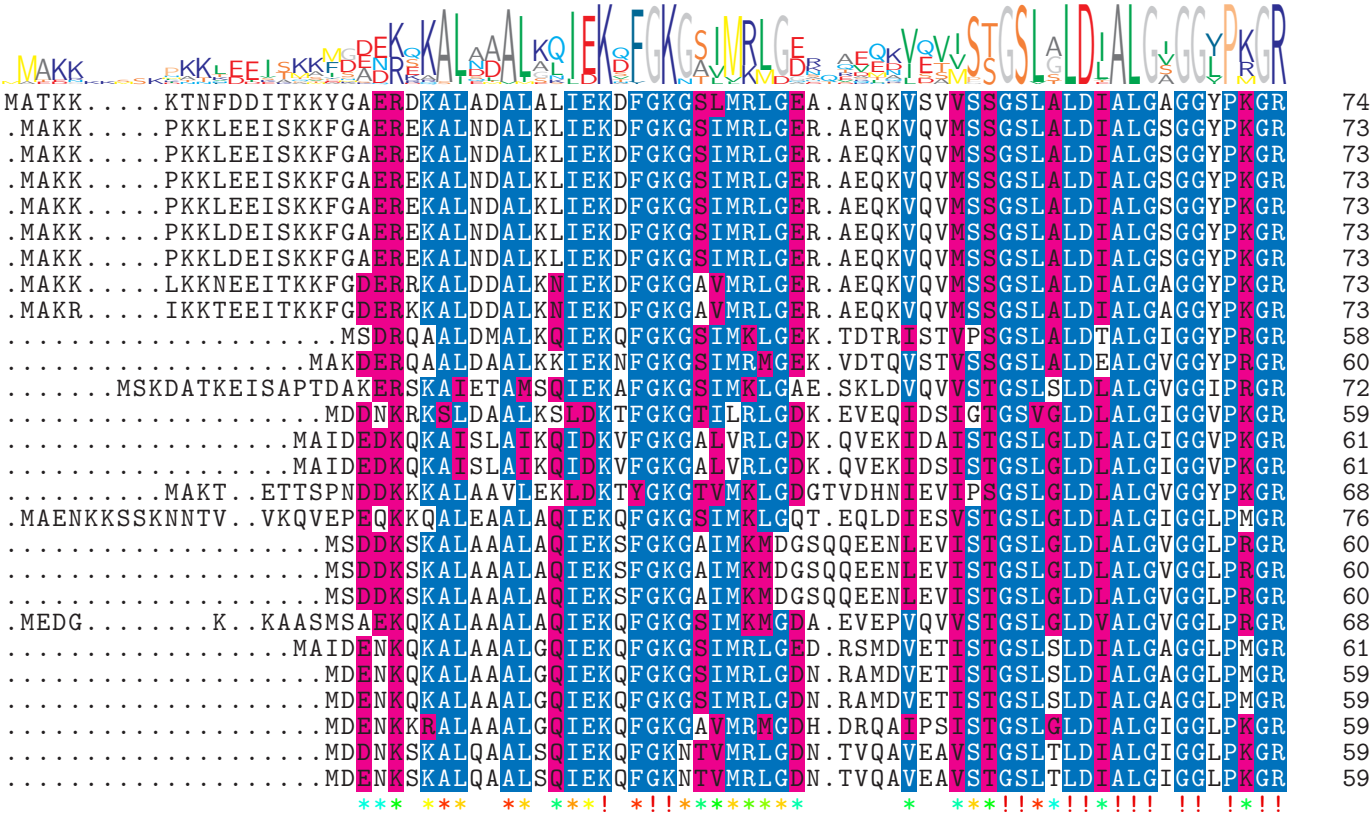


logo

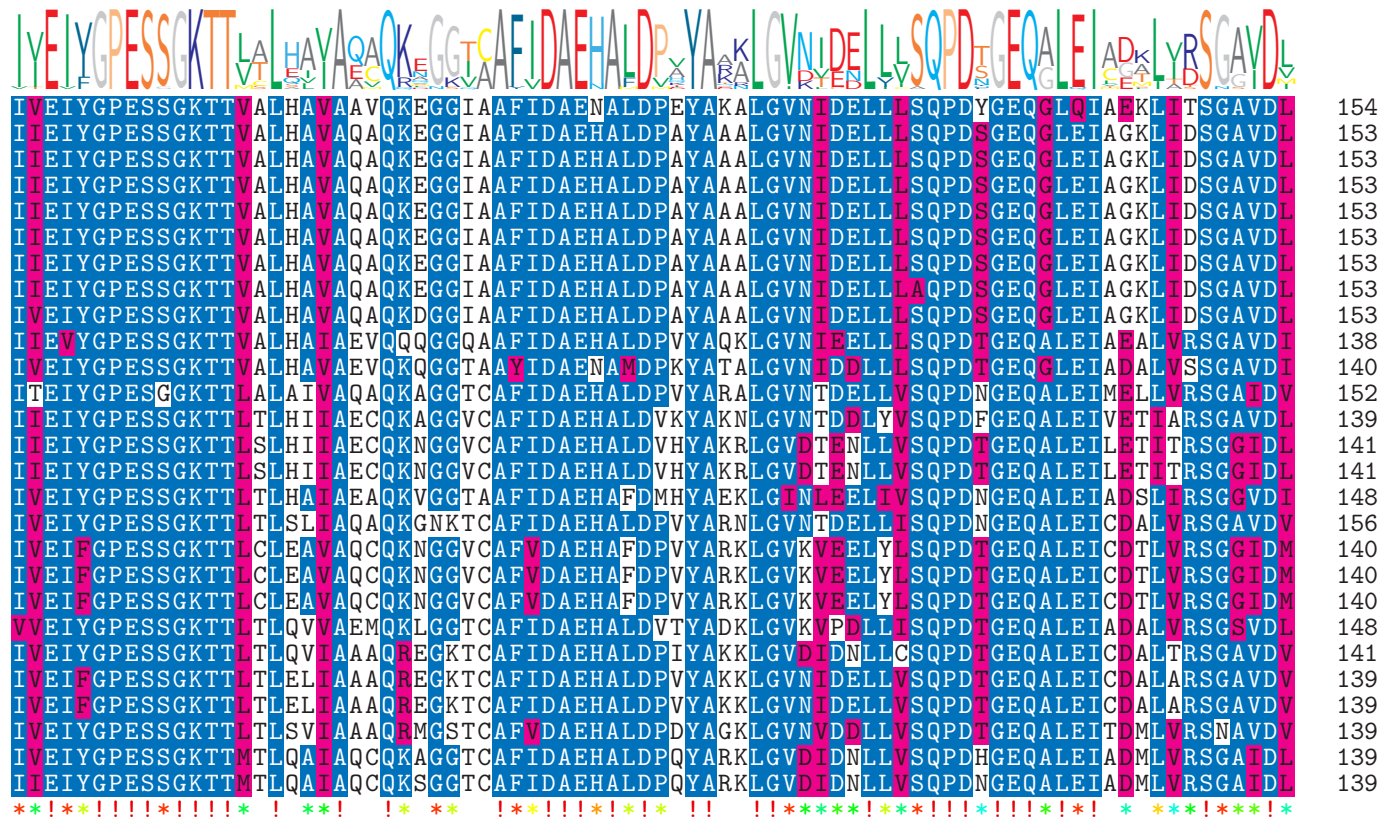
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c 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 274223 C5E22 RS17380 WP 012822822.1
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 274223 C5E22 RS17380 WP 012822822.1
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

