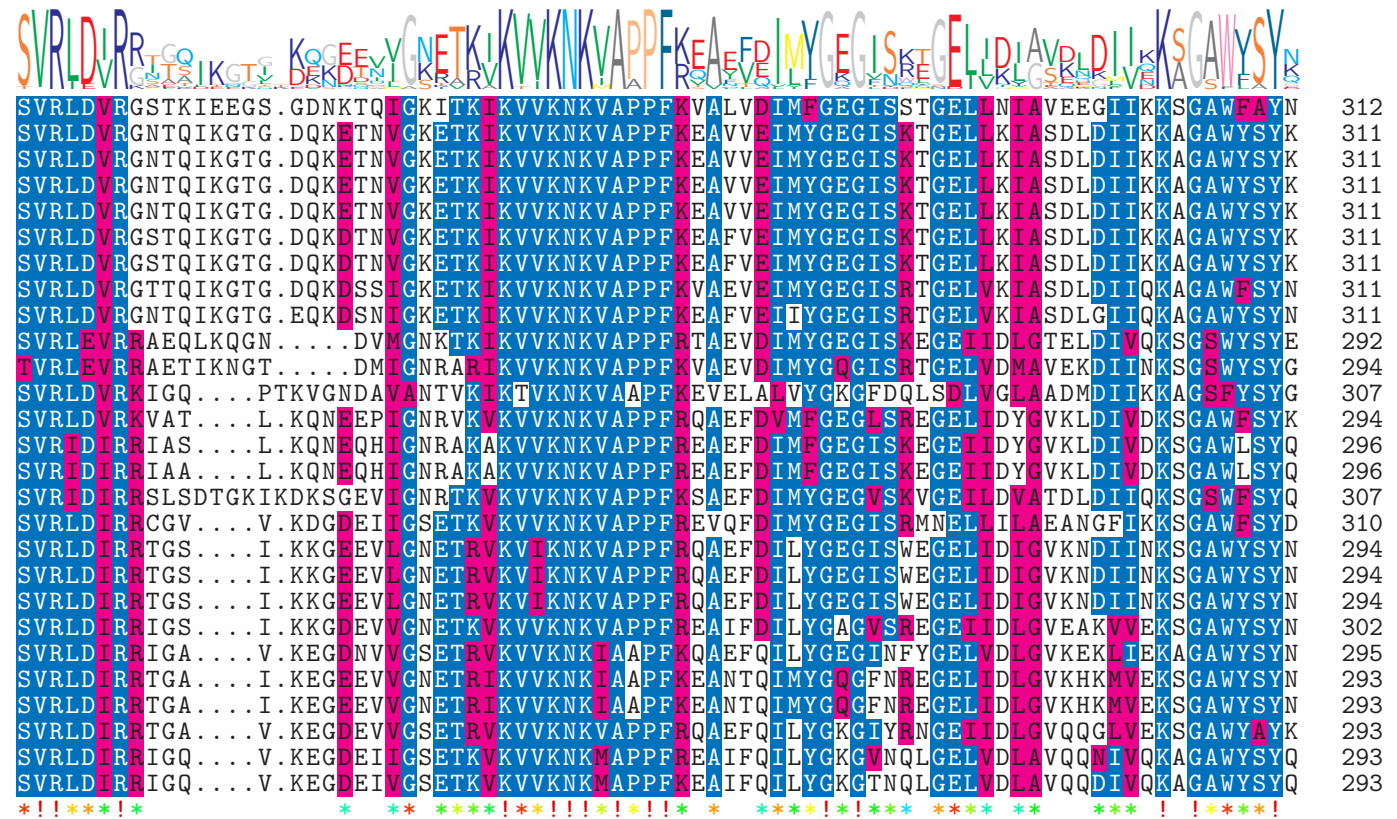


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NTDB id 600 KW2 RS01765 WP 011675413.1	MATKKK....TNFDDITKKYGAERDKALADALALIEKD FGKGSIMRLGEA.ANQKVSVVSSGSLALDIALGAGGYPKGR	74
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKKP....KKLEEISKKFGEEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKKP....KKLEEISKKFGEEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKKP....KKLEEISKKFGEEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 159 SP RS09750 WP 001085462.1	.MAKKP....KKLEEISKKFGEEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKKP....KKLDEISKKFGEEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKKP....KKLDEISKKFGEEREKALNDALKLIEKD FGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR	73
NTDB id 453 Spy49 1753c ACI62003.1	.MAKKL....KKNEEITKKFGEERRKALDDALKNIEKD FGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGR	73
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKRI....KKTEEITKKFGEERRKALDDALKNIEKD FGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGR	73
NTDB id 115 BSU 16940 NP 389576.2	MSDRQAALDMALKQIEKQFGKGSIMKLGEK.TDTRISTVPSGSLALDTALGIGGYPRGR	58
NTDB id 625 LCA RS02525 WP 011374196.1	MAKDERQAALDAALKKIEKNFGKGSIMRMGEK.VDTQVSTVSSGSLALDEALGVGGYPRGR	60
NTDB id 1313 DR RS12030 WP 010888966.1	MSKDATKEISAPTDAKERSKATETAMSIIEKAFGKGSIMKLGAE.SKLDVQVVSTGSLSLDLALGVGGIPRGR	72
NTDB id 1245 Cj1673c YP 002345041.1	MDDNKRKSLDAALKSLDKT FGKGTILRLGDK.EVEQIDSIGTGSVGLDLALGIGGVPRGR	59
NTDB id 1211 C694 RS00795 WP 000963128.1	MAIDEDKQKAIISLAIKQIDKVF GKGA LVRLGDK.QVEKIDSISTGSLGLDLALGIGGVPRGR	61
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NTDB id 1334 RAOC RS04870 WP 004918236.1	MAKT..ETTSNPDDKKKALAAVLEKLDKT YGKGTVMKLGDTVDHNIIEVIPSGSLGLDLALGVGGYPKGR	68
