK37	EWSLFWSAPVDPQCDVYKTCGPYAYCDLNTSPLCNCIOGFM	PSNVQOWDLRNPSS	GCIRR 332	
BrSRK40	GWSLFWTLP-TDVCDPLYL	CGSYSYCDLITSPNCNCISGFV	PKNPQOWDLRDGTQ	GCVRR 341
BrSRK41	IWNMFWSSPVDPQCDSYIMCGAYAYCDVNTSPVCNCIOGFN	PRNIQRWDQRVWAG	GCVRR 333	
BrSRK44	DWSLFWTLP-TDVCDPLYL	CGSYSYCDLITSPNCNCIRGFV	PKNPQOWDLRDGTQ	GCVRR 340
BrSRK45	MWNVWFSFPLDSQCESYRMCGPYSYCDVNTSPVCNCIOGFN	PSNVEQWDLRSWSG	GCIRR 345	
BrSRK46	AWNLFWSSP-NHQCDMYRMCGTYSYCDVNTSPSCNCIPGFN	PKNRQOWDLRIPIS	GCKRR 347	
BrSRK48	AWNLFWSVPVDTRCDVYMSCGPYAYCDVNTSPVCNCIOGFN	RSNEEQOWDMRDGAS	GCIRG 335	
BrSRK49	MWNVWFFFVDSQCDTYMMC	CGPYAYCDVNTSPVCNCIOGFN	PMYVEEWDLREWSS	GCIRR 333
BrSRK52	IWQVFWSSPMSLQCDPYRICGPYAYCDESTSPMCNCIOGFD	PKNRQOWDLRSHAS	GCIRR 335	
BrSRK53	IWILFWSSPVDPQCDTYVMCGPNAYCDVNTSPVCNCIOGFN	PWNVQLWDQRVWAG	GCIRR 332	
BrSRK54	AWNLFWSSPVDIRCDMFRVCGPYAYCDGNTSPLCNCIOGFD	PWNLQOWDIGEPAG	GCVRR 336	
BrSRK55	AWNLLWSSPVDIRCDVYIVCGPYAYCDGNTSPLCNCIOGFM	PFIVQRWDMGDGAG	GCIRR 337	
BrSRK56	VWTVFWSSPVNPQCDIYRMCGPYSYCDVNTSPVCNCIOGFN	RKNRQOWDVRIFLS	GCIRR 335	
BrSRK60	GWSLFWSLP-TDVCDSLYFCGSYSYCDLNTSPYCNCIRGFV	PKNRQRWDLRDGSH	GCVRT 351	
BrSRK61	VWNVFWSSP-NHQCDMYRICGPYTYCDVNTSPSCNCIOGFR	PKNRQOWDLRIPIS	GCKRR 333	
BrSRK99	EWSLFWSSPVDLQCDVYKTCGPYAYCDLNTSPLCNCIOGFT	PSNVQOWDLRNPSTG	GCIRR 337	
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AlSRKb TRLNCGDGF LCLRKMKLPDSSAAIVDRSID--LGECKKRLNDCNCTAYASTDIQNGGL 403
 BrSRK8 TRLSCNGDGFTRMKNIKLPDTRMAIVDRSIG--LKECEKRCLSDCNCTAFANADIRNRVT 403
 BrSRK9 TRLSCRGDGFTRMKNMKLPETTMATVDRSIG--VKECEKKCLSDCNCTAFANADIRDGGT 394
 BrSRK11 TRLSCNGDGFTRMKNMKLPDTTMAIVDRSMG--VKECEKRCLSDCNCTAFANADIRNGGT 393
 BrSRK12 TRLSCSSDGFTRMKNMKLPDTKMAIVDRSID--VKECEKRCLSDCNCTAFANADIRNGGT 406
 BrSRK21 TPLSCSGDGFTRMKNMKLPETTMAVVDRSIG--VKECEKMCLSDCNCTAFANADIRNGGT 407
 BrSRK22 TRLSCSGDGFTRMRKMKLPETKMANVYRSIG--VKECEKRCLSDCNCTAFANADIRNGGT 376
 BrSRK25 TRLSCSGDGFTRMKNMKLPETTMMAIVDRSIG--VKECEKRCLNDCNCTAFANADIRNGGT 391
 BrSRK26 TRLSCSGDGFTRMRKMKLPETKMAIVDRSIG--VKECEKRCLSDCNCTAFANADIRNGGT 395
