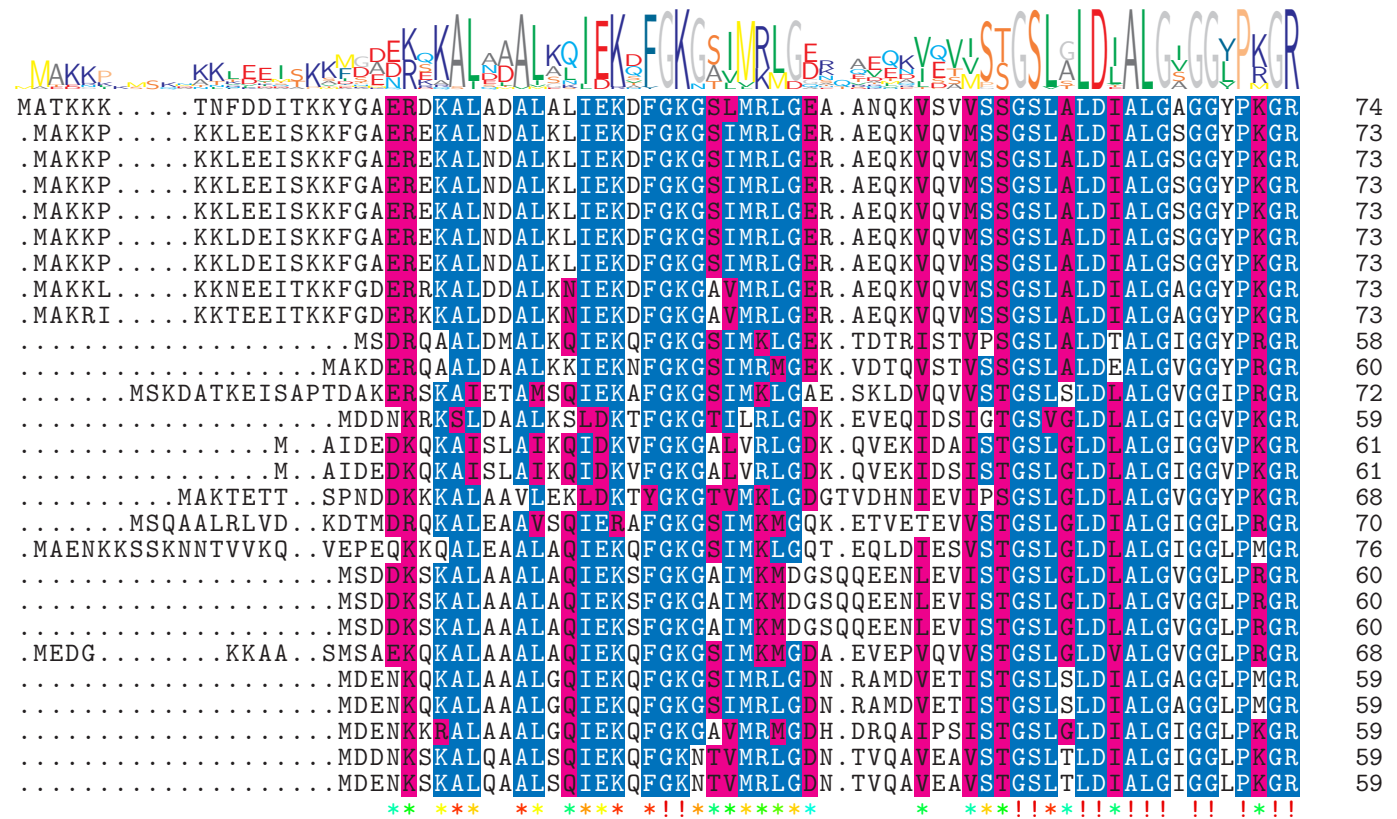


```

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 277702 MSR1L RS16740 WP 024081150.1
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

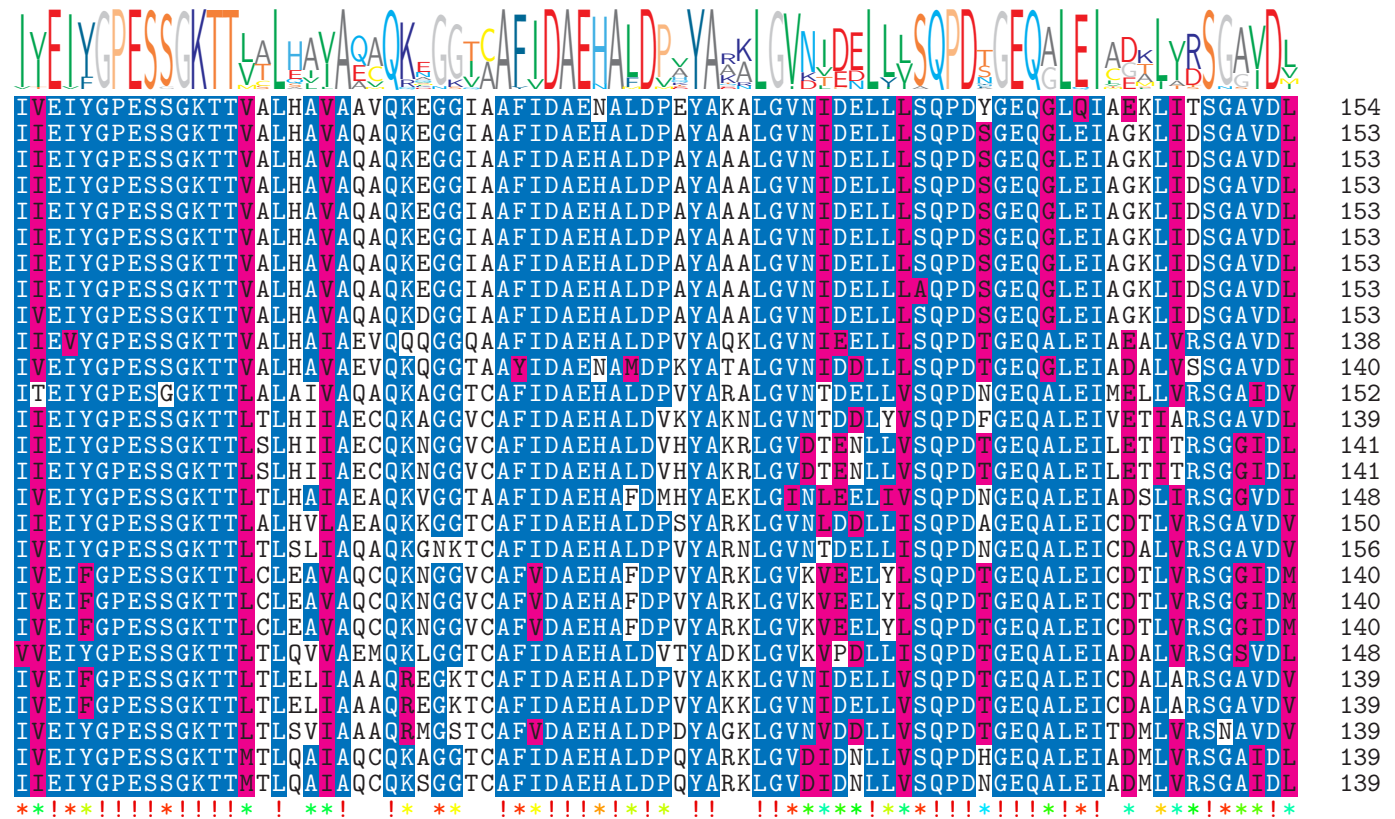
```



```

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 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 277702 MSR1L RS16740 WP 024081150.1
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

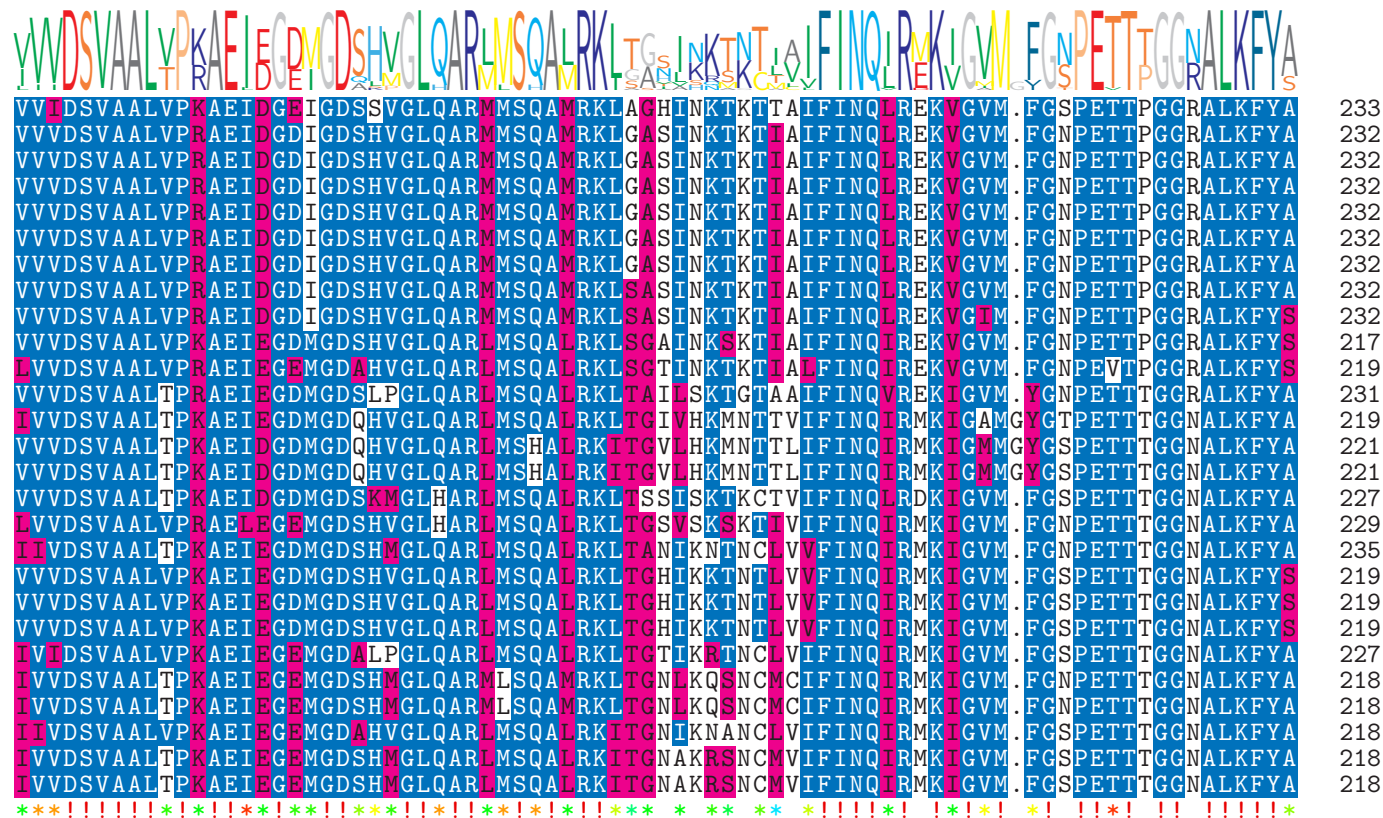
```



```

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 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 277702 MSR1L RS16740 WP 024081150.1
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

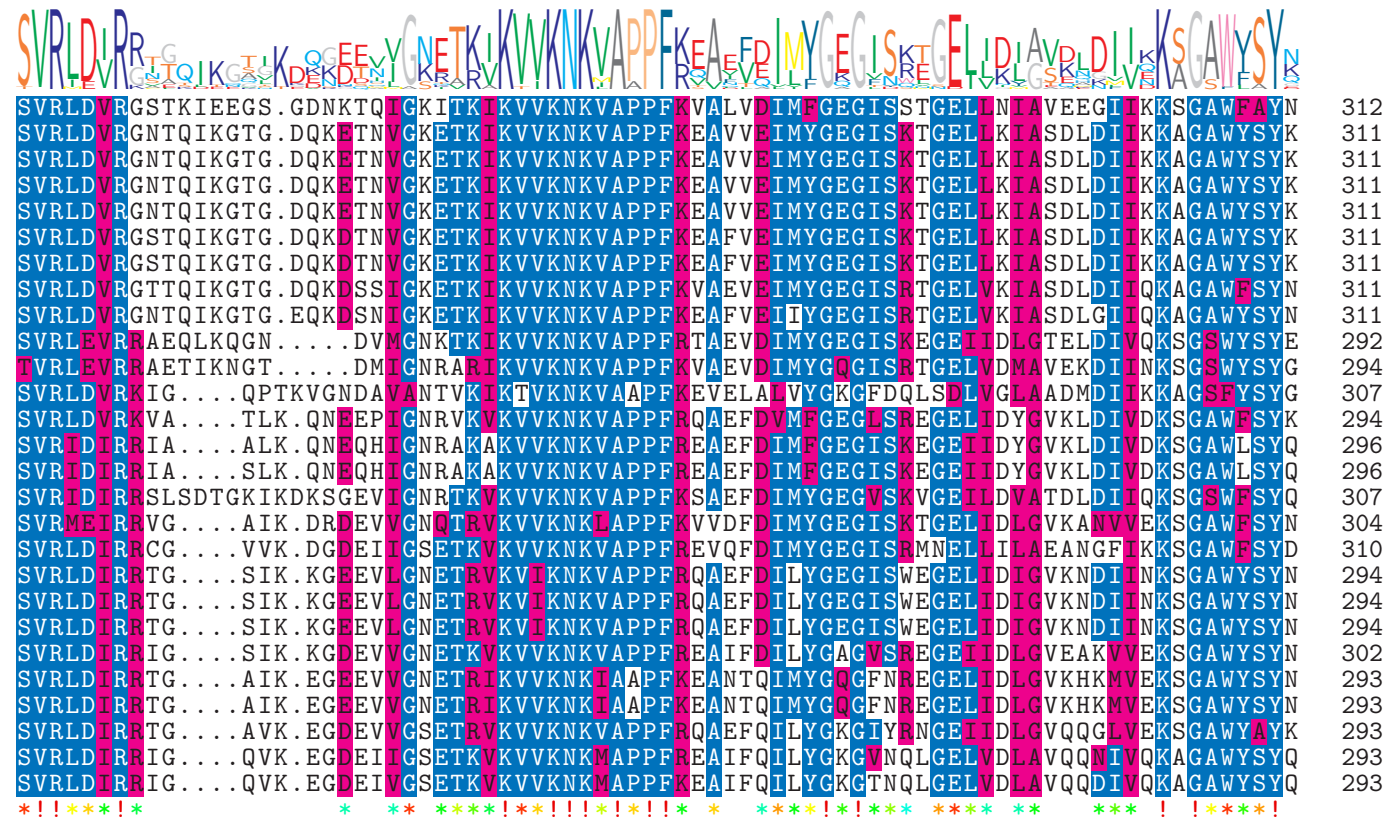
```



```

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 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 277702 MSR1L RS16740 WP 024081150.1
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	LDDSEVAETEEE	..TTASKTKAKAKKEEKAVETEEIELELED...	387			
