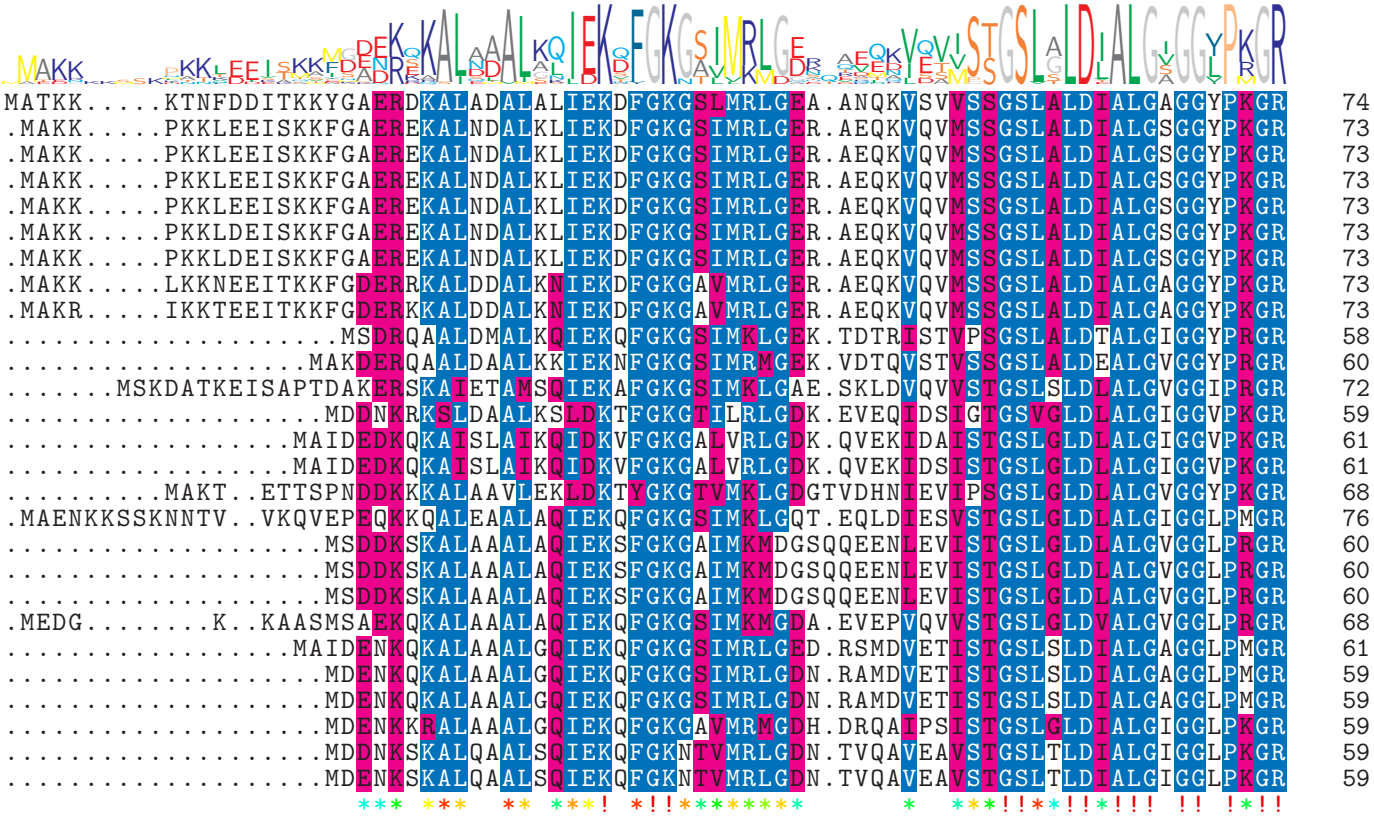


logo

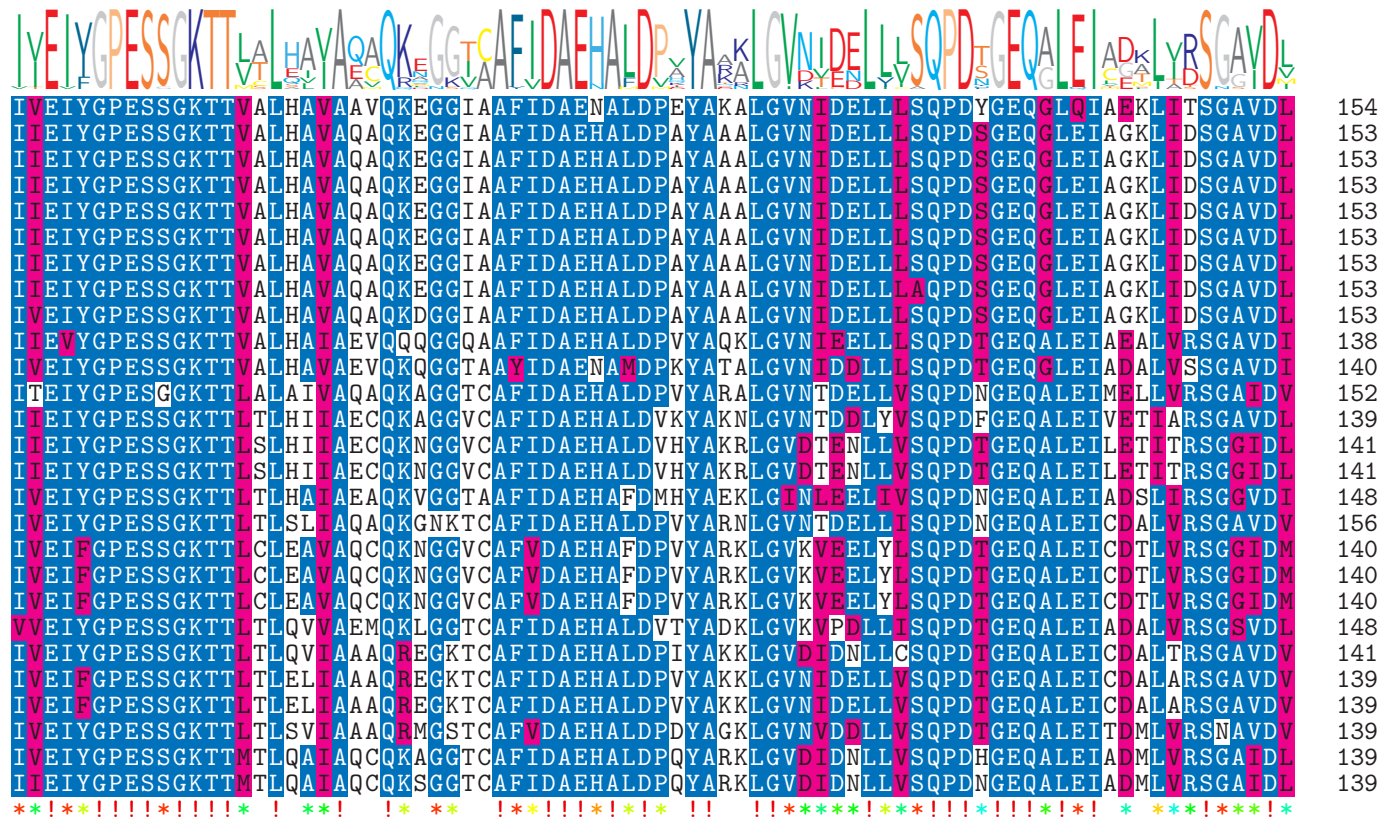
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
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 255776 OA04 RS17205 WP 103862885.1
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 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
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 255776 0A04 RS17205 WP 103862885.1
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 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

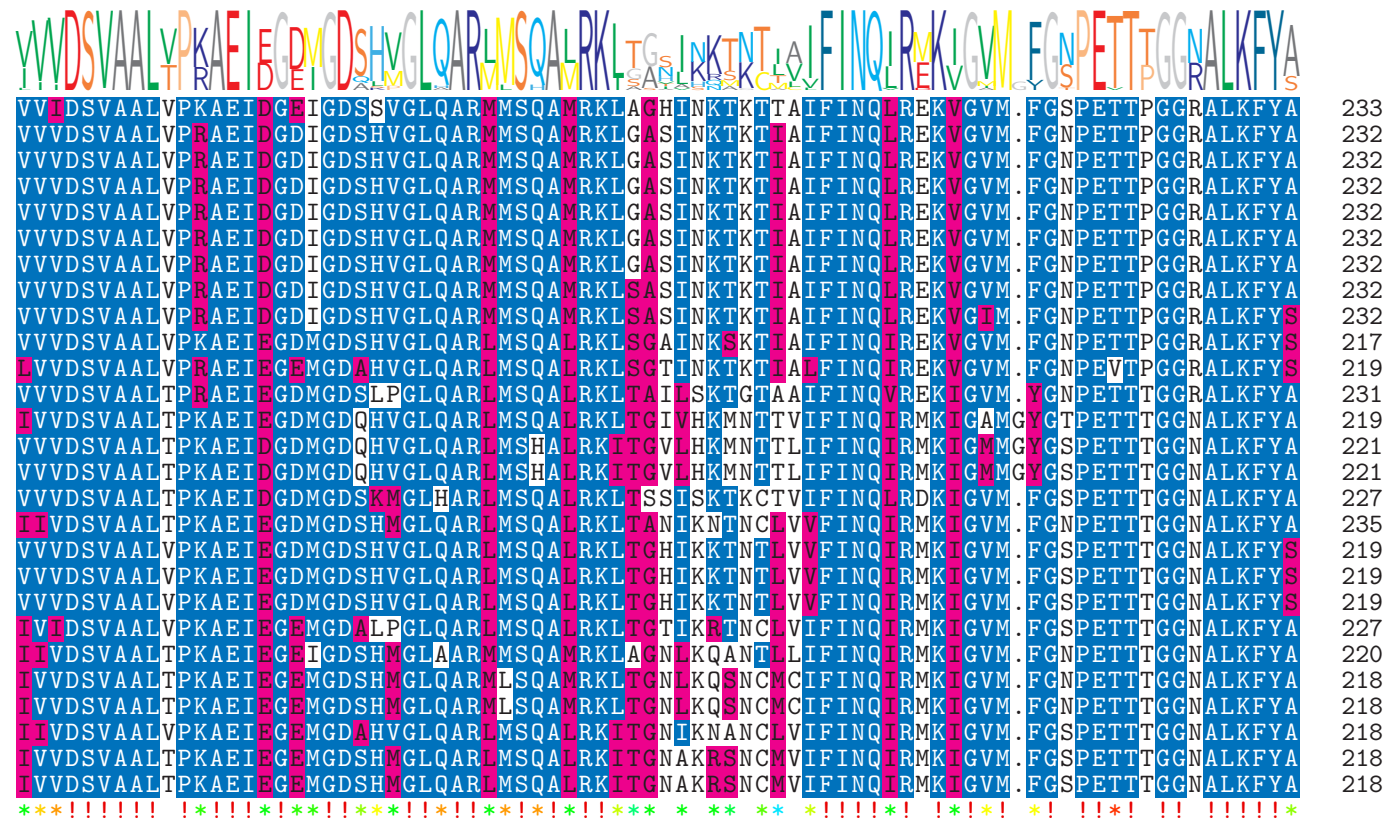
```



```

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 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
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 255776 0A04 RS17205 WP 103862885.1
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 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

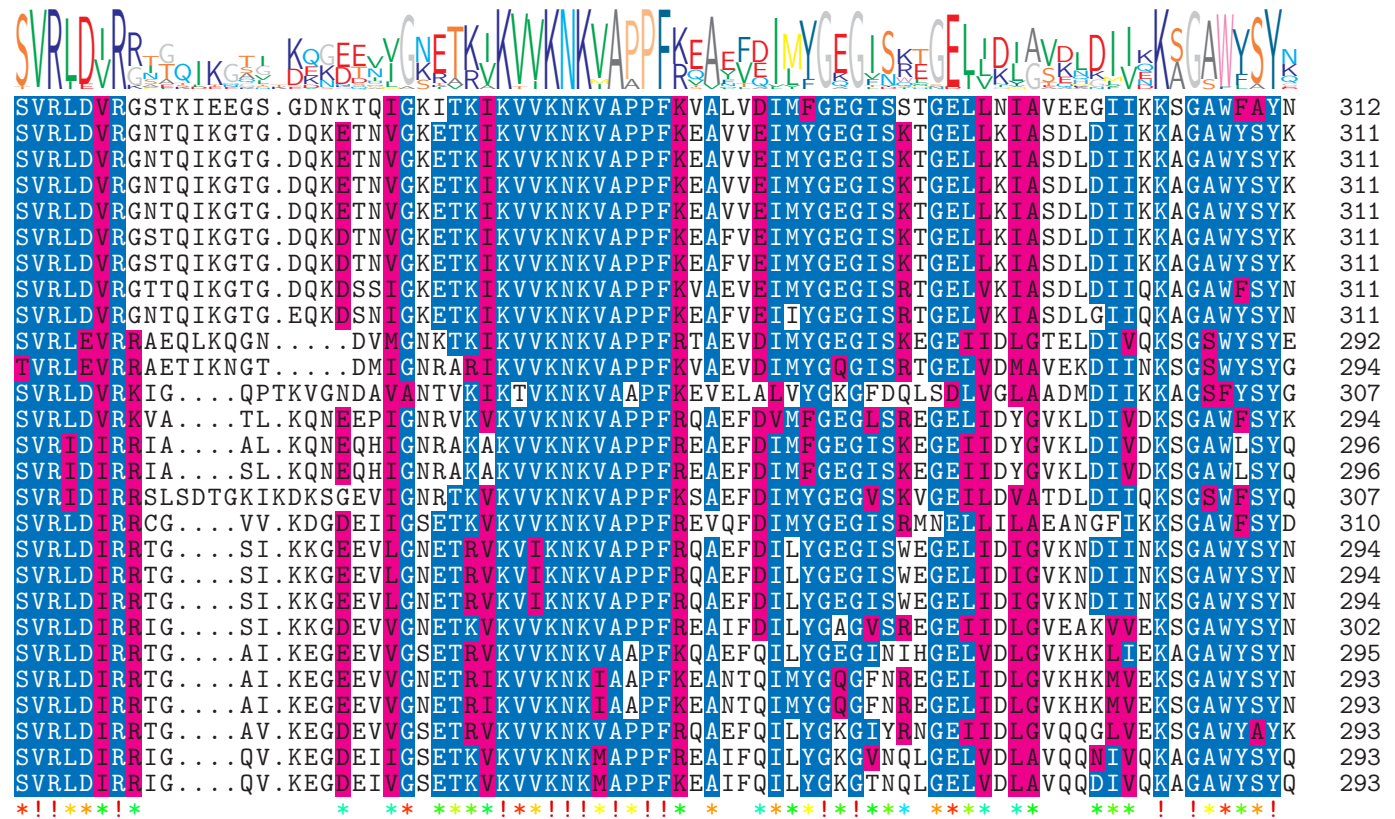
```



```

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 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
