

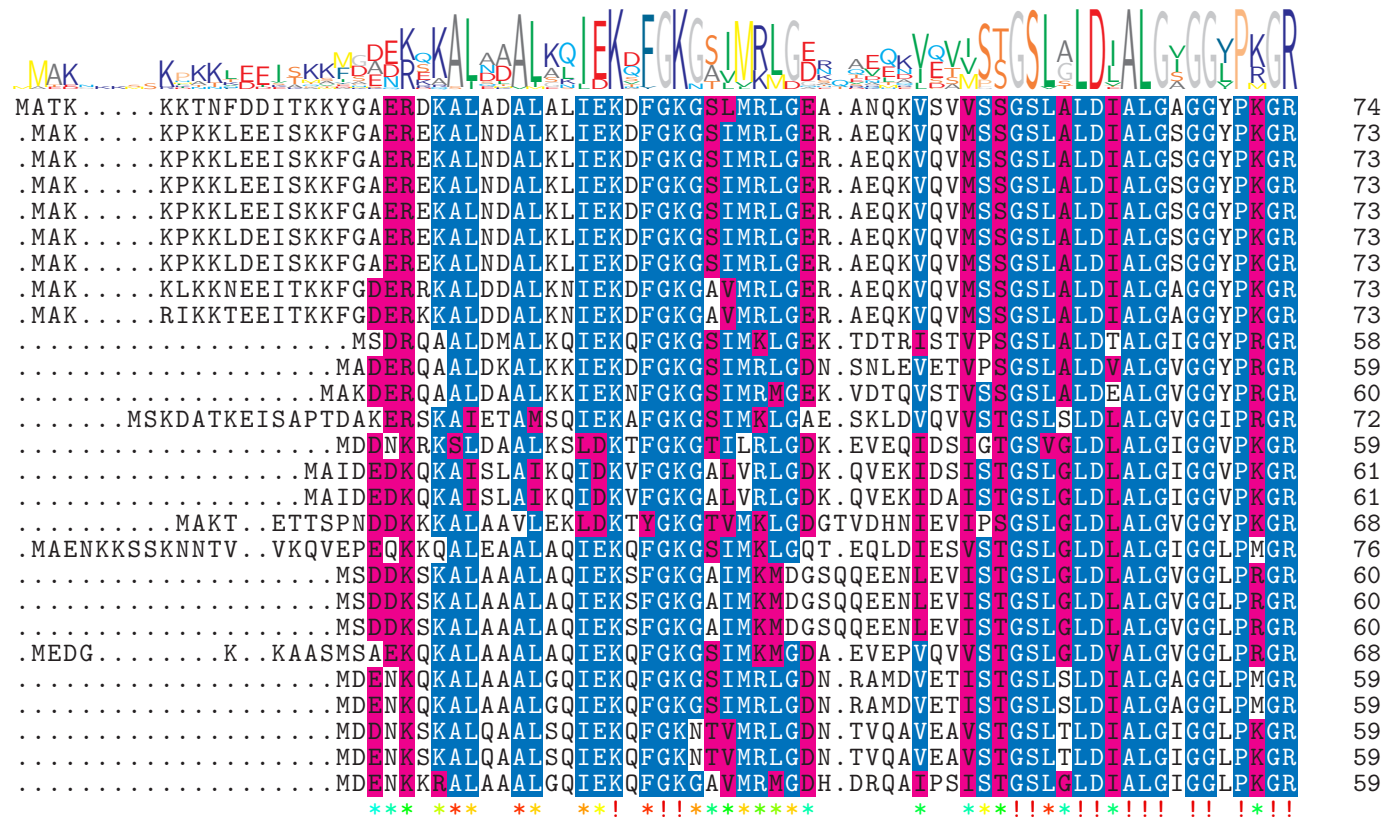
logo

```

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 304064 UCCLB521 RS03955 WP 011667973.1
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 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1