 BrSRK27 TRLSCSGDGFTRMKNMKLPETTMATVDRSFG--LKECEKRCLSDCNCTAFANADIRNGGT 394
 BrSRK29 TQMCSGDGFLRLNMMNLPDTKTATVDRTID--VKKCEERCLSDCNCTSFAAADVNRGGL 408
 BrSRK30 TRLSCSGDGFTRMKNMKLPETTMMAIVDRSIG--LKECKRRCVRDCNCTAFANADIRNGGT 392
 BrSRK32 TRLSCRGDGFTRMKNMKLPETTMMAIVDRSIG--IKECKKRLSDCNCTAFANADIRNGGT 387
 BrSRK33 TRLSCNGDGFTRMKRMKLPETTMMAIVDRSIGIGVTECEKRCLSDCNCTAFANADIRNGGT 399
 BrSRK34 TPLSCKGDGFTRMKMMKLPETRMAIVDRSIG--VKECEKRCLSDCNCTAFANADIRNGGT 395
 BrSRK35 TLLSCGGDGFTRMMKVLPDTTMAIVDRSIG--LKECKKRLGDCNCTAFANADTRNGGT 394
 BrSRK36 TRLSCSDDGFTRMKNMKLPETTMMAIVDRSIG--MKECKKRLSDCNCTAFANADVRNGGT 387
 BrSRK37 TRLGCSGDGFTRMKNMKLPETTTAIVDRSIG--MKECKKRLSDCNCTAFANADIRNGGT 390
 BrSRK40 TRLSCSEDEF LRLNMMNLPDTKTATVDRTID--VKKCEERCLSDCNCTSFADIVNRGGL 399
 BrSRK41 TQLSCNGDGFTRMKNMKLPETTMMAIVDRSIG--VKECEKRCLSDCNCTAFANADIRNGGT 391
 BrSRK44 TQMCSGRDGF LRLNMMNLPDTKTATVDRTMD--VKKCEERCLSDCNCTSFAAADVKNNGGI 398
 BrSRK45 TRVSCSGDGFTRMKNMKLPETTMATVDRSIG--VKECEKKCLSDCNCTAFANADIRNGGT 403
 BrSRK46 TRLSCNGDGFTRMKNMKLPDTTMAIVDRSMG--VKECEKRCLSDCNCTAFANADIRNGGT 405
 BrSRK48 TQLSCSDDGFTRMKMMKLPDTTMAIVDRSIG--VKECEKRCLSDCNCTAFANADIRNGGT 393
 BrSRK49 TLLSCSEDGFTRMKNMKLPDTTMAIVDRSIG--LKECEKRCLSDCNCTAFANADIRNGGT 391
 BrSRK52 TRLRCSGDGFTRMKNMKLPDTTTAIVDRSIG--VKECEKRCLSDCNCTAFANADIRNGGT 393
 BrSRK53 TQLSCSGDGFTRMKMMKLPETTMMAIVDRRIG--VKECEKRCLSNCKCTAFANADIRNGGT 390
 BrSRK54 TLLSCSDDGFTRMKMMKLPDTRLAIVDRSIG--LKECEKRCLSDCNCTAFANADIRNGGT 394
 BrSRK55 TPLSCSGDGFTRMKNMKLPDTTMAIVDRRIG--VKECKKRLSNCNCTAFANADIRNGGT 395
 BrSRK56 TRLSCNGDGFTRMKNMKLPETTMMAIVDRSIG--LKECEKRCLSDCNCTAFANADIRNGGT 393
 BrSRK60 TQMCSGDGFLRLNMMNLPDTKTASVDRTID--VKKCEEKCLSDCNCTSFATADVNRGGL 409
 BrSRK61 TRLSCNGDGFTRMKNMKLPDTTMAIVDRSIV--LKECKKRLGDCNCTAFANADIRNGGT 391
 BrSRK99 TRLSCRGDGFTRMKNMKLPETTTIATVDRNIG--LKECKKMCLSDCNCTAFANADIRNGGT 395

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AlSRKb	GCVIWIEELDIRNYASG---GQDLYVRLADVDIG-----DERNIRGKIIIGLAVGASVILF	456
BrSRK8	GCVIWTGELEDMRNYAEG---GQDLYVRLAAADLV-----KKRNGNWKIIISLIVGVSVLL	456