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 255776 0A04 RS17205 WP 103862885.1
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 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

```



logo

NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHGL	LDDSEVAETEEE...	TTASKTKAKAKKEEKAVETEEIELELED..	387		
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTE...	NKKDE....PKKEEA..VNEEVPLDLGDEL	382		
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTE...	NKKDE....PKKEEA..VNEEVPLDLGDEL	382		
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTE...	NKKDE....PKKEEA..VNEEVPLDLGDEL	382		
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTE...	NKKDE....PKKEEA..VNEEVPLDLGDEL	382		
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLADNPEVFAE	IDHQVRVQFGL	IDGEEAAE.....	SKKDE....VAQVDS..VNEEVTLDLGDEL	378		
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	IDGEEIAE.....	SKKDE....AAQVDS..VNEEVTLDLGDEL	378		
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAV...	ASE.....E.....TDDLALDLNGI	374		
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEEKQSS...	KEK.....ETDEK..ADKNLVLELDDTI	379		
NTDB id 115 BSU 16940 NP 389576.2	EERLGGG	RENAKQFLKENKDIMLMIQE	QIREHYGL	DNNGVVQQAAEE...	TQEEL.EFE.E.....	348		
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKNYLADHEDVE	DEVRLKVRVQYGL	ISDVPEEDLPTTE...	DE.QI.NILPDDST.....EE.....	355		
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQG	KEKTIAYIAERPEMEQE	IRDRVMAAIRAGNAGE	APALAPAPAAPEAAEA	.....	363		
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGG	RENSKAFLENPEIADE	ITKAIQNSMG	IEGMISGS...	EDD..EGEE.....	343		
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGG	RENAKALLKEDKALADE	ITLKIKESIGS	NEEIMPL...	PDE..PLEEME.....	347		
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGG	RENAKALLKEDKALADE	ITLKIKESIGS	NEEIMPL...	PDE..PLEEME.....	347		
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGG	RDTVKELIKDNPELA	ELEAKIREKLQAK	.....	.....	343		
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKENPEIA	DKLEQEIRNTLAS	NPNSVLK...	ATASDSNDESDEVVEF.....SEEEL.....	372		
