

E571

Yxxø motif 1

A1SRKb ICEFRNEVKLISKLQHINLVRLFGCCVDENEKMLIYEYLENLSLDSh 611
 A1SRKa VNEFKNEVKLIARLQHINLVRLFSCCIYADEKMLIYEYLENGLDSH 610
 A1SRK1 SDEFKTEVKVISRLQHINLVRLGCASGKEKMLIYEYLENSSLDRH 608
 A1SRK14 TNEFRTEMILIAKLQHINLVRLLGCFADADDKILVYEYLENLSLDYy 609
 A1SRK16 TIEFMNEVRLLSCCIHAGEKILIVEYEYLENLSLDSh 639
 A1SRK18 TNEFRTEMILIAKLQHINLVRLLGCFADADDKILVYEYLENLSLDYy 609
 A1SRK37a TNEFKNEVRLIARLQHINLVRLLGCFSCCIYADEKMLIYEYLENGLDSH 597
 A1SRK38 TDEFMNEVRLIARLQHINLVRLLGCCIDGDEKMLIYEYLENLSLDSh 623
 A1SRK39 TNEFKNEVKLIARLQHINLVRLGCFNAKEKVLIVEYEYLENLSLDry 615
 A1SRK50 TNEFKNEVKLIARLQHINLVQLIGGCCVDEKMLIYEYLENSSLDIy 611
 AhSRK3 TNEFRTEMILIAKLQHINLVRLLGCFADDEDDKILVYEYLENLSLDYy 612
 AhSRK4 TNEFKNEVRLIARLQHINLVRLLGCFSCCIYADEKMLIYEYLENGLDSH 607
 AhSRK12 TSEFKNEMRLLIARLQHINLVRLLGCCVDVDEKMLIYEYLENLSLDYy 609
 AhSRK13 TNEFKNEVRLIAKLQHINLVRLLGCCVEVDEKMLIYEYLENLSLDy 606
 AhSRK20 TREFKNEVNLLIARLQHINLVRLGCFDAKEKMLIYEYLENLSLDTy 621
 AhSRK28 TNEFRTEMILIAKLQHINLVRLLGCFADDEDDKILVYEYLENLSLDYy 610
 AhSRK29 TNEFKNEVKLIARLQHINLVRLFSCCIYADEKMLIYEYLENGLDSH 610
 AhSRK32 AREFRNEVKLIARLQHINLVRLGCFDAKEKMLIYEYLENLSLDTy 615
 AhSRK43 VHEFKNEELRLIARLQHINLVRLLGCCVDEGEKMLIYEYMENLSLDSh 613
 AhSRKa FDEFMNEVKLIARLQHINLVRLLGCCIDVEEMMLIYEYLANLSLDy 608
 AhSRKb IREFKNEVRLIARLQHINLVRLLGCCVDAGENILIVEYELENLSLDy 612
 AhSRKc SDEFKTEVKVISRLQHINLVRLGCFASGKEKMLIYEYLENSSLDRH 608
 CgSRK7 TNEFKNEVRLIARLQHINLVRLLGCFSCCIYADEKMLIYEYLGEWKPPil 605
 BrSRK8 IDEFMNEVTLIARLQHINLVQLIGGCCIEAGEKILIVEYELENSSLDYy 613
 BrSRK9 ADEFMNEVTLIARLQHINLVQLIGGCCIDADEKMLIYEYLENLSLDy 601
 BrSRK12 IDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENSSLDYy 611
 BrSRK21 TDEFMNEVRLIARLQHINLVRLGCFIDAGETMLIVEYELENSSLDSy 613
 BrSRK22 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 582
 BrSRK25 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDcy 597
 BrSRK29 TDEFMNEVRLIAKLQHNNLVRLLGCCVYEGEKILIVEYELENLSLDSh 617
 BrSRK32 TDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 191
 BrSRK35 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 181
 BrSRK36 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 193
 BrSRK38 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSS 193
 BrSRK40 TDEFMNEVRLIAKLQHNNLVRLLGCCVYEGEKILIVEYEYMENLSLDSh 608
 BrSRK41 TDEFMNEVTLIARLQHINLVQLIGGCCIDADEKMLIYEYLENLSLDSh 600
 BrSRK44 TDEFMNEVRLIARLQHNNLVRLLGCCVYEGEKILIVEYELENLSLDSh 607
 BrSRK45 TDEFMNEVTLIARLQHINLVQLIGGCCIDADEKMLIYEYLENLSLDSh 610
 BrSRK46 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 615
 BrSRK47 VDEFMNEVTLIARLQHVNVLVQLIGGCCIDADEKMLIYEYLENLSLDSh 610