BrSRK9	GCVIWTGRLDDMRNYAVS---GQDLYVRLAAADV-----EKRTANGKIVSLIVGVCVLL	447
BrSRK11	GCVIWTGELEDMRNYAEG---GQELYVRLAAADLG-----	425
BrSRK12	GCVTWTGELEDIRNYIGN---GQDLYVRLAAADLV-----KKRKANGKIIISLIVGVS-VLL	458
BrSRK21	GCVIWTGELEDIRNYFD---DGQDLYVRLAAADLV-----KKRNANGKTITLIVGVGLLFI	460
BrSRK22	GCVIWTGRLDDIRNYAD---GQDLYVRLAAADLV-----KKRDANWKIIISLIVGVSVLL	429
BrSRK25	GCVIWTGELEDMRNYAAA---GQDLYVRLAAGDLV-----TKRNANWKIIISLAVGVSVLL	444
BrSRK26	GCVIWTGDLEDLRNYA---DGQDLYVRVAAADLV-----KKSANWKIIS-----	438
BrSRK27	GCVFWTGRLDDMRNYAADH--GQDLYVKVAAADLV-----KKRNANGKNIS-----	438
BrSRK29	GCVFWTGELVAIRKFAVG---GQDLYVRLNAADLDLSSGEKRDRTGKIIIGWSIGVSVMLI	465
BrSRK30	GCVIWTVLLEDMRNYADG---QDLYVRLAAADLV-----KKRNANGKIIIS-----	434
BrSRK32	GCVIWTGQLDDIRNYGTD---GQDLYVRLAAADLV-----KRRNANGKIIIS-----	430
BrSRK33	GCVIWTTGLEDIRTYFADD-IGQDLYVRLAAADLV-----KKRNANGKIIP-----	444
BrSRK34	GCVIWTRELEDIRTYSAAD-LGQDLYVRLAAADLV-----KTRNENGKIIT-----	440
BrSRK35	GCVTWTGELEDIRNYIRD---GQDLYVRLAAADLV-----KKRNANGKIVS-----	437
BrSRK36	GCVIWTAQLDDVRNYGAD---GQDLYVRLAAADLV-----KRRNANGKIIIS-----	430
BrSRK37	GCVIWTERLHDIRNYFD---NGQDLYVRLAAADLG---QERNANGKIII-----	433
BrSRK40	GCVFWTGELVAIRKFAVG---GQDLYVRLNAADLDISSGEKRDRTGKII-----	445
BrSRK41	GCVIWTGQLDDMRNYAIGATDGQDLYVRLATADIA----EKRNANGEIIS-----	437
BrSRK44	GCVFWTGELVAIRKFAVG---GQDLYVRLNAADLDISSGEKRDRTGKII-----	444
BrSRK45	GCVIWTGRLDDMRNYVADH--GQDLYVRLAAADLV-----KKRNADGKIIISSTVAVSVLL	457
BrSRK46	GCVIWTGELEDMRNYAEG---GQELYVRLAAADLV-----KKRNGNWKIIISLIVGVSVLL	458
BrSRK48	GCVIWTGELEDIRNYFA-V-LGQDLYVRLAAADLA----KKRNANGKIVTLT-----	439
BrSRK49	GCVIWTGKVEDMRNYGAD---GQDLYVRLAAADIID---KKRNANGKIIISL-----	436
BrSRK52	GCVIWTGELEDIRTYVAD---GQDLYVRLAAADLV-----RKRNANGKIVS-----	436
BrSRK53	GCVIWTEQLDDMRNYGTGATDGQDLYVRLAAADIA----KKRNANGKIIISVTVAVSILL	446
BrSRK54	GCVIWTGHLQDIRTYDE---GQDLYVRLAADDLV-----KKKNANWKIIISLIVGVSVLL	447
BrSRK55	GCVIWTGALQDIRTYDD---GQDLYVRLAAADLV-----QKRNAKGKIITLIVGVS-VLL	447
BrSRK56	GCVIWIGRLDDMRNYVPDH--GQDLYVRLAAADLV-----KKRNVNVKIIISLIVGVSVLL	447