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NTDB id 1130 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQREENLEVISTGSLGLDLALGVGGLPRGR	60
NTDB id 1124 NGFG RS03960 WP 003688695.1	MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQREENLEVISTGSLGLDLALGVGGLPRGR	60
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NTDB id 351209 E2R62 RS11915 WP 012907232.1	MAIDENKQKALAAALGQIEKQFGKGSIMRLGED.RSMDVETISTGSLSLDIALGAGGLPMGR	61
NTDB id 1165 A1552VC RS01565 WP 000344154.1	MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGR	59
NTDB id 1142 GTF74 RS11550 WP 000344154.1	MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGR	59
NTDB id 1205 PSJM300 05545 AFN77183.1	MDENKKRALAAALGQIEKQFGKGAVMRMGDH.DRQAIPSIISTGSLGLDIALGIGGLPKGR	59
NTDB id 1022 ACIAD RS06390 WP 004925639.1	MDDNKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGR	59
NTDB id 1074 ABD1 RS10195 WP 000344167.1	MDENKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGR	59
consensus	*** **	

NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1211 C694 RS00795 WP 000963128.1
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NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
NTDB id 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 351209 EZ2R62 RS11915 WP 012907232.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
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NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

Sequence	Score
DEKIGGGA ⁺ EA ⁺ KA ⁺ KN ⁺ YL ⁺ KE ⁺ HQ ⁺ DV ⁺ FD ⁺ EID ⁺ DHK ⁺ V ⁺ RAAH ⁺ CI ⁺ LDDSEVAETEET ⁺ TASKTKAKAKKE ⁺ KA ⁺ VETEEIELELED ⁺	387
DEKIGGGS ⁺ ENAK ⁺ KYLA ⁺ EHPE ⁺ IF ⁺ DEID ⁺ DKQ ⁺ VR ⁺ SKF ⁺ CLIDGEEVSEQD ⁺ TENKKDE ⁺PKKEE ⁺ AA ⁺ .VNEEVPLDLGDELEIE ⁺	385