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTE	..NKKDE...PKKEEA..VNEEVPLDLGDELE	383			
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTE	..NKKDE...PKKEEA..VNEEVPLDLGDELE	383			
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTE	..NKKDE...PKKEEA..VNEEVPLDLGDELE	383			
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	LIDGEEVSEQDTE	..NKKDE...PKKEEA..VNEEVPLDLGDELE	383			
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLAADNPEV	FAEIDHQVRVQFGL	LIDGEEAAE	SKKDE...VAQVDS..VNEEVTLDLGDELE	379			
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLAADNPEIF	DEIDHQVRVQFGL	LIDGEEIAE	SKKDE...AAQVDS..VNEEVTLDLGDELE	379			
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAV	..ASE.....E.....TDDLALDLNNGIE	375			
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEEKQSS	..KEK.....ETDEK..ADKNLVLELDDTIE	380			
NTDB id 115 BSU 16940 NP 389576.2	EERLGQGR	ENAKQFLKENKDIM	LMIQEQIREHYGL	DNNGVVQQAAEE	..TQEEL.EFE.E.....	348			
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQGR	ENAKNYLADHEDVE	DEVRLKVRVQYGL	ISDVPEEDLPSTE	..DE.QI.NILPDDST.....EE.....	355			
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQGK	EKTIAIYIAERPEME	QEIRDRVMAAIRAGN	AGEAPALAPAPAAPEAA	..EA.....	363			
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGGR	ENSKAFLKENPEIA	DEITKAIQNSMG	IEGMIS..GSEDD..EGEE	.....	343			
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGGR	ENAKALLKEDKAL	ADEITLKI	KESIGSNEEIM..PLPDE..PLEEM.E	.....	347			
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGGR	ENAKALLKEDKAL	ADEITLKI	KESIGSNEEIM..PLPDE..PLEEM.E	.....	347			
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGGR	DTVVKELIKDNPEL	AEELEAKIREKLQAK	.....	.....	343			
NTDB id 277702 MSR1L RS16740 WP 024081150.1	STRVGQGR	ENAKQFLRDNPA	MAGEIEATIRANAG	LVAEAL..AAGPGDL	DGNAA.....ED.....	358			
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQGG	KNNAVKWLKENPEIA	DKLEQEIRNTLAS	NPNSV..LKATASDSN	DES.DVEEF.....SEEEL.....	372			