BrSRK60	GCVFWTGDLVEIRKQAVV---GQDLYVRLNAADLDFSSGEKRDRTGTIIIGWSIGVSVMLI	466
BrSRK61	GCVIWIGELADIRNYADG---GQDLYVRLAAADLV-----KKRNGNWKIIISLIVGVSVLL	444
BrSRK99	GCVIWTGRLHDIRNYAA---DGQDLYVRLAAVDLA----QKRNANGKIIT-----	438

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Supplemental Figure 2. Amino acid-sequence alignment of the PAN_APPLE domains of SRK variants from *A. lyrata* (AISRKx) and *A. halleri* (AhSRKx).

The sequences are aligned relative to the sequence of the *A. lyrata* SRKb variant used in this study. Potential *N*-glycosylation sites are shown in red type.

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SRKb_PAN      RLNCG-GDGFFLCLRKMKLPDSSAAIV-DRTIDLGECKKRCLNDCNCTAYASTDIQNGGLG 58
AlSRK1        PLNCG-KDRFLPLKQMKLPDTTKTVIV-DRKIGMKDCKKRCLNDCNCTAYANTDI--GGTG 56
AlSRK3        QLNCN-GDGFYWLRNMKLPETSGAIV-DKRIGLKECEERCCIENCNCTAFANTNIQDGGSG 58
AlSRK4        PLSCR-RDGFLPMKKMKLPTTTTMTATV-DGRISGKECKQKCLMDCNCTAYANADIKNGGLG 58
AlSRK5        PLNCL-EDGFIKLKKMKLPASTTAIV-DKRIGLKECEEKCKQYCNNCTAYANTDTRNGGTG 58
AlSRK6        QLSCS-GDGFFLMRKMKLPATTGAIV-DKRIGVKECEEKCINNCNCTAFANTNIQDGGSG 58
AlSRK8        QLSCS-GDRFFRLSKMKVPDTMGAIV-DKRIGLKECEEERCINDCNCTAFANTNIQDRGSG 58
AlSRK10       PLSCS-GDGFMRLERMKLPDTTMAIV-DRSINVKECEEERCHSDCNCTAFANADIRNGGTG 58
AlSRK11       RLSCN-GDGFHKLKKMKLPDTTAAIV-DWKIDLKECKKRCLENCNCTALANIITGDGRTG 58
AlSRK12       QLNCN-GDGFFKLKKVKLPPETTAIV-DRKIGLKDCEKRCLSYCNNCTAYANTDIQNDGSG 58
AlSRK14       QLSCD-GDGFFWLRNMKPPDTSGAIV-DKRIGLKECEEERCIKECNNCTAFSNMNIQDGGKG 58
AlSRK15       QLSCT-GDGFLRLQMKLPDTVEAIVVDRRIGIKECEKRCQIDCNCTAFANIDIQNGGLG 59
AlSRK18       QLSCN-GDGFFWLRNITPDTAGAIV-DKRIGLKECEEERCCIENCNCTAFANTNIQDGGSG 58
AlSRK19       QLSCNGGDGFYQLKKVKLPDTTMALV-DTRIGLKECEVKLANCNCTAYANMDIRNGGSG 59
AlSRK23       PLNCS-EDGFVQLKNMKLPDTTEEVIV-DRRISTKECRERCLGDCNCTAFANTDIQNGGWG 58
AlSRK28       QLNCN-GDGFFWLRNMKLPDTSGAIV-DKRIGLKECEEERCCIENCNCTAFANTNIQNGGSG 58
AlSRK30       RLSCSRGDVVFFQLKNTKLPDTTWTTIV-NKSIDMEECKERCLRDCNNCTAYANTDIRNGGSG 59
