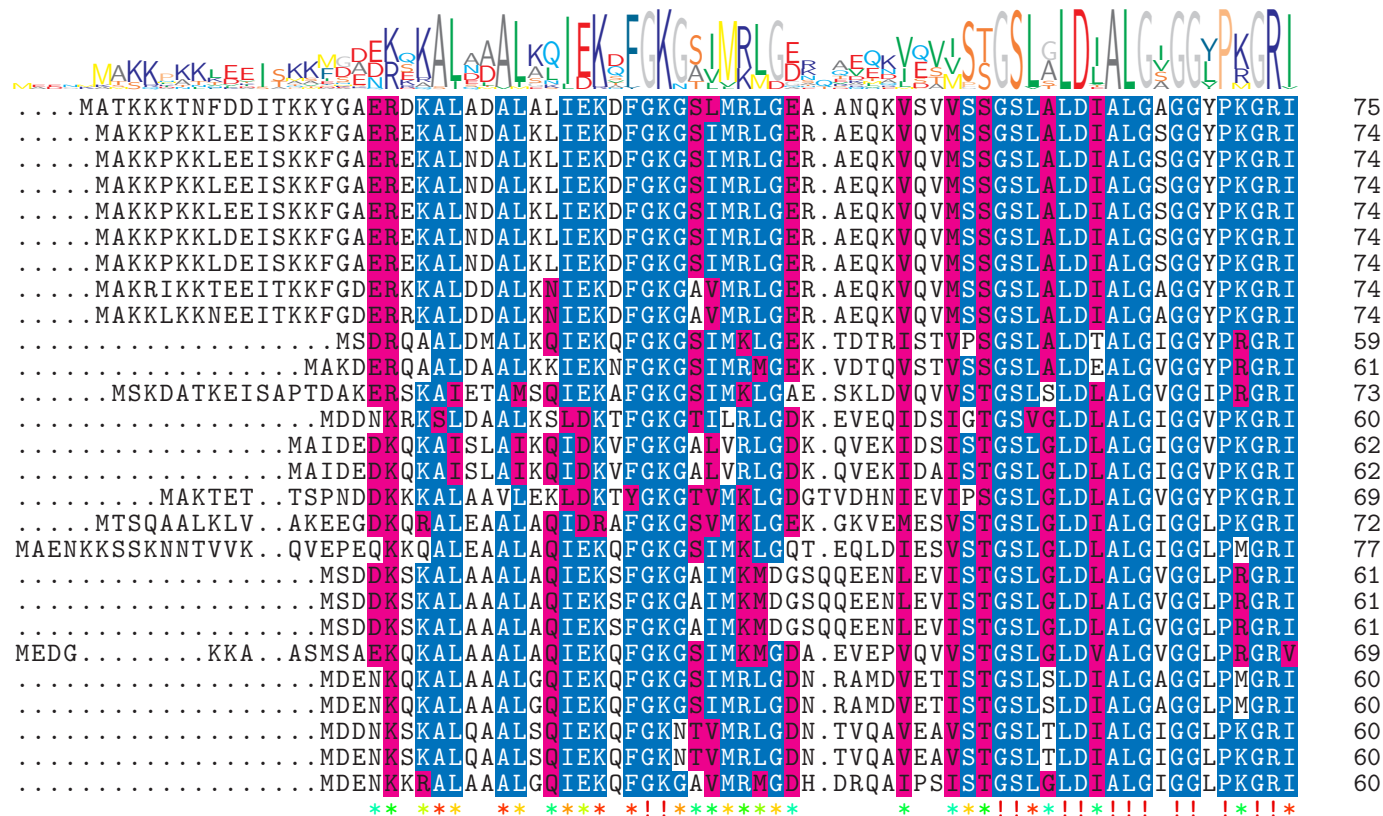


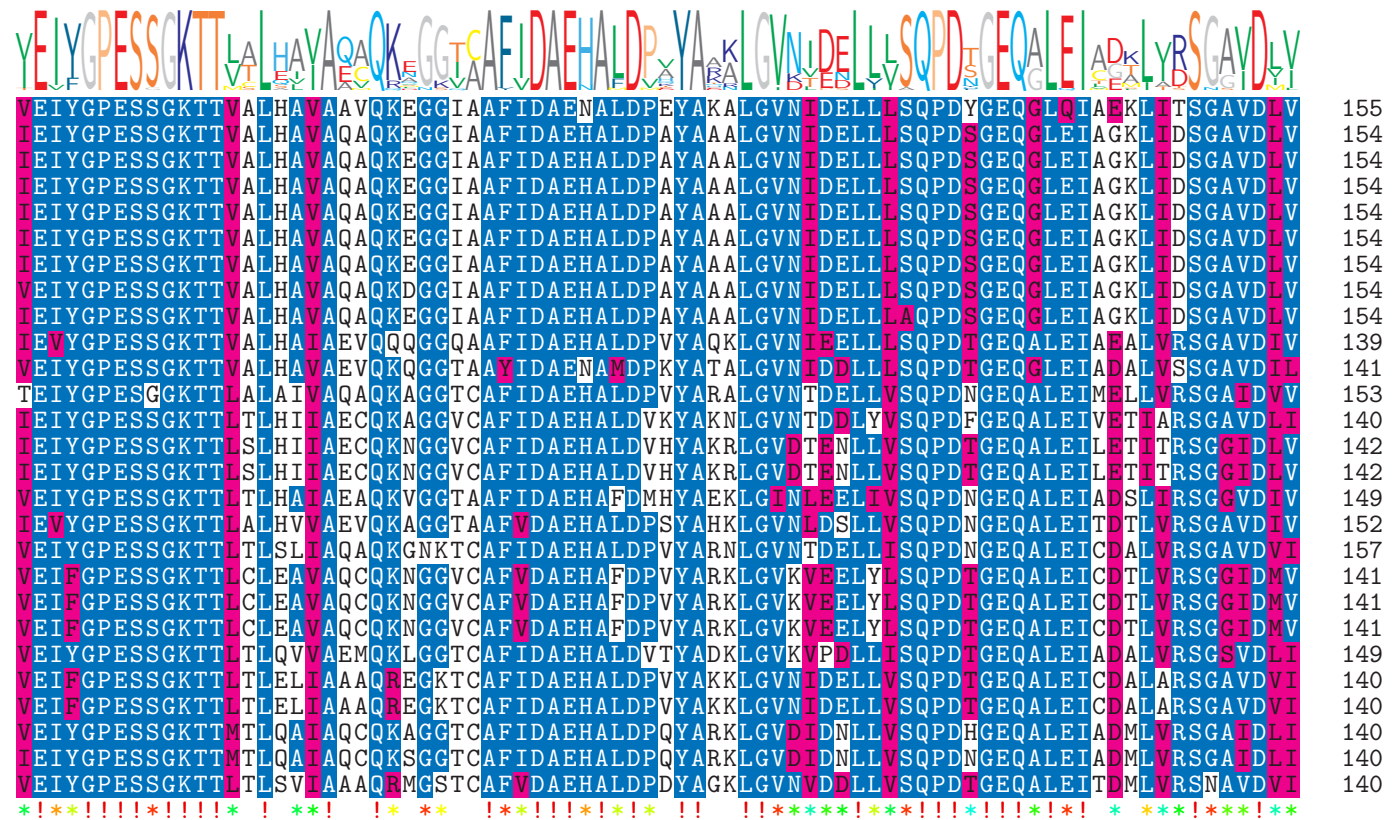
```

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 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 280932 B7G68 RS06060 WP 013078343.1
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