```

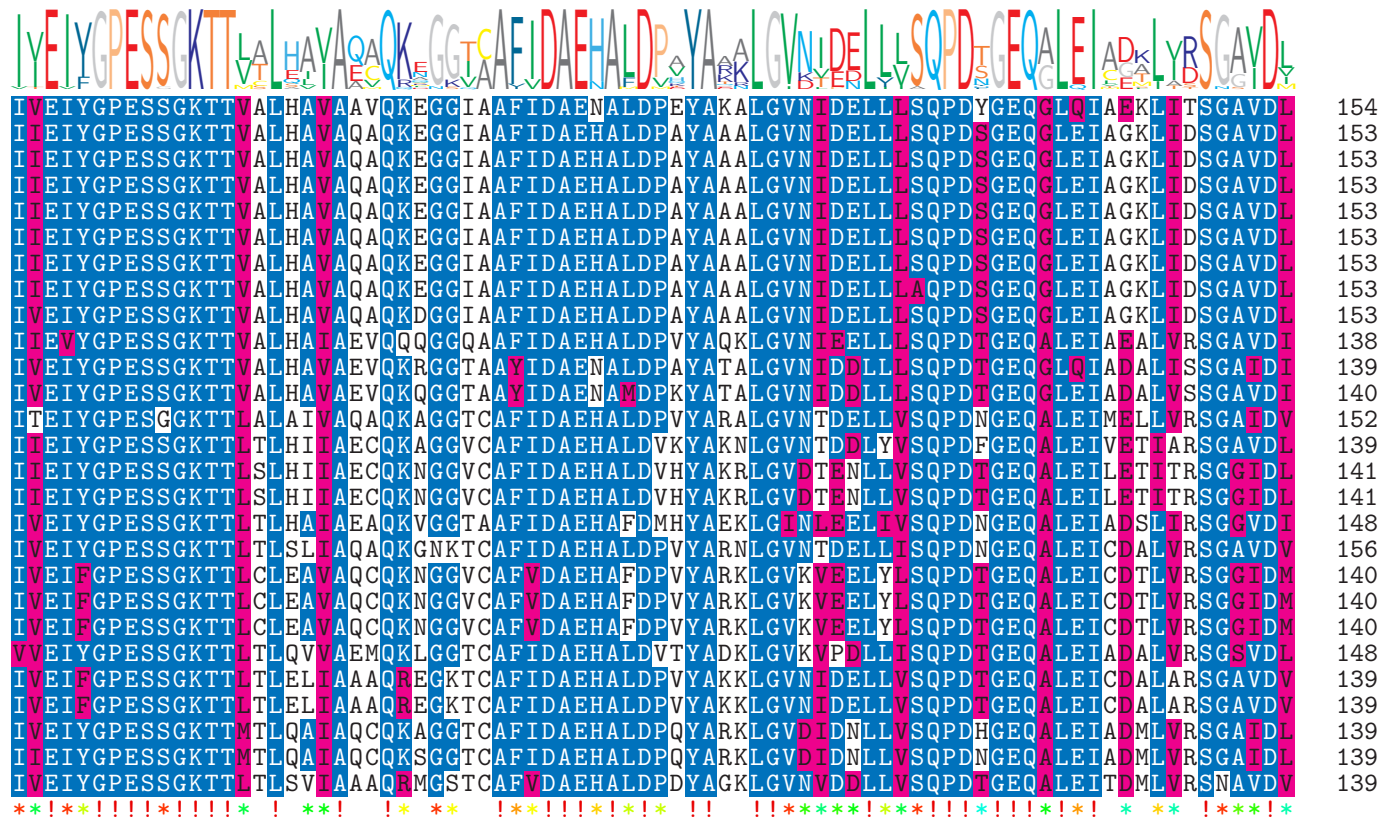
consensus



```

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 304064 UCCLB521 RS03955 WP 011667973.1
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 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