AlSRK33       PLSCG-GDGFVRLEKMKMPDTTKAVV-DWNIGMKDCRKKCLSDCNCTAYANADIRNGRLG 58
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SRKb_PAN      CVIWIEELLDIRNYASGGQDLYVRLADVD 87
AlSRK1        CVMWIGELLDIRNYA----- 71
AlSRK3        CVLWTRELADIRRYVDAGQDLYVRL---- 83
AlSRK4        CVIWTGELVDIRTYVVGQDLYVRM---- 83
AlSRK5        CVIWIGKFDDVRYYPAAQDLYIRL---- 83
AlSRK6        CVIWTSELTDIRSYADAGQDLYVRV---- 83
AlSRK8        CVIWTGELLDIRSFADAGQDLYVRV---- 83
AlSRK10       CVIWTGELEDIRNY----- 72
AlSRK11       CVIWTVELEDLRNYPT----- 74
AlSRK12       CVMWTGELADIRNYANAGQDLYVRL---- 83
AlSRK14       CVIWTKELADIRRYADGGQDLYVRL---- 83
AlSRK15       CVFWTKELLDIRNYAVEGQDLYVRL---- 84
AlSRK18       CVLWTRELEDIRRYVDAGQDLYVR---- 82
AlSRK19       CVIWTRELEDIRTFAAAGQDLYVRL---- 84
AlSRK23       CVIWTGELMDIRNYAIDGQDLYVRL---- 83
AlSRK28       CVLWTRELADIRRYVDAGQDLYVR---- 82
AlSRK30       CVIWTGELKDIRNYPATGQDLYVR---- 83
AlSRK33       CLTWTRELVDIRNYVAEGQDLYVR---- 82
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Accession numbers: AISRK1 (AAK19317.2), AISRK3 (AAK19313), AISRK4 (AAK19315.2), AISRK5 (AAK19311.2), AISRK6 (ABF71371.1), AISRK8 (AAO16816.1), AISRK10 (AAO16817.1), AISRK11 (AAO16818.1), AISRK12 (AAO16819.1), AISRK14 (AAO16820.1), AISRK15 (AGC54823.1), AISRK18 (ABF71374.1), AISRK19 (AAK19319.2), AISRK23 (AAK19318.2), AISRK28 (AAO16825.1), AISRK30 (ACP31395.1) and AISRK33 (ACH78228.1).

SRKb_PAN RLNCGG-DGFLCLRKMMLPDSSAAI-VDRITIDLGECKKRCLNDCNCTAYASTDIQNGGLG 58
 AhSRK2 -LSCIG-DKFIRLSNMMLPPTTEVI-VDKRIGFKDCEERCTSNCNCLAFANTDIRNGGSG 57
 AhSRK3 -LNCKG-DGFYWLRLNMMLPETSgai-VDKRIGLKECEERCIECNCTAFANTNIQDGGSG 57
 AhSRK5 -LSCGGDKFLHLKNNMMLPDTTSVI-VDRRIGVKECKRRCLSNCNCTAVANADIRNGGFG 58
 AhSRK6 -LNCGR-DEFFQLMNIKLPAATTATI-VDKRLGVKECEEKRENCNCTAYANMDIQNGGPG 57
 AhSRK7 -LICEG-DEFLPLKRMMLPDTAEVI-VDRIIISLEQCKDRCIKNCNCTAFANADIRKGGSG 57
 AhSRK8 -LSCRG-DGFFMLTKVKLPNTFGAV-VDKRIGLKECEERCINNCNCTAFANTNLEDGGSG 57
 AhSRK9 -LSCDG-DGFFWLRLNMMLPDTSGAI-VDKRIGLQCEERCIEKCNCTAFSNMNIQDGGKG 57
