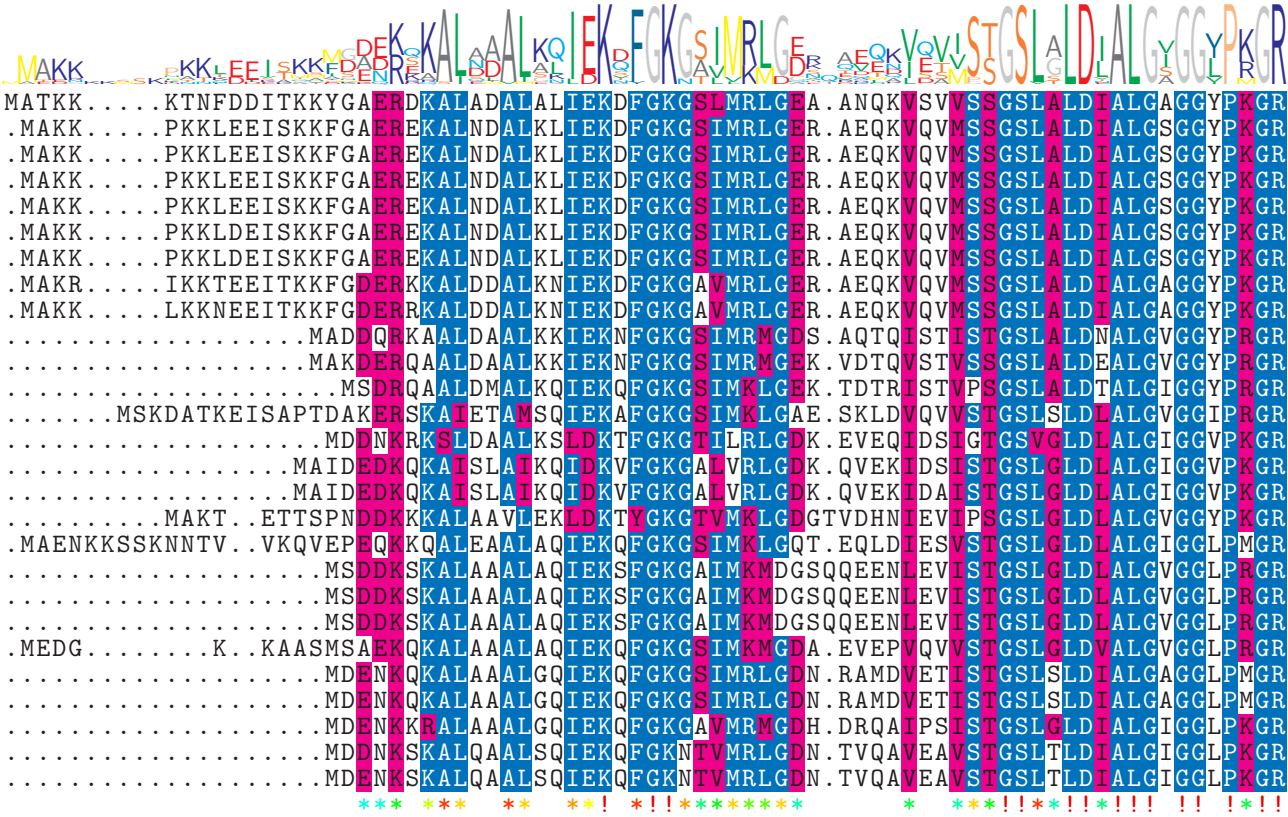


logo

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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 92865 ADU73 RS02850 WP 062913162.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

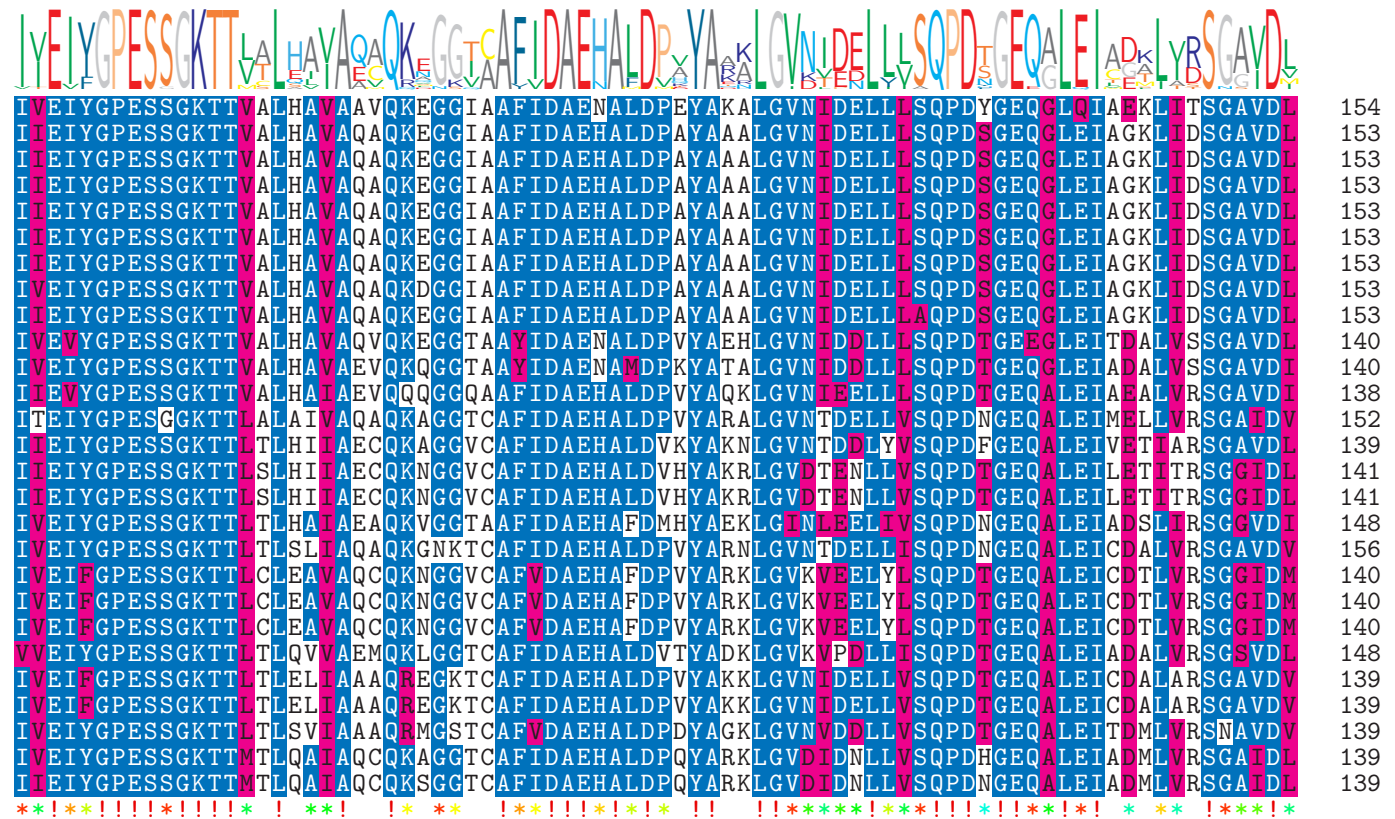


74
73
73
73
73
73
73
73
73
60
60
58
72
59
61
61
68
76
60
60
60
68
59
59
59
59
59

```

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 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 92865 ADU73 RS02850 WP 062913162.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

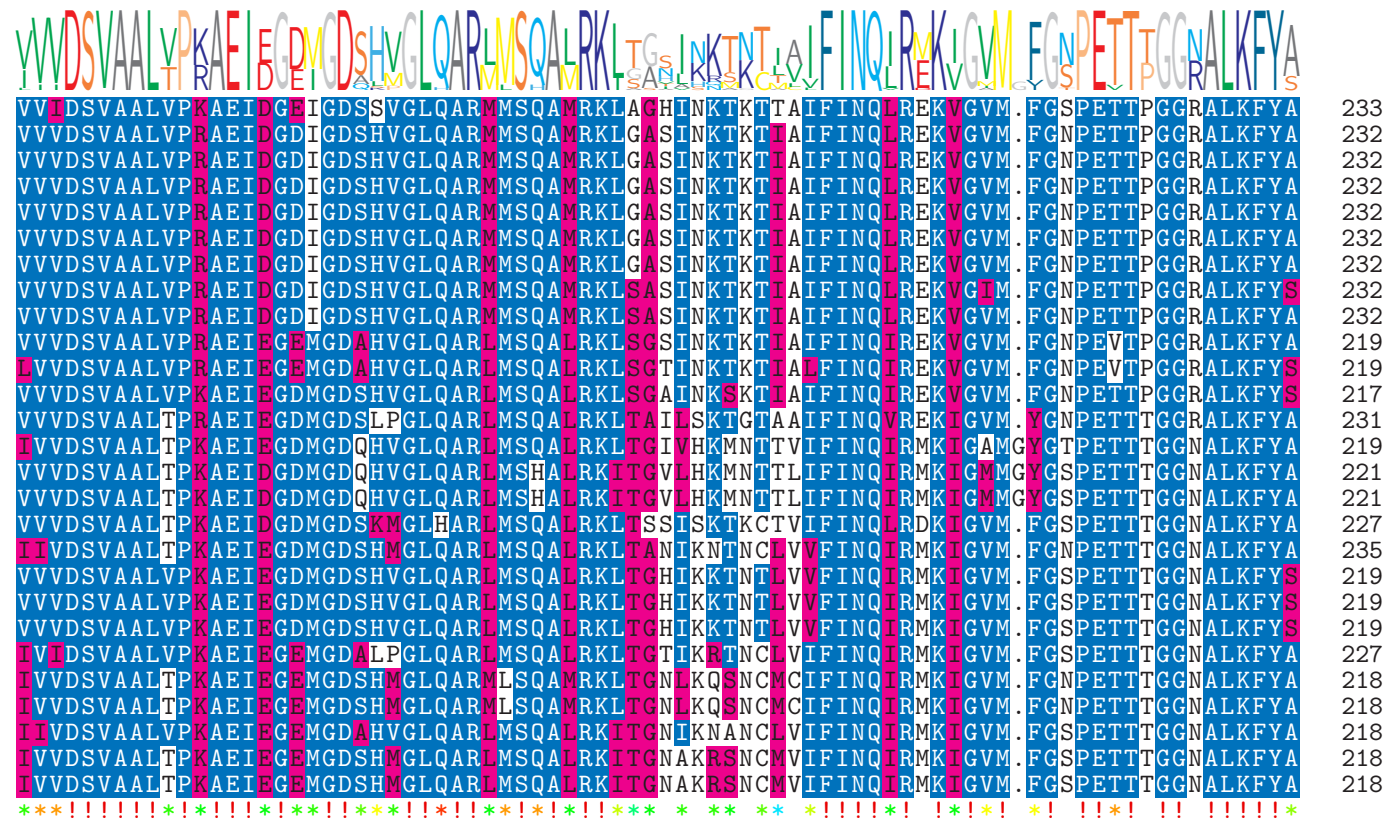
```



```

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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 92865 ADU73 RS02850 WP 062913162.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 RA0C 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 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

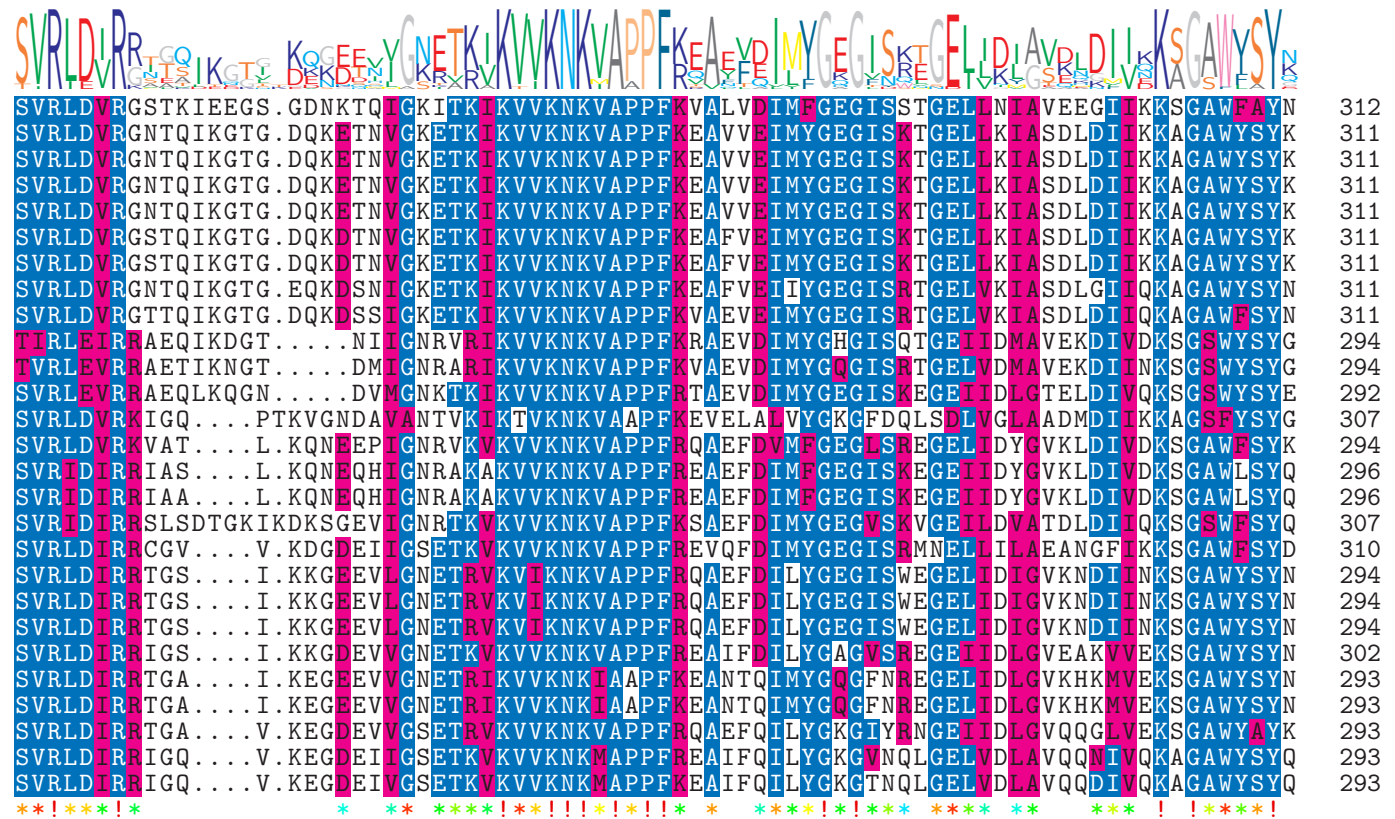
```



```

