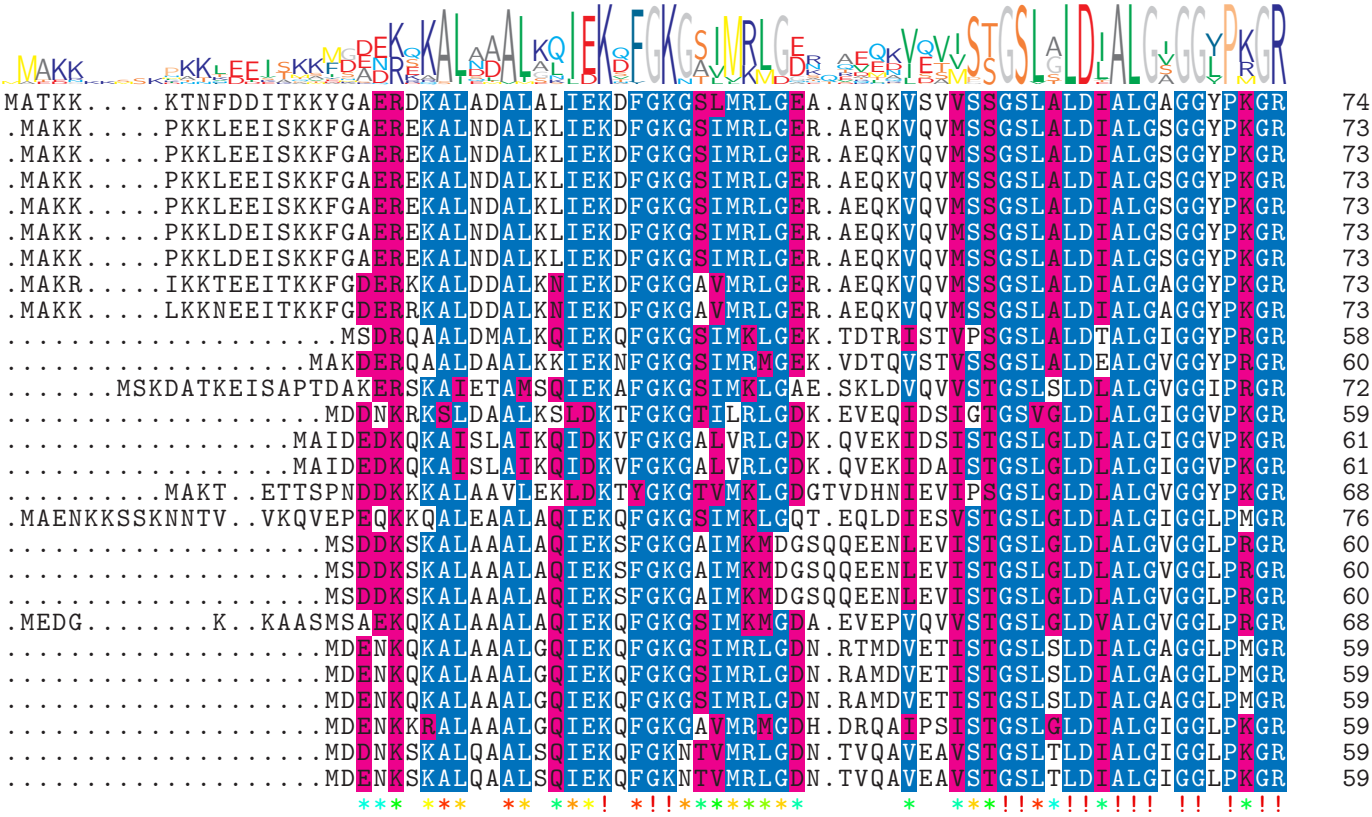
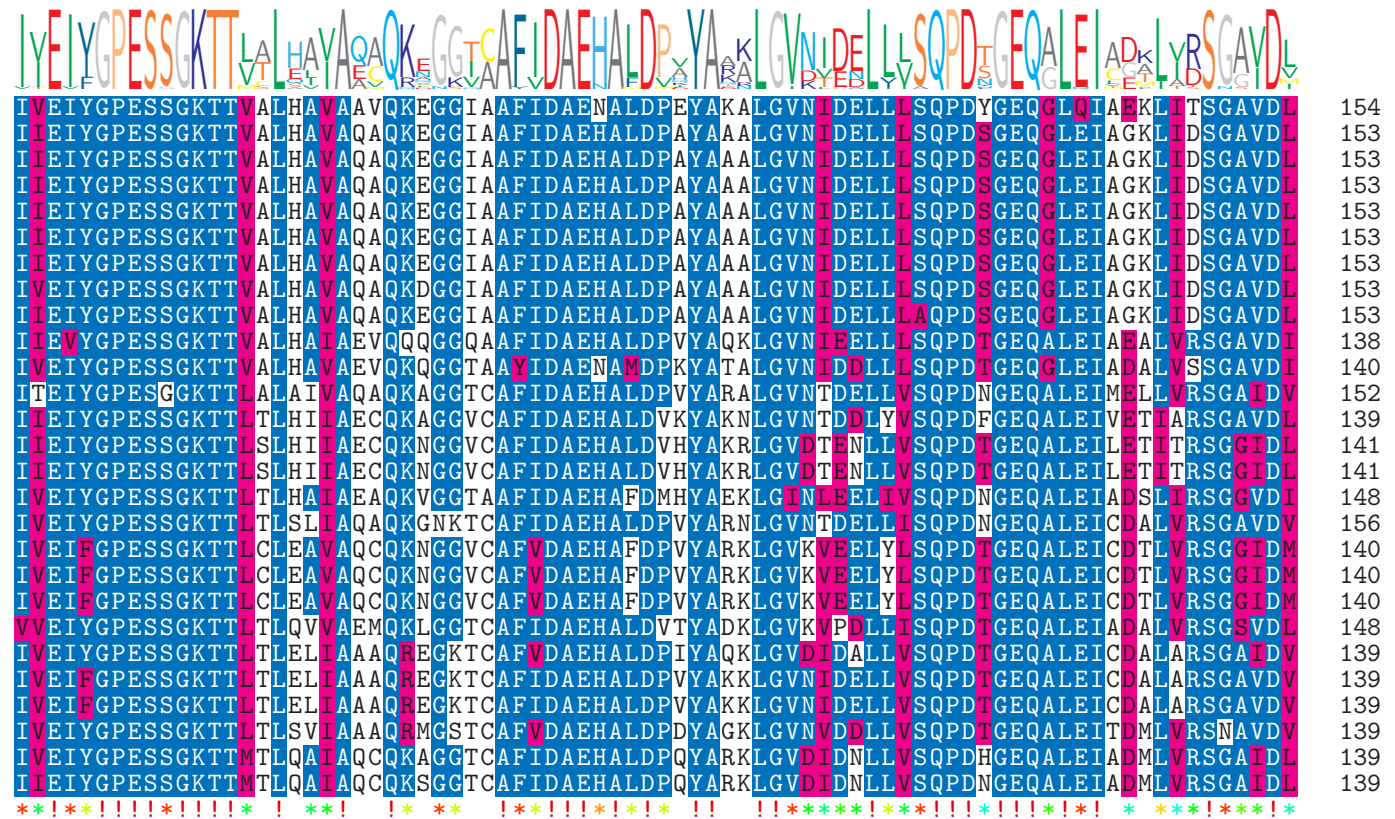


logo

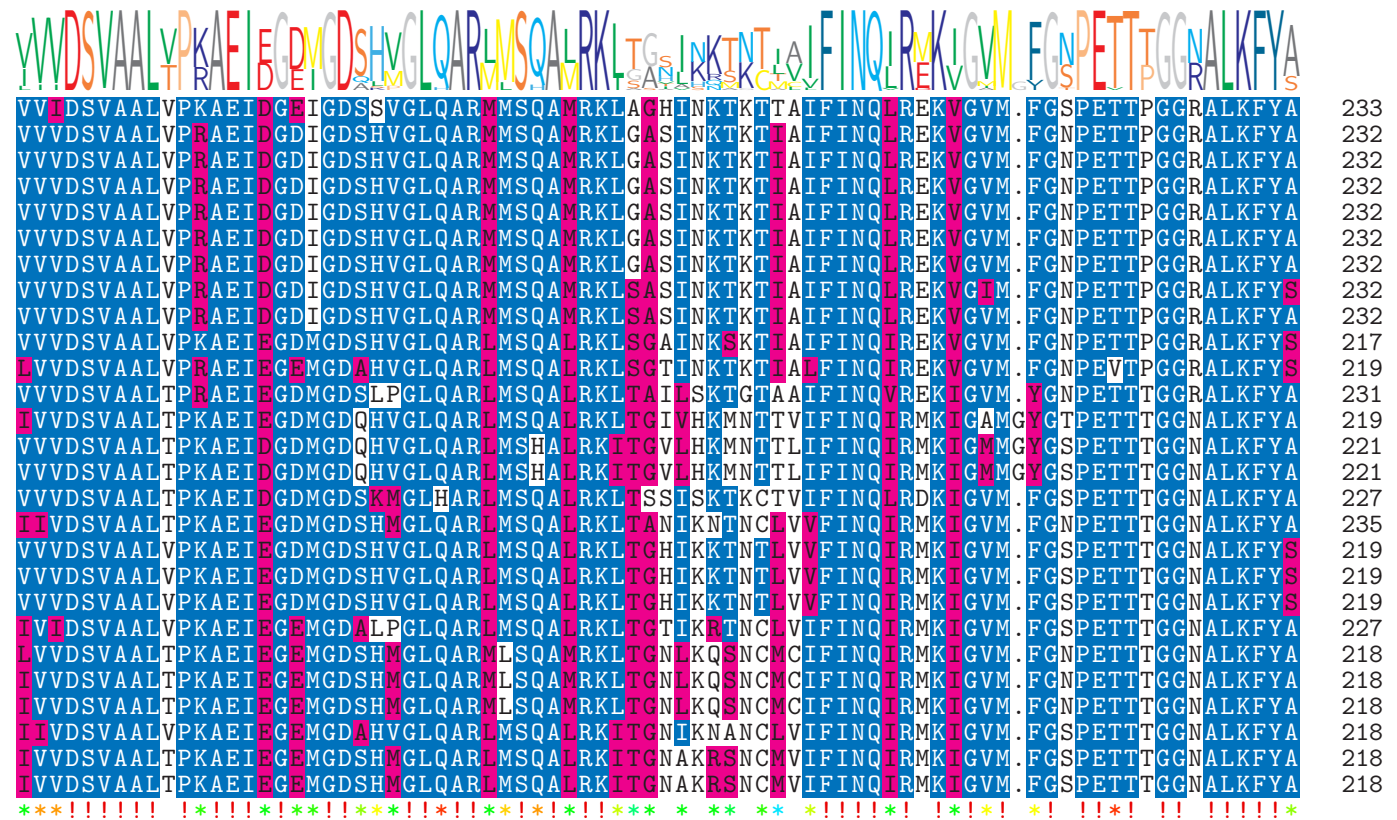
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 115 BSU 16940 NP 389576.2
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
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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 92013 OCV50 RS12005 WP 261903149.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 115 BSU 16940 NP 389576.2
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
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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 92013 OCW50 RS12005 WP 261903149.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 115 BSU 16940 NP 389576.2
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
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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 92013 OCW50 RS12005 WP 261903149.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus



logo

NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRGSTKIEEGS.GDNKTQIGKITKIKVVKNKVAPPFKVALVDIMFGEGISSTGELINIAVEEGI	IKKSGAWFAYN	312	
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVVEIMYGE	GISKGTGELLKIASDLDIIK	
NTDB id 228 SPD RS09265 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVVEIMYGE	GISKGTGELLKIASDLDIIK	
NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVVEIMYGE	GISKGTGELLKIASDLDIIK	
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVVEIMYGE	GISKGTGELLKIASDLDIIK	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKEAFVEIMYGE	GISKGTGELLKIASDLDIIK	
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKEAFVEIMYGE	GISKGTGELLKIASDLDIIK	
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNTQIKGTG.EQKDSN	IGKETKIKVVKNKVAPPFKEAFVEIITYGEGISRTGELVKIASDLGI	IQKAGAWYSYN	
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTTQIKGTG.DQKDSN	IGKETKIKVVKNKVAPPFKEAFVEIMYGE	GISRTGELVKIASDLDIIQ	
NTDB id 115 BSU 16940 NP 389576.2	SVRLEVRRAEQLKQGN.....DVMGNKTKIKVVKNKVAPPFR	TAEVDIMYGE	GISKEGEIIDLGTELDIVQKSGSWYSYE	
NTDB id 625 LCA RS02525 WP 011374196.1	TVRLEVRRAETIKNGT.....DMIGNRARIKVVKNKVAPPFK	VAEVDIMYGGISRTGELVDMAVEKDI	INKSGSWYSYG	