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQGG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT..EGT.....QDE	.TDGER.....PEE.....	348			
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQGG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT..EGT.....QDE	.TDGER.....PEE.....	348			
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQGG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT..EGT.....QDE	.TDGER.....PEE.....	348			
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQGR	DNCREFLRENAEL	AREIENKVREHLG	VTPMGA..V.TLAE	EEVEED.....	352			
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQGG	KANACKYLLKENPEIA	KTLDKKLREMLLN	PENMQ..LIAETSSA	ADDV.EFGAV.....PEEF.....	354			
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQGG	KANACKYLLKENPEIA	KTLDKKLREMLLN	PENMQ..LIAETSSA	ADDV.EFGAV.....PEEF.....	354			
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQGG	KANAAYLEENPEI	GIEQQIRAKLLV	TSANT..KATPVAED	LADA.DI.....	347			
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQGG	KNNVIRYLEENPQ	ISTEIEAVIREQLLT	KASDQ..TAA.HDETE	EEP.DLL.....ES.....	349			
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQGG	KNNVIRYFEENNQ	IAEEIERNIREQLLT	TGTNG..AVQ.I.EDEE	EP.DLL.....LES.....	349			
consensus	***!!!	*****	**	*****	*****	**	*	*	*

logo

		IEIEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	.....		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	IEIEE		388
NTDB id 228 SPD RS09265 WP 001085462.1	IEIEE		388
NTDB id 194 SPR RS08825 WP 001085462.1	IEIEE		388
NTDB id 159 SP RS09750 WP 001085462.1	IEIEE		388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEIEE		384
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEIEE		384
NTDB id 453 Spy49 1753c ACI62003.1	IED..		378
NTDB id 408 SMU RS09530 WP 002262392.1	LED..		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 277702 MSR1L RS16740 WP 024081150.1	.....		358
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			

- ⓧ non conserved
- ⓧ similar
- ⓧ ≥ 50% conserved