```



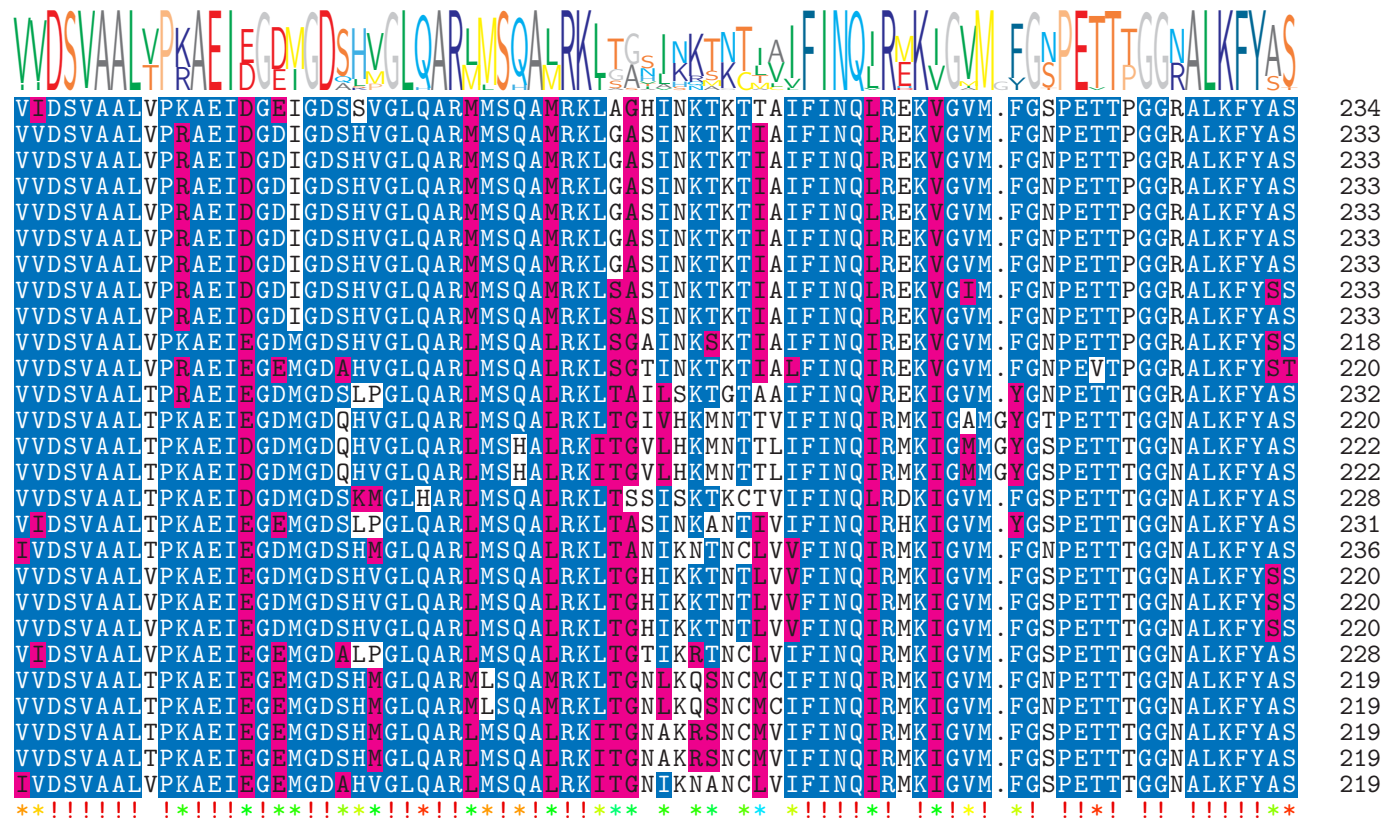
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 280932 B7G68 RS06060 WP 013078343.1
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 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 280932 B7G68 RS06060 WP 013078343.1
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