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 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 92865 ADU73 RS02850 WP 062913162.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 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	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETE	EETTAS	KTKAKAKKEEKAVETEEIE	382	
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQD	TENKKD	E....PKKEEA..VNEEVP	375	
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQD	TENKKD	E....PKKEEA..VNEEVP	375	
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQD	TENKKD	E....PKKEEA..VNEEVP	375	
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQD	TENKKD	E....PKKEEA..VNEEVP	375	
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	IDGEEIAES	KKD	E....AAQVDS..VNEEVT	371	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLADNPEVFAE	IDHQVRVQFGL	IDGEEAAES	KKD	E....VAQVDS..VNEEVT	371	
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEKQ	SSKEK	ETDEK..ADKNLV	372	
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEESAM	AVASE	E.....TDDLA	367	
NTDB id 92865 ADU73 RS02850 WP 062913162.1	DERIGQG	RENAKQYLEDNPEKRE	EIYKKVRAAYGM	DETAEEKDEE	EEQ	KKTKAKEKAKGKAKKEKS..DPSKLD	366	
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKNYLADHEDVE	DEVRLKVRAAYG	ISDVPEEDLPT	TED	EQINI.....	347	
NTDB id 115 BSU 16940 NP 389576.2	EERLGQG	RENAKQFLKENKDIM	LMIQEQIREHYGL	DNNGVVQQA	EETQE	ELEFEE.....	348	
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQG	KEKTIAYIAERP	EMEQUEIRDRV	MAAIRAGNAGEAPALAP	AAPAAEA	.....	363	
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGG	RENSKAFLENPEIA	DEITKAIQNSMG	IEGMI	SGSEDD	E..GEE	343	
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGG	RENAKALLKEDKAL	ADEITLKI	KESIGSNEEI	MPLPDEP	..LEEME	347	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGG	RENAKALLKEDKAL	ADEITLKI	KESIGSNEEI	MPLPDEP	..LEEME	347	
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGG	RDRTVKELIKDNPE	LAELEAKIREKLQ	AK	.....	.....	343	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKENPEI	ADKLEQEIRNTLA	SNPNS	VLKATASDSND	ESDVVEF.....SEEEL	372	