 BrSRK52 TDEFMNEVTLIARLQHINLVQLIGGCCIDADEKMLIYEYLENLSLDSh 599
 BrSRK53 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 599
 BrSRK54 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 610
 BrSRK55 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 601
 BrSRK56 ADEFMNEVTLIARLQHVNVLVQLIGGCCIDADEKMLIYEYLENLSLDSh 600
 BrSRK60 TDEFMNEVRLIAKLQHNNLVRLLGCCVYEGEKILIVEYELENLSLDSh 618
 BrSRK61 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 603
 BrSRK99 TDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 601
 BoSRK01 IDEFMNEVTLIARLQHVNVLVQLIGGCCIDADEKMLIYEYLENLSLDSh 603
 BoSRK02b TDEFMNEVRLIARLQHNNLVRLLGCCVYEGEKILIVEYELENLSLDSh 617
 BoSRK03 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 609
 BoSRK04 MDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 602
 BoSRK05 TDEFMNEVRLIARLQHYNLVRLLGCCVYEGEKILIVEYELENLSLDSh 611
 BoSRK06 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 612
 BoSRK07 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 615
 BoSRK12 VDEFMNEVTLIARLQHVNVLVQLIGGCCIDADEKMLIYEYLENLSLDSh 609
 BoSRK13 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 609
 BoSRK14 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDcy 604
 BoSRK15 TDEFMNEVRLIARLQHNNLVRLLGCCVYEGEKILIVEYELENLSLDSh 608
 BoSRK17 TDEFMNEVTLIARLQHINLVQLIGGCCIDADEKMLIYEYLENLSLDSh 179
 BoSRK18 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 611
 BoSRK20 TDEFMNEVTLIARLQHINLVQLIGGCCIDADEMLLIYEYLENLSLDSh 179
 BoSRK23 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 601
 BoSRK24 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 597
 BoSRK25 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 605
 BoSRK28 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 602
 BoSRK29 TDEFMNEVRLIARLQHNNLVRLLGCCVYEGEKILIVEYELENLSLDSh 603
 BoSRK31 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 181
 BoSRK32 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 599
 BoSRK33 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 601
 BoSRK38 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 602
 BoSRK39 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 599
 BoSRK51 TDEFMNEVTLIARLQHINLVQLIGGCCIDADEKMLIYEYLENLSLDSh 179
 BoSRK52 TDEFMNEVTLIARLQHINLVQLIGGCCIDADEMLLIYEYLENLSLDSh 601
 BoSRK60 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 616
 BoSRK61 DDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 602
 BoSRK63 IDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 178
 BoSRK65 TDEFMNEVTLIARLQHINLVQLIGGCCIEADEKMLIYEYLENLSLDSh 601
 BoSRK68 TDEFMNEVRLIARLQHINLVRLGCFSCCIYADEKMLIYEYLENSSLDSy 580