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHITEG....T.....	QDETGE.....RPEE.....	348		
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHITEG....T.....	QDETGE.....RPEE.....	348		
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHITEG....T.....	QDETGE.....RPEE.....	348		
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREFLRENAELARE	IEENKVRHLGV	TPMGAVT....L.A.EEV	EED.....	352		
NTDB id 255776 OA04 RS17205 WP 103862885.1	GDKIGQG	KANACNFLKENPTIAA	ELDKKLREMLLHK	GNELTP...	AAASNSRDEDEFAGE.....GNEEF.....	357		
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLLKENPEIA	KTLDKKLREMLLN	PENMQLI....AETSSA	ADVEFGA.....VPEEF.....	354		
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYLLKENPEIA	KTLDKKLREMLLN	PENMQLI....AETSSA	ADVEFGA.....VPEEF.....	354		
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAAYLEENPEIG	QIEQQIRAKLLV	TSANTKA...TPVAEDL	ADADI.....	347		
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYLEENPQISTE	IEAVIREQLLT	KASDQTA....A.HDETE	EEPDLLES.....	349		
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEENNQIAE	EIERNIREQLLT	TGTNGAV....Q.I.EDE	EEPDLLE.....S.....	349		
consensus	***!!!	*****	**	*****	*****	**	**	***

logo

	E	I	E	L	E	E	
NTDB id 600 KW2 RS01765 WP 011675413.1	.....						387
NTDB id 269 KZH43 RS08665 WP 001085462.1	EIEIEE						388
NTDB id 228 SPD RS09265 WP 001085462.1	EIEIEE						388
NTDB id 194 SPR RS08825 WP 001085462.1	EIEIEE						388
NTDB id 159 SP RS09750 WP 001085462.1	EIEIEE						388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EIEIEE						384
NTDB id 499 SM12261 RS08315 WP 078228268.1	EIEIEE						384
NTDB id 453 Spy49 1753c ACI62003.1	EIED..						378
NTDB id 408 SMU RS09530 WP 002262392.1	ELED..						383
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 1214 NCTC11637 00359 SQJ03206.1	.....						347
NTDB id 1211 C694 RS00795 WP 000963128.1	.....						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 255776 OA04 RS17205 WP 103862885.1	.....						357
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