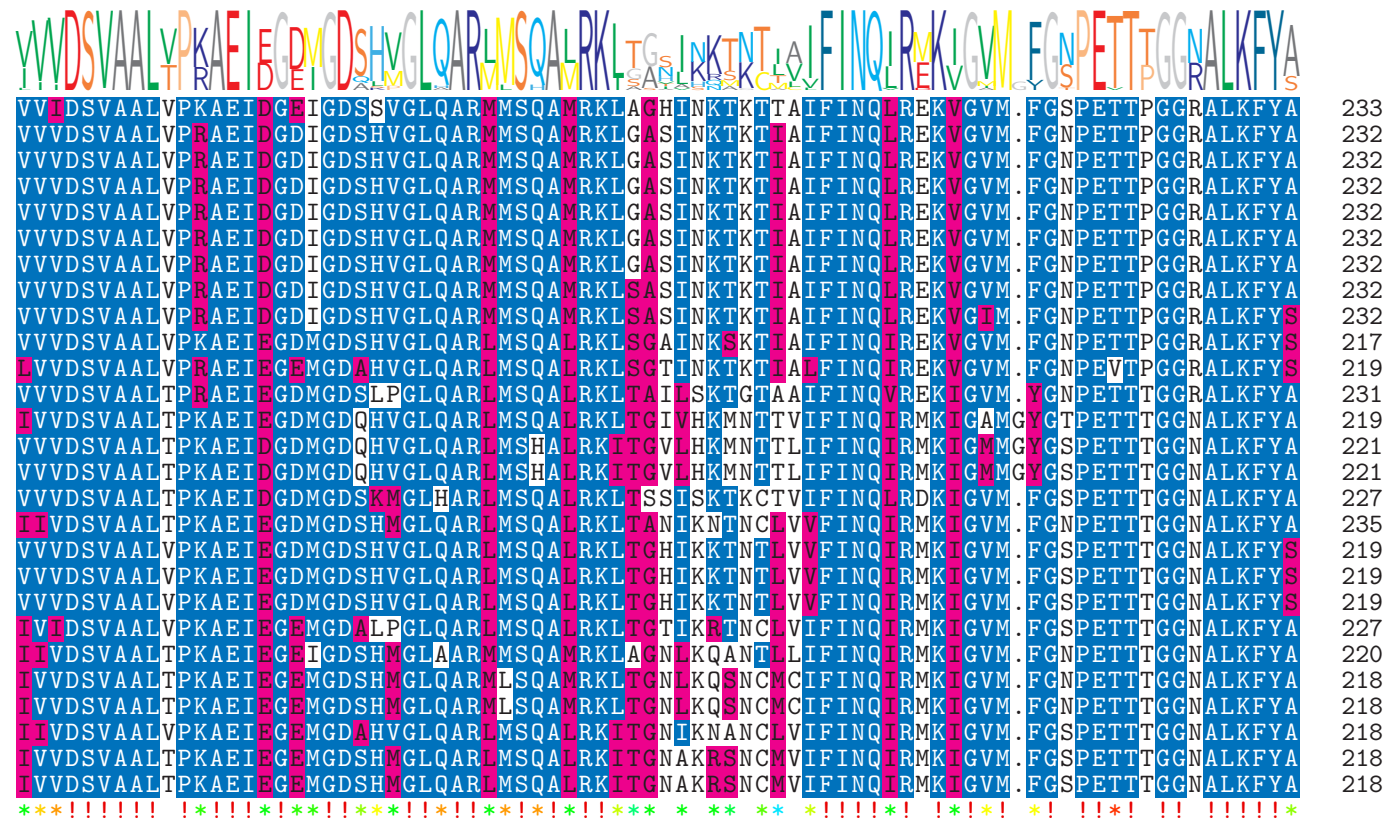
```



```

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 274223 C5E22 RS17380 WP 012822822.1
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

