

**S1**

MlotiK1 -----MSVLPFLRIYAP**LN**AVLAAPGLLAVAALTI 30  
 BjapK1 -----MFKPLISALAQFVAATAGRNMTKAAAYVAVGVLLSMVLLTV 41  
 RpalK -----ARHYFYEILESQAQTSRMGVIVNRFIVFFIVLSVGITVMESV 52  
 BjapK2 KPWRAREAVGLVPRGRGLRDPNLRDRLYELLEHDPLAYSVGSRFIQLIIGVIVLDDVAVMLASV 101  
 MspiK1 RNSDDAPLLRYYRYSIGGSKGGAMINWLYGLVGEFPFMSRAVYVRGILVVCIVLSTTIAIVDTV 84  
 KvAP -----IGDVMHEHP**LVELGVSYAALLSVIVVVVECT** 47  
 Kv1.2 AMEMFREDEGYIKEERPLPENEFQRQVWLLFEYPESSGPARI IAIVSVMVILISIVSFCLETL 180

**S2**

MlotiK1 PDM-----SGRSRLALAALL**LA**VIWGAYLLQLAATLL- 61  
 BjapK1 GPA-----YETAPRWVDALLWACLAYFVF**EWV**VRLR- 72  
 RpalK PAMRED-----YGRLFQAL**ELL**CCLVMFSI**EYY**IIRIW- 83  
 BjapK2 PDLDAQ-----FGALFSAIKVFAVIVFAL**EYA**ARLW- 132  
 MspiK1 PDA-----WIGFVIGSVAGGLFLVILSLD**Y**ILRLL- 115  
 KvAP MQLSG-----**EYLVR**LYLV**DDL**LILV**ILWADY**AYRAY- 78  
 Kv1.2 PIFRDENEDMHG-----GGVTFHTYSNSTIGYQQSTSF**TDPFFIVETL**CI**IWF**S**FELV**RFF- 242

**S3**

MlotiK1 KRR-----AGVVRDRTP**KIAIDV**LAVLVPLAA**FLL**DGS----- 94  
 BjapK1 HMRRT-----RLALYMSSAGIV**DA**IGALAVPVALVLGVE----- 108  
 RpalK IAPHELPYHHMSPL--RAAWAYMISPQGI**DC**ISVMP**LW**IALFGPDD----- 128  
 BjapK2 TVAGHT-QRKASALSD--RLSYAFSALGI**IDL**MAFL**PAA**IVLATG-R----- 175  
 MspiK1 VAWSQ-RAEGESGMA--ALAGYALSPYGI**DF**LAVVPF**L**VG**EAT**ALM----- 159  
 KvAP KSGDPAGYVKKT-----**LYEIPALVPAGLLALIEGH**LAGLG----- 114  
 Kv1.2 ACPSKAGF-----FTNIMNI**D**IVAIIPYFITLGT**ELAEK**P**EDAQQ**Q**Q**AMSLA- 291

**S4****S5**

MlotiK1 --**PDWSLYCAVWLLKPL**RDST**FFPV**L**GRV**LAN**EARN**LIGVTT**LFGV**VL**FAVA**LAAY**VI**ERDIQP 156  
 BjapK1 -**LRTAW**LLSVLWV**LKVV**PGIP**GLRQ**LRRV**LV**LESGPLVSVL**VIFLM**VVFLASVAEY**F**LERDVQP 171  
 RpalK -**LRVLI**I**L**R**MLRLLK**FARYSS**GMR**S**L**LEV**LES**ERRALMACLVILACAT**LV**SATAMHIAEGHVQP 191  
 BjapK2 -HATLAALGVLP**FFK**LIRYSPAMR**SLLAAV**HAERRALIGCIVILIGV**LT**FASLLYAIERDVQP 238  
 MspiK1 PHDGETVFGIL**RFLK**LARYSPAL**ETL**GVV**V**LHEL**RPL**LASLFI**ML**ILAI**SAST**VIYFVERAANP 223  
 KvAP **LFR**LV**RL**L**RFLR**ILLI**IS**RG**S**K**FL**S**AI**AD**A**DKR--FYHLFGAV**MLT**VLYGAF**AI**YIVEYDPDN 178  
 Kv1.2 **ILRVIR**L**VRVFRIF**KL**SR**HSK**GLQIL**Q**T**L**KAS**MREL**GLLI**FF**L**FGVIL**FSSAV**YFA**E**ADERD 355

**S6**

MlotiK1 EKFGSIPQAMWWAVVTLSTTGYGDTIPQ**S**AG**R**VL**AGAV**MM**S**GIG**I**FLWAGILATGFYQ**EVRR** 220  
 BjapK1 QTFGSVPAAL**LW**AVVTLTTTGYGDVVPV**T**PLGRMVAAL**VMI**SGLGVFGLWTGILATGFA**AE**TRR 235  
 RpalK EKFGTIPDAMWWA**I**VTLSTIGYGDVVPATGIGRMVASATI**IC**GLIMIALPVGIVANAFSE**VI**HR 255  
 BjapK2 DKLGTIPQAMWWA**I**VTLGT**VG**YGDVVPV**T**TLGK**FV**SV**F**AI**IS**GFAMIALP**V**AI**I**STAF**AE**EVKR 302  
 MspiK1 -ALASVPAAMWWA**I**VTLST**VG**FGDVVPIT**PL**GK**L**FGSV**VAV**LGLCMFALPASILASGFA**E**EMKR 286  
 KvAP SSIKSVFDAL**LW**AVV**T**ATT**VG**YGDVVPAT**P**IG**K**VIG**I**AV**MLT**GI**SALT**LLIG**T**VS**NM**FQ**K**IL**V**- 240  
 Kv1.2 SQFSP**IP**DA**F**WWA**V**VS**M**TT**VG**Y**G**DMV**P**TT**IG**KG**I**VG**SL**CA**I**AG**V**LT**I**AL**P**V**P**IV**S**N**F**NY**F**Y**H**R 419