DEKIGGGS ⁺ ENAK ⁺ KYLA ⁺ EHPE ⁺ IF ⁺ DEID ⁺ DKQ ⁺ VR ⁺ SKF ⁺ CLIDGEEVSEQD ⁺ TENKKDE ⁺PKKEE ⁺ AA ⁺ .VNEEVPLDLGDELEIE ⁺	385
DEKIGGGS ⁺ ENAK ⁺ KYLA ⁺ EHPE ⁺ IF ⁺ DEID ⁺ DKQ ⁺ VR ⁺ SKF ⁺ CLIDGEEVSEQD ⁺ TENKKDE ⁺PKKEE ⁺ AA ⁺ .VNEEVPLDLGDELEIE ⁺	385
DEKIGGGS ⁺ ENAK ⁺ KYLA ⁺ ADNPE ⁺ IF ⁺ DEID ⁺ HQ ⁺ VR ⁺ VQF ⁺ CLIDGEEIAES ⁺KKDE ⁺AAQV ⁺ DS ⁺ .VNEEVTLDLGDELEIE ⁺	381
DEKIGGGS ⁺ ENAK ⁺ KYLADN ⁺ PEVFA ⁺ EID ⁺ HQ ⁺ VR ⁺ VQF ⁺ CLIDGEEAAS ⁺KKDE ⁺VAQV ⁺ DS ⁺ .VNEEVTLDLGDELEIE ⁺	381
GEKIGGGS ⁺ ENAK ⁺ RYLAD ⁺ HPQL ⁺ IF ⁺ DEID ⁺ RKV ⁺ VKF ⁺ CLLEESEESAMAVASE ⁺E ⁺TDDLALDLNGIEIE ⁺	377
GEKIGGGS ⁺ ENAK ⁺ KFLADN ⁺ PEIF ⁺ DDID ⁺ HKV ⁺ RVQY ⁺ CLIEEDNTEEKQSSKEK ⁺ETD ⁺ E ⁺ ..ADKNLVLELDDTIELE ⁺	382
EE ⁺ RL ⁺ GGGREN ⁺ AK ⁺ QFLKEN ⁺ KD ⁺ IMLM ⁺ IQEQ ⁺ IREHY ⁺ CLDNNGVVQQQA ⁺ EETQEEL ⁺ .EFE ⁺ .E ⁺	348
SERIGGGREN ⁺ AK ⁺ NYLAD ⁺ HEDVE ⁺ DEV ⁺ RLKV ⁺ RAAY ⁺ CI ⁺ SDVPEEDLPTTEDE ⁺ .QI ⁺ .NILPDDST ⁺EE ⁺	355
DERIGGGKEK ⁺ TIAYIA ⁺ ERP ⁺ EMEQE ⁺ IRDR ⁺ VANAI ⁺ RAGNAGEAPALAPAAPEAA ⁺ ...EA ⁺	363
DKKLGGGREN ⁺ SKA ⁺ FLKEN ⁺ PEIAD ⁺ EITKAT ⁺ QNSM ⁺ TEGMI ⁺SGSEDD ⁺EGEE ⁺	343
DKKLGGGREN ⁺ AK ⁺ ALLKED ⁺ KALADE ⁺ ITLK ⁺ IKES ⁺ GSNEEI ⁺MPLPDE ⁺PLEEME ⁺	347
DKKLGGGREN ⁺ AK ⁺ ALLKED ⁺ KALADE ⁺ ITLK ⁺ IKES ⁺ GSNEEI ⁺MPLPDE ⁺PLEEME ⁺	347
DTKLGGGRD ⁺ TV ⁺ KELIK ⁺ DNPE ⁺ LAELE ⁺ EAK ⁺ IREKLQAK ⁺	343
GTKIGGGK ⁺ NNAVK ⁺ WLKEN ⁺ PEIAD ⁺ KLQE ⁺ IRNTL ⁺ ASPNPS ⁺VLKATASDSN ⁺ ...DES ⁺ DVEEFSEEL ⁺	372
GAKIGGGK ⁺ DNVR ⁺ VWLKEN ⁺ PEIS ⁺ DEID ⁺ AK ⁺ IRALN ⁺ GVEMHI ⁺TE ⁺GT ⁺ ...QDET ⁺ DGERPEE ⁺	348
GAKIGGGK ⁺ DNVR ⁺ VWLKEN ⁺ PEIS ⁺ DEID ⁺ AK ⁺ IRALN ⁺ GVEMHI ⁺TE ⁺GT ⁺ ...QDET ⁺ DGERPEE ⁺	348
GAKIGGGK ⁺ DNVR ⁺ VWLKEN ⁺ PEIS ⁺ DEID ⁺ AK ⁺ IRALN ⁺ GVEMHI ⁺TE ⁺GT ⁺ ...QDET ⁺ DGERPEE ⁺	348
GERIGGGRD ⁺ NCREF ⁺ LEN ⁺ AE ⁺ LARE ⁺ EIEN ⁺ KVREHL ⁺ GVTPMG ⁺AVTLAE ⁺ .EVE ⁺ ...ED ⁺	352
GEKIGGGKAN ⁺ ATTWLKEN ⁺ PEIATA ⁺ KE ⁺ KKV ⁺ RELLLN ⁺ QDS ⁺TPDFS ⁺ V ⁺ ...D ⁺ ...DGEGVAETNEDF ⁺	353