NTDB id 1313 DR RS12030 WP 010888966.1	SVRLDVRKIGQ....PTKVGND	AVANTVKIKTVKNKVAAPFKEVELALVYGKGF	QLSDLVGLAADMDIIK	
NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVRKVAT....L.KQNEEP	IGNRVKVVKNKVAPPFRQAEFDVMFGEGLSR	EGELIDYGVKLDIVDKSGAWFSYK	
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRIDIRRIAS....L.KQNEQH	IGNRAKAKVVKNKVAPPFR	EAFFDIMFGEGISKEGEIIDYGVKLDIVDKSGAWLSYQ	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRIDIRRIAA....L.KQNEQH	IGNRAKAKVVKNKVAPPFR	EAFFDIMFGEGISKEGEIIDYGVKLDIVDKSGAWLSYQ	
NTDB id 1334 RAOC RS04870 WP 004918236.1	SVRIDIRRLSDTGKIKDKSGEV	IGNRTKVVKNKVAPPFKSAEFDIMYGE	GVSKVGEILDVATDLDIIQKSGSWFSYQ	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCGV....V.KDGDEI	IGSETKVVKNKVAPPFR	EVQFDIMYGE	
NTDB id 1130 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEDEV	LGNETRVKVIKNKVAPPFRQAEFDILYGE	GISWEGELIDIGVKNDIINKSGAWYSYN	
NTDB id 1124 NGFG RS03960 WP 003688695.1	SVRLDIRRTGS....I.KKGEDEV	LGNETRVKVIKNKVAPPFRQAEFDILYGE	GISWEGELIDIGVKNDIINKSGAWYSYN	
NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTGS....I.KKGEDEV	LGNETRVKVIKNKVAPPFRQAEFDILYGE	GISWEGELIDIGVKNDIINKSGAWYSYN	
NTDB id 1427 RS RS02760 WP 011000510.1	SVRLDIRRIGS....I.KKGEDEV	GNETKVVKNKVAPPFR	EAIFDILYGA	
NTDB id 92013 OCV50 RS12005 WP 261903149.1	SVRLDIRRTGS....I.KEGDEI	VGNETRIKVVKNKIAAPFKQ	AETQILYGGGFNREGELIDLGVKHKLLIEKAGAWYSYN	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTGA....I.KEGEEV	VGNETRIKVVKNKIAAPFKEANTQIMYGGGFN	REGELIDLGVKHKMVEKSGAWYSYN	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTGA....I.KEGEEV	VGNETRIKVVKNKIAAPFKEANTQIMYGGGFN	REGELIDLGVKHKMVEKSGAWYSYN	
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTGA....V.KEGDEV	VGSETRVVKNKVAPPFRQAEFQILYGKGIYRNGE	IIDLGVQQGLVEKSGAWYAYK	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIGQ....V.KEGDEI	IGSETKVVKNKMAPPFR	REAIQILYGKGVNQLGELVDLAVQQNIVQKAGAWYSYQ	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIGQ....V.KEGDEI	VGSETKVVKNKMAPPFKEAIFQILYGKGTNQLGELVDLAVQQ	DIVQKAGAWYSYQ	
consensus	*!!**!* *	* ** *****!!*!!*!!*!!* *	*****!!*!!*!!* ***** *	*** ! !*****!