```



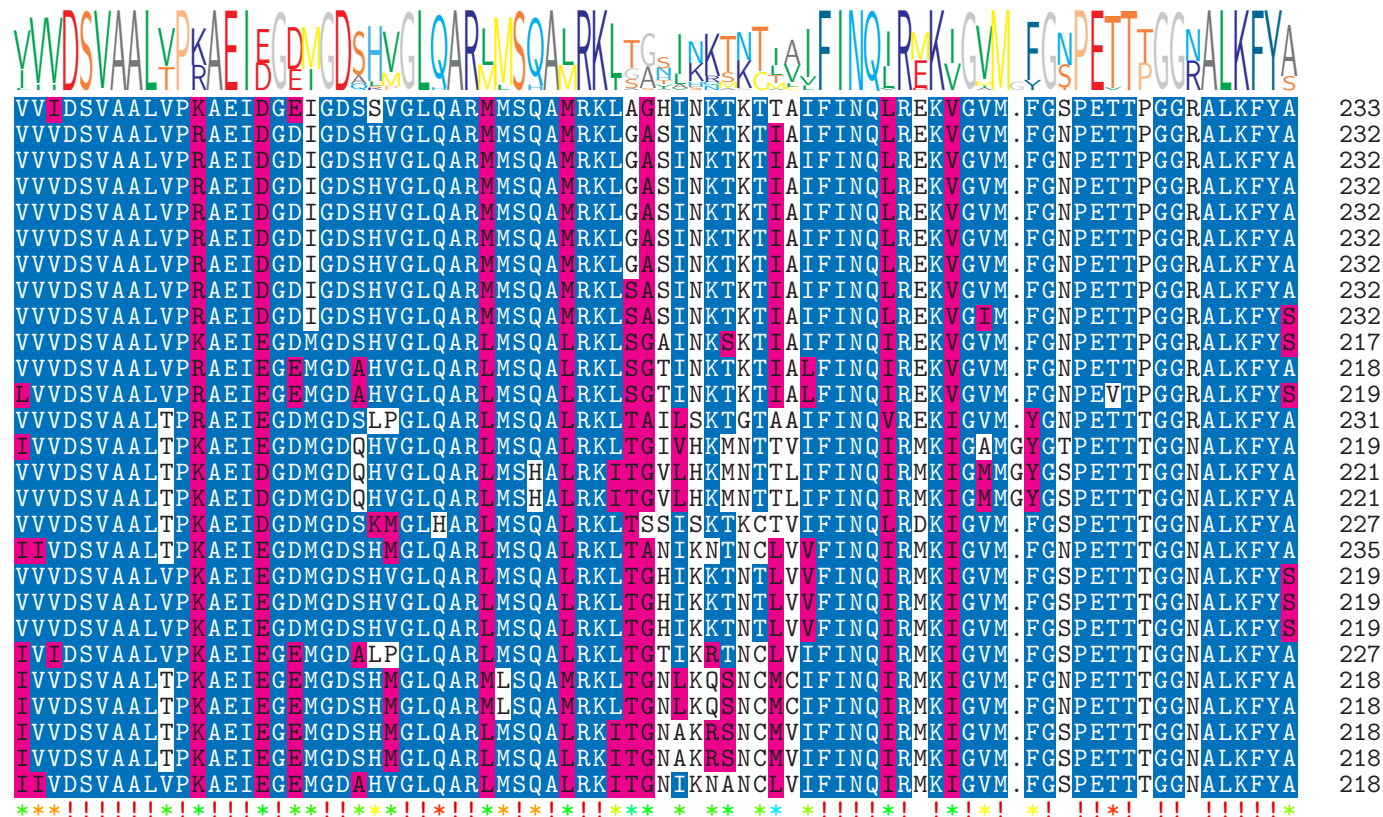
logo

```

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 304064 UCCLB521 RS03955 WP 011667973.1
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 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1