GDKIGGGKAN ⁺ ACKYLKEN ⁺ PEIAKT ⁺ LD ⁺ KKL ⁺ REMLLN ⁺ PNEM ⁺QLIAETSSAA ⁺ ...DDV ⁺ EFGAVPEEF ⁺	354
GDKIGGGKAN ⁺ ACKYLKEN ⁺ PEIAKT ⁺ LD ⁺ KKL ⁺ REMLLN ⁺ PNEM ⁺QLIAETSSAA ⁺ ...DDV ⁺ EFGAVPEEF ⁺	354
GSKIGGGKAN ⁺ AAKYLEEN ⁺ PEI ⁺ GQ ⁺ EIE ⁺ QQI ⁺ RAKL ⁺ LVTSAN ⁺TKATPVAEDL ⁺ ...ADADI ⁺	347
GNKIGGGK ⁺ NNVIRYLEEN ⁺ PEI ⁺ QISTE ⁺ EIE ⁺ AVIRE ⁺ QLLT ⁺ KASD ⁺QTAA ⁺ .HDETE ⁺ ...EEP ⁺ DLLES ⁺	349
GNKIGGGK ⁺ NNVIRYLEEN ⁺ PEI ⁺ QIAE ⁺ IERN ⁺ IRE ⁺ QLLT ⁺ TGTN ⁺GAVQ ⁺ .I ⁺ .EDE ⁺ ...EEP ⁺ DLLES ⁺	349

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NTDB id 600 KW2 RS01765 WP 011675413.1	...	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	IEE	388
NTDB id 228 SPD RS09265 WP 001085462.1	IEE	388
NTDB id 194 SPR RS08825 WP 001085462.1	IEE	388
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NTDB id 115 BSU 16940 NP 389576.2	...	348
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NTDB id 1313 DR RS12030 WP 010888966.1	...	363
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NTDB id 1211 C694 RS00795 WP 000963128.1	...	347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	...	347
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NTDB id 1389 A4U84 RS07560 WP 021112712.1	...	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	...	348
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NTDB id 1427 RS RS02760 WP 011000510.1	...	352
NTDB id 351209 E2R62 RS11915 WP 012907232.1	...	353
NTDB id 1165 A1552VC RS01565 WP 000344154.1	...	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	...	354
NTDB id 1205 PSJM300 05545 AFN77183.1	...	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	...	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	...	349

consensus

 non conserved
 similar
 ≥ 50% conserved