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETEEETT	ASKTKAKAKKEEK	AVETE	EIELELED		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKK	DE....PKKEEA..	VNEEVPLDLG	DELEIE		385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKK	DE....PKKEEA..	VNEEVPLDLG	DELEIE		385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKK	DE....PKKEEA..	VNEEVPLDLG	DELEIE		385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKK	DE....PKKEEA..	VNEEVPLDLG	DELEIE		385
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLAADNPEV	FAEIDHQVRVQFGL	IDGEEAAE....	SKKDE....VAQVDS..	VNEEVTLDL	GDELEIE		381
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLAADNPEIF	DEIDHQVRVQFGL	IDGEEIAE....	SKKDE....AAQVDS..	VNEEVTLDL	GDELEIE		381
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEKQSSKE	ETDEK..	ADKNLVLEL	DDTIELE		382
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAVASE	E.....	TD	DLALDL	DNGIEIE	377
NTDB id 115 BSU 16940 NP 389576.2	EERL	GQGRENAKQFLKEN	KDIMLMIQEQIRE	HYGLDNNGVVQQ	QAEETQEEL	EFEE	E.....		348
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQGS	ENAKNYLADHEDVE	DEVRLKVRVQYGL	ISDVPEEDLPTTE	DE.QI.NILPDD	ST.....	EE		355
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQGS	KEKTIAIYIAERPE	MEQEIRDRVMAAIR	AGNAGEAPALAPAP	.AAP.....EAAE..	A.....			363
NTDB id 1245 Cj1673c YP 002345041.1	DKKL	GQGRENSKAFLEN	PEIADITKAIQNS	MGIEGMISGSED	..DEGEE				343
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKL	GQGRENAKALLKED	KALADEITLKIKES	IGSNEEIMPLPD	..EPLEE		ME		347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKL	GQGRENAKALLKED	KALADEITLKIKES	IGSNEEIMPLPD	..EPLEE		ME		347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKL	GQGRDITVKELIK	DNPELAEELEAKI	REKLQAK					343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQGS	KNNAVKWLKENPEI	ADKLEQEI	RNTLASNPNSVL	KATASDSNDES	DVEE..	FSEEL		372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	TQDE....	TDGE..RPEE			348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	TQDE....	TDGE..RPEE			348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	TQDE....	TDGE..RPEE			348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQGS	RDNCRFLRENAEL	AREIENKVRHL	GVTPMGAVTL	.AAEEVEED				352
NTDB id 92013 OCV50 RS12005 WP 261903149.1	GDKIGQGS	KANAGKFLRENPEA	AKTIDAKLREML	LTPARAE	EP.....ETGE..	MPQEEL			345
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQGS	KANACKYLLKENPEI	AKTLDKKLREML	LNPNENMLIAET	SSAADV....EFGA..	VPEEF			354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQGS	KANACKYLLKENPEI	AKTLDKKLREML	LNPNENMLIAET	SSAADV....EFGA..	VPEEF			354
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQGS	KANAAYLEENPEI	QIEEQIRAKLL	VTSANTKATP	VAEDLADA....D....	I.....			347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQGS	KNNVIRYLEENPQ	ISTEIEAVIRE	QLLT	TKASDQTAA.HDETE	EEP.....D.....	LLES		349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQGS	KNNVIRYFEENN	QIAEEIERNIRE	QLLT	TGTNGAVQ.I.EDEE	EP.....D.....	LLLES		349
consensus	***!!!	*****	**	*****	*****	**	**	*	*

logo

		IEE	
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
NTDB id 159 SP RS09750 WP 001085462.1	IEE		388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEE		384
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEE		384
NTDB id 408 SMU RS09530 WP 002262392.1	D..		383
NTDB id 453 Spy49 1753c ACI62003.1	D..		378
NTDB id 115 BSU 16940 NP 389576.2	...		348
NTDB id 625 LCA RS02525 WP 011374196.1	...		355
NTDB id 1313 DR RS12030 WP 010888966.1	...		363
NTDB id 1245 Cj1673c YP 002345041.1	...		343
NTDB id 1211 C694 RS00795 WP 000963128.1	...		347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	...		347
NTDB id 1334 RAOC RS04870 WP 004918236.1	...		343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	...		372
NTDB id 1130 NGFG RS03960 WP 003688695.1	...		348
NTDB id 1124 NGFG RS03960 WP 003688695.1	...		348
NTDB id 1123 OK783 RS03845 WP 003688695.1	...		348
NTDB id 1427 RS RS02760 WP 011000510.1	...		352
NTDB id 92013 OCV50 RS12005 WP 261903149.1	...		345
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