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Yxxø motif 2

A1SRKb	ANTRKVVGT YGYM SPEYAMDG	704
A1SRKa	ASTKKVVGT YGYM SPEYAMDG	703
A1SRK1	AITRRIVGT YGYM SPEYAMDG	701
A1SRK14	ATTRRIVGT YGYM APEYAMDG	702
A1SRK16	ANTRKVVGT YGYM SPEYAMDG	732
A1SRK18	ATTRRIVGT YGYM APEYAMDG	702
A1SRK37a	ANTRKVVGT YGYM SPEYAMEG	691
A1SRK38	ANTRKVVGT YGYM SPEYAMDG	716
A1SRK39	AITRRIVGT YGYM SPEYAMEG	708
A1SRK50	AITRRIVGT YGYM SPEYAMDG	704
AhSRK3	ATTRRIVGT YGYM APEYAMDG	705
AhSRK4	ANTRKVVGT YGYM SPEYAMEG	701
AhSRK12	ANTRKVVGT YGYM SPEYAMDG	702
AhSRK13	ANTKKVVGT YGYM SPEYAMDG	699
AhSRK20	ATTRRIVGT YGYM SPEYAMDG	714
AhSRK28	ATTRRIVGT YGYM APEYAMDG	703
AhSRK29	ASTKKVVGT YGYM SPEYAMDG	703
AhSRK32	ATTRRIVGT YGYM SPEYAMDG	708
AhSRK43	ANTRRVVGT YGYM SPEYAMDG	706
AhSRKa	ANTRRVVGT YGYM SPEYAMDG	701
AhSRKb	ANTRKVVGT YGYM SPEYAMDG	705
AhSRKC	AITRRIVGT YGYM SPEYAMDG	701
CgSRK7	ANTRKVVGT YGYM SPEYAMDG	698
BrSRK8	VRTDNAVGT YGYM SPEYAMYG	706
BrSRK9	ANTMRRVVG YGYM SPEYAMEG	694
BrSRK12	ARTDNAVGT YGYM SPEYAMDG	704
BrSRK21	ANTRNVVGT YGYM SPEYAMDG	706
BrSRK22	ARTDNAVGT YGYM SPEYAMDG	675
BrSRK25	ANTMKVVGT YGYM SPEYAMRG	690
BrSRK29	ADTRKVVGT YGYM SPEYAMNG	710
BrSRK32	ARTDNAVGT YGYM SPEYAMDG	284
BrSRK35	VRTDNAVGT YGYM SPEYAMYG	274
BrSRK36	ANTRKVVGT YGYM SPEYAMYG	286
BrSRK38	ANTMKVVGT YGYM SPEYAMQG	286
BrSRK40	ADTRKVVGT YGYM SPEYAMNG	701
BrSRK41	ANTMKVVGT YGYM SPEYAMYG	693
BrSRK44	ADTRKVVGT YGYM SPEYAMNG	700
BrSRK45	ANTMKVVGT YGYM SPEYAMNG	703
BrSRK46	VRTDNAVGT YGYM SPEYAMYG	708
BrSRK47	ANTMKVVGT YGYM SPEYAMGG	703
BrSRK52	ASTMKVVGT YGYM SPEYAMQG	692
BrSRK53	ANTKKVVGT YGYM SPEYTMHG	692
BrSRK54	VRTDNAVGT YGYM SPEYAMYG	703
BrSRK55	ARTDNAVGT YGYM SPEYAMDG	694
BrSRK56	ANTMKVVGT YGYM SPEYAMHG	693
BrSRK60	ADTRKVVGT YGYM SPEYAMNG	711
BrSRK61	VRTDNAVGT YGYM SPEYAMYG	696
BrSRK99	ANTMKVVGT YGYM SPEYAMDG	694
BoSRK01	ANTMKVVGTCGYMSPEYAMDG	696
BoSRK02b	ADTRKVVGT YGYM SPEYAMNG	710
BoSRK03	ASTMKVVGT YGYM SPEYAMHG	702
BoSRK04	ARTDNAVGT YGYM SPEYAMDG	695
BoSRK05	ADTRKVVGT YGYM SPEYAMNG	704
BoSRK06	ANTMKVVGT YGYM SPEYAMYG	705
BoSRK07	ARTDNAVGT YGYM SPEYAMDG	708
BoSRK12	ANTMKVVGT YGYM SPEYAMGG	702
BoSRK13	AMTDNAVGT YGYM SPEYAMDG	702
BoSRK14	ANTMKVVGT YGYM SPEYAMHG	697
BoSRK15	ADTRKVVGT YGYM SPEYAMNG	701
BoSRK17	ANTMKVVGT YGYM SPEYAMHG	272
BoSRK18	ANTMKVVGT YGYM SPEYAMNG	704
BoSRK20	ANTMKVVGT YGYM SPEYAMHG	272
BoSRK23	ANTMKVVGT YGYM SPEYAMGG	694
BoSRK24	ANTRKVVGT YGYM SPEYAMYG	690
BoSRK25	ARTDNAVGT YGYM SPEYAMDG	698
BoSRK28	ARTDNAVGT YGYM SPEYAMDG	695
BoSRK29	ADTRKVVGT YGYM SPEYAMNG	696
BoSRK31	ARTDNAVGT YGYM SPEYAMDG	274
BoSRK32	ARTDNAVGT YGYM SPEYAMDG	692
BoSRK33	ANTMKVVGT YGYM SPEYAMNG	694
BoSRK38	ARTDNAVGT YGYM SPEYAMDG	695
BoSRK39	ANTKKVVGT YGYM SPEYAMHG	692
BoSRK51	ANTMKVVGT YGYM SPEYAMHG	272
BoSRK52	ANTMKVVGT YGYM SPEYAMHG	694
BoSRK60	AMTDNAVGT YGYM SPEYAMDG	709
BoSRK61	ANTMKVVGT YGYM SPEYAMAG	695
BoSRK63	ANTENAVGT YGYM SPEYAMDG	271
BoSRK65	ANTMKVVGT YGYM SPEYAMHG	694
BoSRK68	ASTDNAVGT YGYM SPEYAMDG	673