```

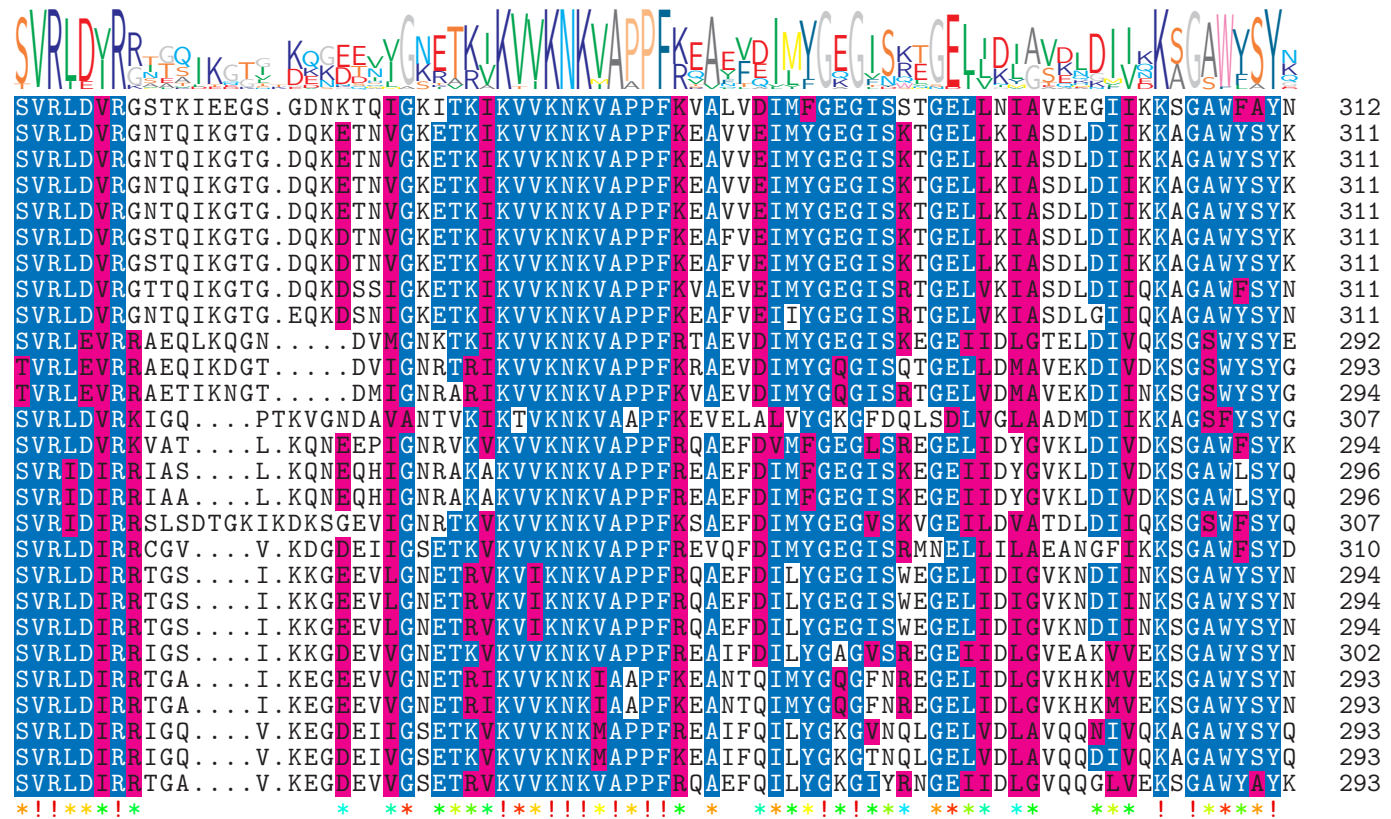
consensus



```

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 304064 UCCLB521 RS03955 WP 011667973.1
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 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