 AhSRK11 -LSCNG-DGFHKLKMMMLPDTTSAI-VDWKIDLKECKKRCLENCNCTALANTITRDGRTG 57
 AhSRK12 RLSCSE-KRFLRLKMMMLPVTMDAI-VDRKIGKKECKERCLGDCNCTAYANID----GSG 54
 AhSRK14 RLNCTG-DGFSQLTKMKSPATKAVI-VYNKMSLKDCKEECIKNCSCCTAFANKDIRNDGSG 58
 AhSRK15 KLSCTG-DGFWKLSKVLPDTKSVI-VDKKIDAECEMRLQNCNCTAFANKDIRNGGSG 58
 AhSRK16 PLSCCTG-DGFLQLKMMMLPDTTTEAIVDRIIDVKECEDKINDCNCTAFANAIQ-YGRSG 58
 AhSRK17 PLNCDG-DGFVKLRNMMLPGTTAVI-VDKSIRLTDCEERCAKNCNCTAFANTDIRDGGSG 58
 AhSRK18 PLSCKE-KEFVQLKMMMLPDTT-EVTVDRIVGVVEECQNCITDCNCTAFANVIR-NGGLG 57
 AhSRK19 QLSCSG-DRFFRLSRMKVPDTMGAI-VDKRIGLKECEERCINDCNCTAFANTNIQDRGSG 58
 AhSRK20 PLSCSG-DGFVPLKMMMLPDTTMTI-VDRRIGVKECKEKLRNCNCTAYAKADITNGGVG 58
 AhSRK21 QLSCCTG-DGFLRLQKMMMLPDTVEAIVDRIIGIKECEKRCQIDCNCTAFANIDIQNGGLG 59
 AhSRK22 PLSCNG-DGFLQLTKMMMLPDTMTAT-VDRSIGVKECKRCLGNCNCTSFASADVQNGGWG 58
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SRKb_PAN CVIWIEELLDIRNYASGGQDLYVRLADVD 87
 AhSRK2 CVIWIEEFVDI----- 68
 AhSRK3 CVLWTRELADIRRYVDA----- 74
 AhSRK5 CLMWIGELLDIRNYPTT----- 75
 AhSRK6 CVIWI----- 62
 AhSRK7 CVIWTGVVKDM----- 68
 AhSRK8 CVMWTRELNDIRTFVDA----- 74
 AhSRK9 CVIWTKELADIRRYADG----- 74
 AhSRK11 CVIWTVELEDLRNYATD----- 74
 AhSRK12 CLIWTGDFLDIRNYGHE----- 71
 AhSRK14 CVIWTGELGDIRNSTAT----- 75
 AhSRK15 CVIWTGELVDMRTYSTA----- 75
 AhSRK16 CVIWTGKLRDIRNYANS----- 75
 AhSRK17 CVIWIGELVDIRNFAAP----- 75
 AhSRK18 CVIWTRKLQDMRNYPDS----- 74
 AhSRK19 CVIWTGELLDIRSFADA----- 75
 AhSRK20 CVIWTGELVDIRNYVVG----- 75
 AhSRK21 CVFWTKELLDIRNYAVE----- 76
 AhSRK22 CIMWTGELIDIRNYARR----- 75
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Accession numbers: AhSRK02 (ABU88943.1), AhSRK03 (ABU88944.1), AhSRK05 (ABU88945.1), AhSRK06 (ABU88946.1), AhSRK07 (ABU88947.1), AhSRK08 (ABU88948.1), AhSRK09 (ABU88949.1), AhSRK11 (ABU88950.1), AhSRK12 (ABU88951.1), AhSRK14 (ABU88953.1), AhSRK15 (ABU88954.1), AhSRK16 (ABU88955.1), AhSRK17 (ABU88956.1), AhSRK18 (ABU88957.1), AhSRK19 (ABU88959.1), AhSRK20 (ABU88960.1), AhSRK21 (ABU88961.1) and AhSRK22 (ABU88962.1)