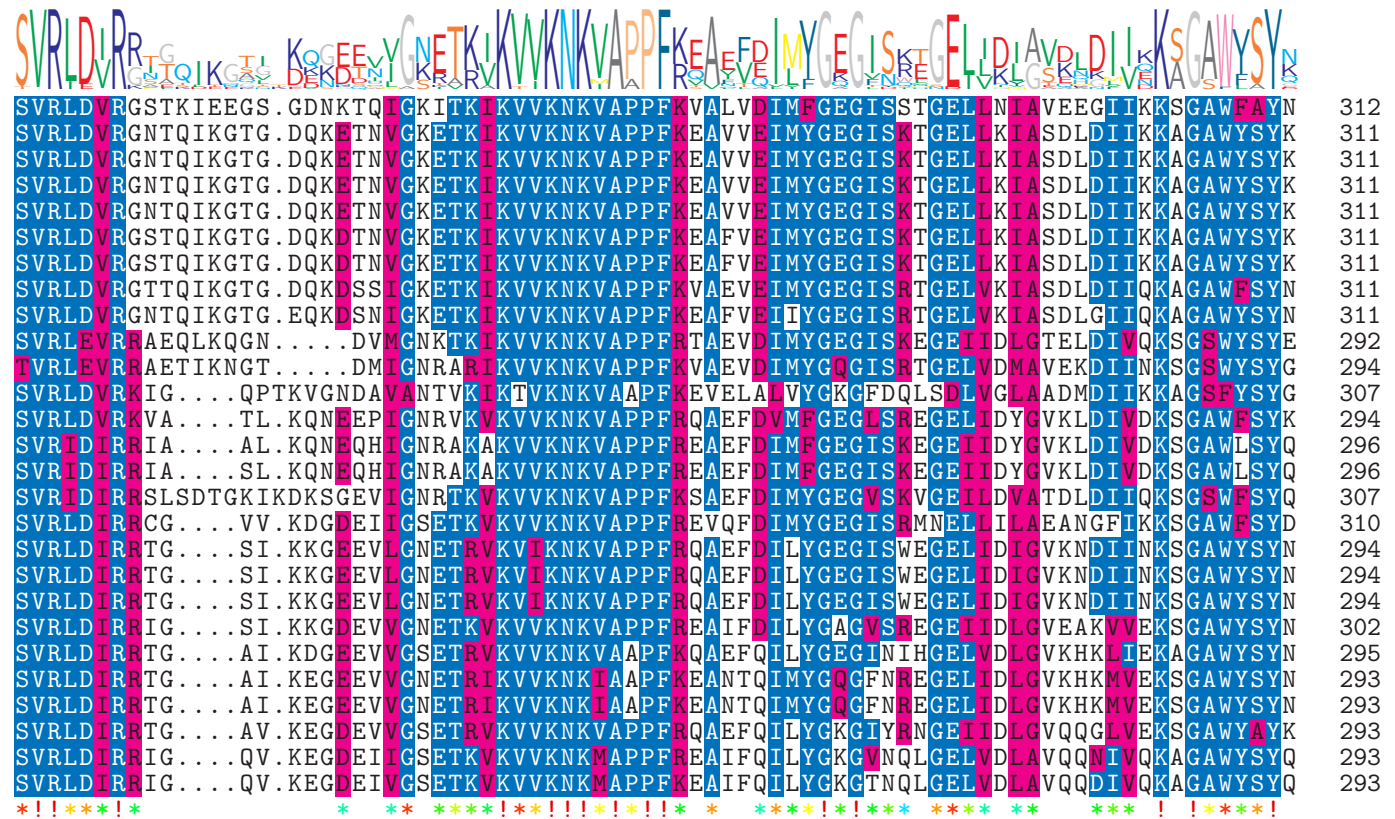
```



```

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 274223 C5E22 RS17380 WP 012822822.1
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	DEIDHKVRAAHG	LDDSEVAETEEET	...	TASKTKAKAKKEEKAVETEEIELELED	..	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTEN	...	KKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTEN	...	KKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTEN	...	KKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTEN	...	KKDE	PKKEEA..VNEEVPLDLGDEL	382
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLADNPEVFAE	IDHQVRVQFGL	LIDGEEAAE	...	S...KKDE	VAQVDS..VNEEVTLDLGDEL	378
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	LIDGEEIAE	...	S...KKDE	AAQVDS..VNEEVTLDLGDEL	378
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAVA	...	SE.....E.....	TDDLALDLNGI	374
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEKQSSK	...	EK.....ETDEK..	ADKNLVLELDDTI	379
NTDB id 115 BSU 16940 NP 389576.2	EERLGGG	RENAKQFLKENKDIM	LMIQEQIREHYGL	DNNGVVQQAEET	...	QEEL.EFE.E.....	.....	348
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKNYLADHEDVE	DEVRLKVRAAYG	ISDVPEEDLPTTED	...	E.QI.NILPDDST	EE.....	355
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQG	KEKTIAYIAERPEME	QEIRDRVMAAIRAG	NAGEAPALAPAPAA	PEAAEA	.....	.....	363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGG	RENSKAFLENPEIA	DEITKAIQNSMG	IEGMISGS	...	EDD..EGEE	.....	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGG	RENAKALLKEDKAL	ADEITLKI	KESIGSNEEIMPL	...	PDE..PLEEME	.....	347
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGG	RENAKALLKEDKAL	ADEITLKI	KESIGSNEEIMPL	...	PDE..PLEEME	.....	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGG	RDITVKELIKDNPE	LAELEAKIREKLQ	AK	.....	.....	.....	343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKENPEI	ADKLEQEIRNTL	ASNPNSVLK	...	ATASDSNDESDV	EEF.....SEEEL	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	.....	TQDET	DGE.....RPEE	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	.....	TQDET	DGE.....RPEE	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDEIDAKIRALNG	VEMHITEG	.....	TQDET	DGE.....RPEE	348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREFLRENAEL	AREIENKVVREHL	GVTPMGAVT	...	L..AEEVEED	.....	352
NTDB id 274223 C5E22 RS17380 WP 012822822.1	GDKIGQG	KANACNFLKENSAT	AAELDKKLREMLL	HKGNELTP	...	AAVGNSHDEDEF	AGE.....GNEEF	357
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLVKENPEI	AKTLDKKLREMLL	NPENMQLI	...	AETSSAAD	VEFGA.....VPEEF	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYLVKENPEI	AKTLDKKLREMLL	NPENMQLI	...	AETSSAAD	VEFGA.....VPEEF	354
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAAYLEENPEIG	QIEQQIRAKLL	VSANTKA	...	TPVAEDLADADI	.....	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYLEENPQ	ISTEIEAVIREQLL	TKASDQTA	...	A.HDETEEPDL	LLES.....	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEENN	QIAEEIERNIREQLL	TGTNGAV	...	Q.I.EDEEPDL	LLE.....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 274223 C5E22 RS17380 WP 012822822.1	.....	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