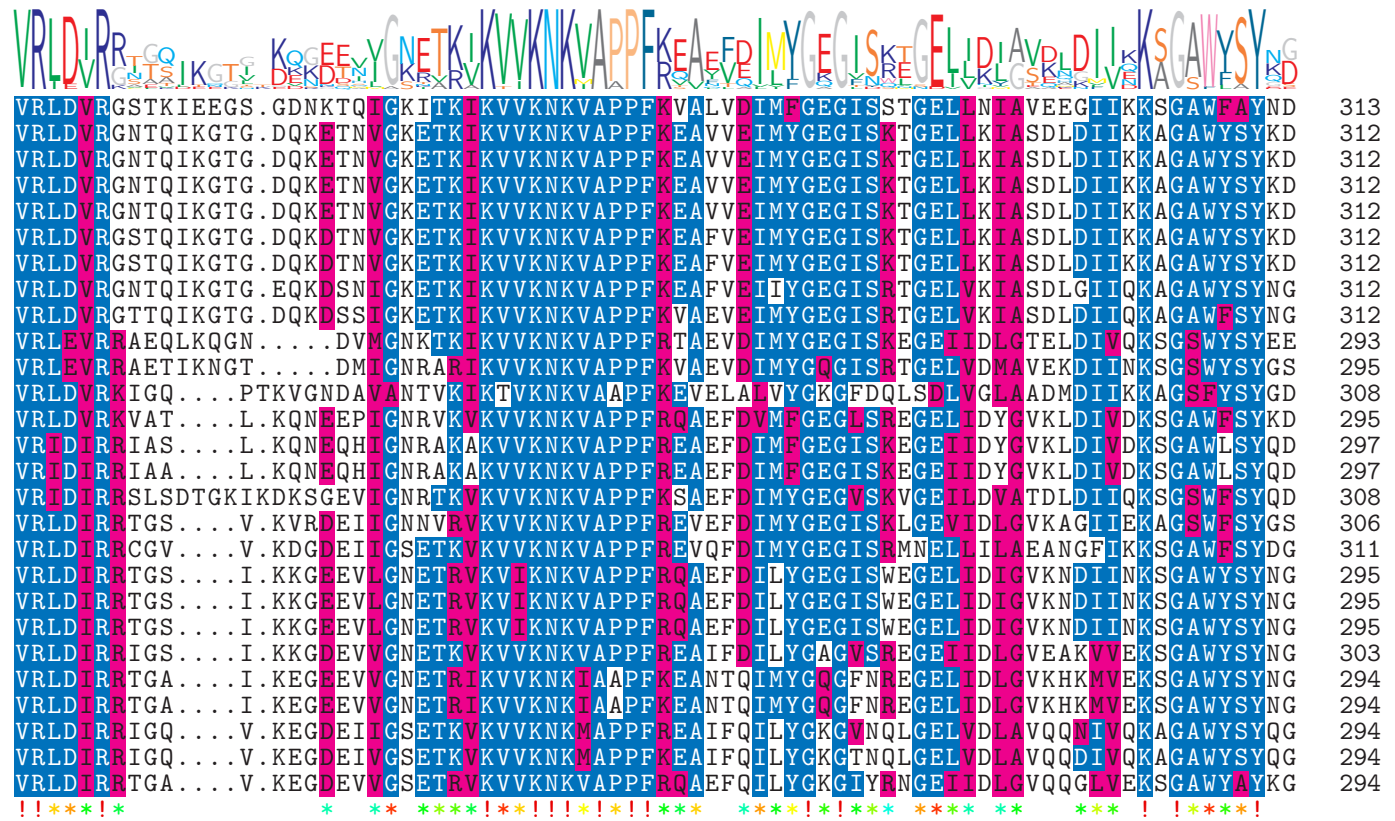
```



```

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 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 280932 B7G68 RS06060 WP 013078343.1
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	EKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	ILDDSEVAETEEETT	ASKTKAKAKKEEK	AVETEEIELELED	.....	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	EKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKK	DE....PKKEEA..	VNEEVPLDLGDELEIEI		386
NTDB id 228 SPD RS09265 WP 001085462.1	EKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKK	DE....PKKEEA..	VNEEVPLDLGDELEIEI		386
NTDB id 194 SPR RS08825 WP 001085462.1	EKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKK	DE....PKKEEA..	VNEEVPLDLGDELEIEI		386
NTDB id 159 SP RS09750 WP 001085462.1	EKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKK	DE....PKKEEA..	VNEEVPLDLGDELEIEI		386
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EKIGQGS	ENAKKYLADNPEVF	AEIDHQVRVQFGL	IDGEEAAE....	SKKDE....VAQVDS..	VNEEVTLDLGDELEIEI		382
NTDB id 499 SM12261 RS08315 WP 078228268.1	EKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	IDGEEIAE....	SKKDE....AAQVDS..	VNEEVTLDLGDELEIEI		382
NTDB id 408 SMU RS09530 WP 002262392.1	EKIGQGS	ENAKKFLADNPEIF	DDIDHKVVRVQYGL	IEEDNTEEKQSSKEK	ETDEK..	ADKNLVLELDDTIELED		383
NTDB id 453 Spy49 1753c ACI62003.1	EKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAVASE	E.....	TDDLALDLDNNGIEIED		378
NTDB id 115 BSU 16940 NP 389576.2	ERLGGG	RENAKQFLKENKDIM	LMIQEQIREHYGL	DNNGVVQQAEETQEEL	.EFE.E.....	.....		348
NTDB id 625 LCA RS02525 WP 011374196.1	ERIGQG	RENAKNYLADHEDVE	DEVRLKVRAAYG	ISDVPEEDLPTTEDE	.QI.NILPDDST	EE.....		355
NTDB id 1313 DR RS12030 WP 010888966.1	ERIGQG	KEKTIAIYTAERP	PEMEQEIRDRVMAA	IRAGNAGEAPALAPAPA	AAPEAAE..A.....	.....		363
NTDB id 1245 Cj1673c YP 002345041.1	KKLGGG	RENSKAFLKENPEIA	DEITKAIQNSMCI	EGMI.....SGSED..	DEGE..E.....	.....		343
NTDB id 1211 C694 RS00795 WP 000963128.1	KKLGGG	RENAKALLKEDKALA	DEITLKIKESIGS	NEEI....MPLPD..	EPL..EME.....	.....		347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	KKLGGG	RENAKALLKEDKALA	DEITLKIKESIGS	NEEI....MPLPD..	EPL..EME.....	.....		347
NTDB id 1334 RAOC RS04870 WP 004918236.1	TKLGGG	RDTVKELIKDNPELA	EELEAKIREKLQAK	.....	.....	.....		343