```



logo

NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	ENAKNYL	KEHQDV	FEIDHKV	RAAHG	LLDDSEVAETEEETTAS	TKAKA	.....	KKEEKAVETEEIELELE	386
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYL	AEHPFI	FDEIDKQ	VRSKF	GLIDGEEVSEQDTENK	KDE....	P.....	KKEEA..VNEEVPLDLG	379
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYL	AEHPFI	FDEIDKQ	VRSKF	GLIDGEEVSEQDTENK	KDE....	P.....	KKEEA..VNEEVPLDLG	379
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYL	AEHPFI	FDEIDKQ	VRSKF	GLIDGEEVSEQDTENK	KDE....	P.....	KKEEA..VNEEVPLDLG	379
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYL	AEHPFI	FDEIDKQ	VRSKF	GLIDGEEVSEQDTENK	KDE....	P.....	KKEEA..VNEEVPLDLG	379
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYL	ADNPEV	FAEIDH	QVRVQ	FGLIDGEEAAE....	SKKDE...V.....	.....	AQVDS..VNEEVTLDLG	375
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYL	ADNPEI	FDEIDH	QVRVQ	FGLIDGEEIAE....	SKKDE....A.....	.....	AQVDS..VNEEVTLDLG	375
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYL	ADHPQL	FDEIDR	KVRVK	FGLLEESEEEESAMAV	ASE.....E.....	.....	TDDLALDLD	371
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFL	ADNPEI	FDDIDH	KVRVQ	YGLIEEDNTEEKQSS	KEK.....ETDEK..	ADKNLVLELD		376
NTDB id 115 BSU 16940 NP 389576.2	EERLGQGR	ENAKQFL	KENKDI	MLMIQ	EQIRE	HYGLDNNGVVQQQAE	ETQEEL	EFEE.....		348
NTDB id 304064 UCCLB521 RS03955 WP 011667973.1	EDRIGQGR	ENAKQYL	ADHPDM	MAEVN	QRVRA	AYCVGDEEAAATKAT	ETKT	DAPKDKDKGKTKAKDKP	ADVTPGQIELAPD	373
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQGR	ENAKNYL	ADHEDV	EDVRL	KVRAA	YCTSDVPEEDLPTTE	DE.....	.....	QINILPD	350
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQGK	EKTIA	YIAER	PEMEQ	EIRDR	VMAAIRAGNAGEA	PALAPAPA	AAPEAAEA.....		363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGQGR	ENSKAFL	KENPEI	ADEIT	KATQNS	MTIEGMI....	SGSEDD..EGEE.....	.....		343
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGQGR	ENAKALL	KEDKAL	ADEIT	LKIKES	IGSNEEI....	MPLPDE..PLEEM.....	E.....		347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGQGR	ENAKALL	KEDKAL	ADEIT	LKIKES	IGSNEEI....	MPLPDE..PLEEM.....	E.....		347
NTDB id 1334 RAO C RS04870 WP 004918236.1	DTKLGQGR	DTVKEL	TKDNPEI	AEIEE	AKIRE	KLQAK.....	.....	.....		343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQGK	NNAVKWL	KENPEI	ADKLE	QEI	RNTLASNPNS....	VLKATASDSNDES.....	.....	DVEEFSE	369
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQGD	NVRVWL	KENPEI	SDEID	AKIRAL	NCVEMHI....	TEGTQDET	DGER.....	PE	347
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQGD	NVRVWL	KENPEI	SDEID	AKIRAL	NCVEMHI....	TEGTQDET	DGER.....	PE	347
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQGD	NVRVWL	KENPEI	SDEID	AKIRAL	NCVEMHI....	TEGTQDET	DGER.....	PE	347
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQGR	DNCR	EFILRE	NAELARE	IE	ENKVR	EHLCVTPMG....	AVTLA.EEVEED.....		352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQGK	ANACKYL	KENPEI	AKTLD	KKLRE	MLLN	PENM....	QLIAETSSAADDV.....	EFGAVPE	352
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQGK	ANACKYL	KENPEI	AKTLD	KKLRE	MLLN	PENM....	QLIAETSSAADDV.....	EFGAVPE	352
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQGK	NNVIRY	LEENPQ	ISTEIE	AVIRE	QLLTKASD....	QTAA.HDETEEEP.....	DLL..ES		349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQGK	NNVIRY	FEENNQ	IAEIE	ERNIRE	QLLTTGTN....	GAVQ.I.EDEEEP.....	DLL..LE		348
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQGK	ANAAKY	LEENPEI	GQIEI	QQIR	AKLLVTSAN....	TKATPVAEDLADA.....	DI.....		347
consensus	***!!!	*****	***	*	***	*****	***	*		

logo

		DELEIELEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	D.....	387	
NTDB id 269 KZH43 RS08665 WP 001085462.1	DELEIEIEE	388	
NTDB id 228 SPD RS09265 WP 001085462.1	DELEIEIEE	388	
NTDB id 194 SPR RS08825 WP 001085462.1	DELEIEIEE	388	
NTDB id 159 SP RS09750 WP 001085462.1	DELEIEIEE	388	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DELEIEIEE	384	
NTDB id 499 SM12261 RS08315 WP 078228268.1	DELEIEIEE	384	
NTDB id 453 Spy49 1753c ACI62003.1	NGIEIED..	378	
NTDB id 408 SMU RS09530 WP 002262392.1	DTIELED..	383	
NTDB id 115 BSU 16940 NP 389576.2	.....	348	
NTDB id 304064 UCCLB521 RS03955 WP 011667973.1	KSAK.....	377	
NTDB id 625 LCA RS02525 WP 011374196.1	DSTEE....	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	EEL.....	372	
NTDB id 1130 NGFG RS03960 WP 003688695.1	E.....	348	
NTDB id 1124 NGFG RS03960 WP 003688695.1	E.....	348	
NTDB id 1123 OK783 RS03845 WP 003688695.1	E.....	348	
NTDB id 1427 RS RS02760 WP 011000510.1	.....	352	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	EF.....	354	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	EF.....	354	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....	349	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	S.....	349	
NTDB id 1205 PSJM300 05545 AFN77183.1	.....	347	
consensus			

-  non conserved
-  similar
-  ≥ 50% conserved