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDIDA	KIRALNGVEMHI	TEGT	QDET	DGER.....PEE... 348	
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDIDA	KIRALNGVEMHI	TEGT	QDET	DGER.....PEE... 348	
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEI	SDIDA	KIRALNGVEMHI	TEGT	QDET	DGER.....PEE... 348	
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREFLRENAEL	AREIENKVREHLG	VTPMG	AV	TLAEEVEED	 352	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLLKENPEI	AKTLDKKLREMLLN	PENM	QLIAETSSAADD	VEFGAV.....PEEF..	354	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYLLKENPEI	AKTLDKKLREMLLN	PENM	QLIAETSSAADD	VEFGAV.....PEEF..	354	
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAACKYLEENPEI	GIEQQIRAKLLV	TSAN	TKATPVAEDLAD	ADI.....	347	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYLEENPQ	ISTEIEAVIREQLLT	KASD	QTAA	HDETEEEPDLL	ES.... 349	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEENNQ	IAEEIERNIREQLLT	TGTN	GAVQ	I.EDEE	EPDLL.....LES... 349	
consensus	***!!!	*****	**	*****	*****	**	**	*

logo

		LDLDELEIEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	LELED.....	387	
NTDB id 269 KZH43 RS08665 WP 001085462.1	LDLGDELEIEIEE	388	
NTDB id 228 SPD RS09265 WP 001085462.1	LDLGDELEIEIEE	388	
NTDB id 194 SPR RS08825 WP 001085462.1	LDLGDELEIEIEE	388	
NTDB id 159 SP RS09750 WP 001085462.1	LDLGDELEIEIEE	388	
NTDB id 499 SM12261 RS08315 WP 078228268.1	LDLGDELEIEIEE	384	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	LDLGDELEIEIEE	384	
NTDB id 408 SMU RS09530 WP 002262392.1	LELDDTIELED..	383	
NTDB id 453 Spy49 1753c ACI62003.1	LDLDNGIEIED..	378	
NTDB id 92865 ADU73 RS02850 WP 062913162.1	LEPSDKNK.....	374	
NTDB id 625 LCA RS02525 WP 011374196.1	.LPDDSTEE....	355	
NTDB id 115 BSU 16940 NP 389576.2	.....	348	
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 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			

- X non conserved
- X similar
- X ≥ 50% conserved