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Figure S1 Alignment of amino-acid sequences in the regions spanning Yxxφ motif 1 and Yxxφ motif 2 in SRKb with the corresponding regions of SRK protein variants from *Arabidopsis lyrata* (Al), *A. halleri* (Ah), *Brassica rapa* (Br), *B. oleracea* (Bo), and *Capsella grandiflora* (Cg). The Yxxφ motifs are shown in bold red characters. The E571 residue in SRKb and the corresponding E residues in other SRKs are shown in red characters. Asterisks, colons, and periods indicate identical amino acids, amino acids having strongly similar properties, and amino acids having weakly similar properties, respectively.

Accession numbers:

AISRKb (BAB40987), AISRKa (BAB40986), AISRK1 (KJ7724s01.1), AISRK14 (AID21648.1), AISRK16 (ADQ37362.1), AISRK18 (AID21658.1), AISRK37a (ACX50425.1), AISRK38 (ADQ37372.1), AISRK39 (AID21691.1), AISRK50 (ADQ37382.1), AhSRK3 (AID21586.1), AhSRK4 (AJP61141.1), AhSRK12 (AID21577.1), AhSRK13 (AJP61130.1), AhSRK20 (AID21613.1), AhSRK28 (AJP61126.1), AhSRK29 (KM592798.1), AhSRK32 (AJP61104.1), AhSRK43 (AJP61150.1), AhSRKa (AFP33760.1), AhSRKb (AFP33764.1), AhSRKc (AFP33765.1), CgSRK7 (ABP02072.1), BrSRK8 (BAA07576), BrSRK9 (BAA06285), BrSRK12 (BAA07577), BrSRK21 (BAF57003), BrSRK22 (BAB21001), BrSRK25 (BAF91385), BrSRK29 (BAA31252), BrSRK32 (BAC24028), BrSRK35 (BAC24031), BrSRK36 (BAC24032), BrSRK38 (BAF91389.1), BrSRK40 (BAE78539), BrSRK41 (BAC24034), BrSRK44 (BAE78540), BrSRK45 (BAA34911), BrSRK46 (BAE95180), BrSRK47 (AB180899), BrSRK52 (BAC24037), BrSRK53 (BAF91394), BrSRK54 (BAE96737), BrSRK55 (BAF91395), BrSRK56 (BAF91396), BrSRK60 (BAC76056), BrSRK61 (BAF91397), BrSRK99 (BAC24038), BoSRK01 (BAC24040), BoSRK02b (CAC84411), BoSRK03 (CAA55950), BoSRK04 (BAF91400), BoSRK05 (CAB41878), BoSRK06 (Q09092), BoSRK07 (BAE95182), BoSRK12 (BAE95185), BoSRK13 (BAA83905), BoSRK14 (BAF91401), BoSRK15 (BAE95187), BoSRK17 (BAF91402), BoSRK18 (BAA92836), BoSRK20 (BAC24045), BoSRK23 (BAA34233), BoSRK24 (BAC24046), BoSRK25 (BAC24047), BoSRK28 (BAE92528), BoSRK29 (CAA82930), BoSRK31 (BAF91406), BoSRK32 (BAB79442), BoSRK33 (BAC24048), BoSRK38 (BAC24051), BoSRK39 (BAC24052), BoSRK51 (BAC24055), BoSRK52 (BAF91411), BoSRK60 (BAA92837), BoSRK61 (BAF91412), BoSRK63 (BAF91413), BoSRK65 (BAC24060) and BoSRK68 (BAF91415).