NTDB id 280932 B7G68 RS06060 WP 013078343.1	QRIGQG	RDNVREFLKNPNPI	ASSIEAAVRKSSQK	IEEE....LLVGGPEEG	DE..E.....	.....		356
NTDB id 1389 A4U84 RS07560 WP 021112712.1	TKIGQG	KNNAVKWLKENPEIA	DKLEQEIRNTLAS	NPNS....VLKATASDS	ND..ESDVVEEFSEEL	.....		372
NTDB id 1130 NGFG RS03960 WP 003688695.1	AKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHI....TEGTQDET	DGE..R.....PEE	.....		348
NTDB id 1124 NGFG RS03960 WP 003688695.1	AKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHI....TEGTQDET	DGE..R.....PEE	.....		348
NTDB id 1123 OK783 RS03845 WP 003688695.1	AKIGQG	KDNVRVWLKENPEIS	DEIDAKIRALNGV	EMHI....TEGTQDET	DGE..R.....PEE	.....		348
NTDB id 1427 RS RS02760 WP 011000510.1	ERIGQG	RDNCRREFLRENAEL	AREIENKVREHLG	VTPMG....AVTLA..	EEVEE..D.....	.....		352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	DKIGQG	KANACKYLLKENPEI	AKTLDKKLREMLLN	NPENM....QLIAETSS	AAD..DVEFGAVPEEF	.....		354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	DKIGQG	KANACKYLLKENPEI	AKTLDKKLREMLLN	NPENM....QLIAETSS	AAD..DVEFGAVPEEF	.....		354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	NKIGQG	KNNVIRYLEENPQIS	TEIEAVIREQLLT	TKASD....QTAA.H	DETEE..EPDLL..	ES.....		349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	NKIGQG	KNNVIRYFEENNQIA	EEIERNIREQLLT	TGTN....GAVQ.I.	EDEE..EPDLL..	LES.....		349
NTDB id 1205 PSJM300 05545 AFN77183.1	SKIGQG	KANAACKYLEENPEI	GQIEIEQIRAKLL	VTSAN....TKATPVA	EDLA..DADI.....	.....		347
consensus	***!!	*****	***	*****	*****	***	***	

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	..	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	EE	388
NTDB id 228 SPD RS09265 WP 001085462.1	EE	388
NTDB id 194 SPR RS08825 WP 001085462.1	EE	388
NTDB id 159 SP RS09750 WP 001085462.1	EE	388
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EE	384
NTDB id 499 SM12261 RS08315 WP 078228268.1	EE	384
NTDB id 408 SMU RS09530 WP 002262392.1	..	383
NTDB id 453 Spy49 1753c ACI62003.1	..	378
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 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 280932 B7G68 RS06060 WP 013078343.1	..	356
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 1022 ACIAD RS06390 WP 004925639.1	..	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	..	349
NTDB id 1205 PSJM300 05545 AFN77183.1	..	347

consensus

 non conserved
 similar
 ≥ 50% conserved