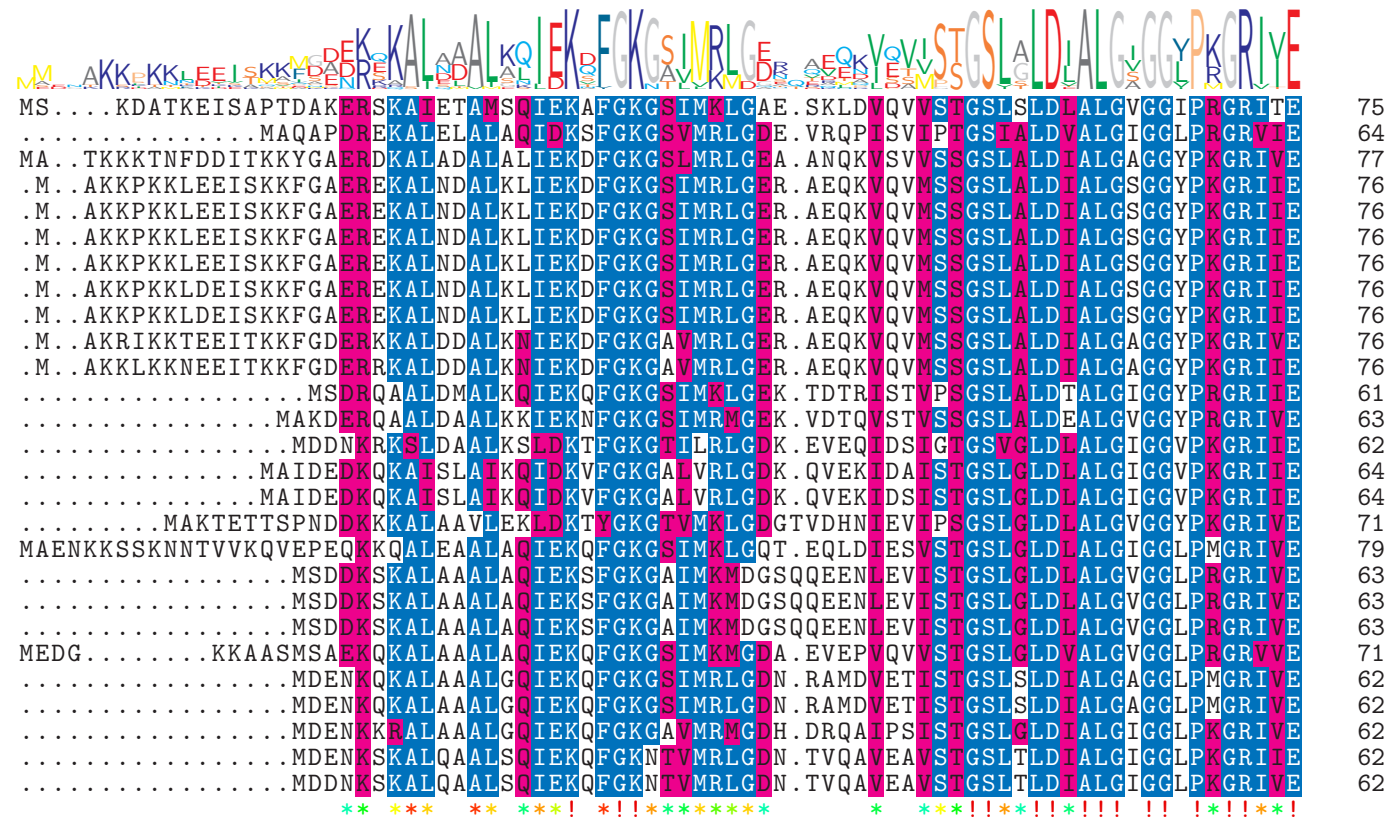


```

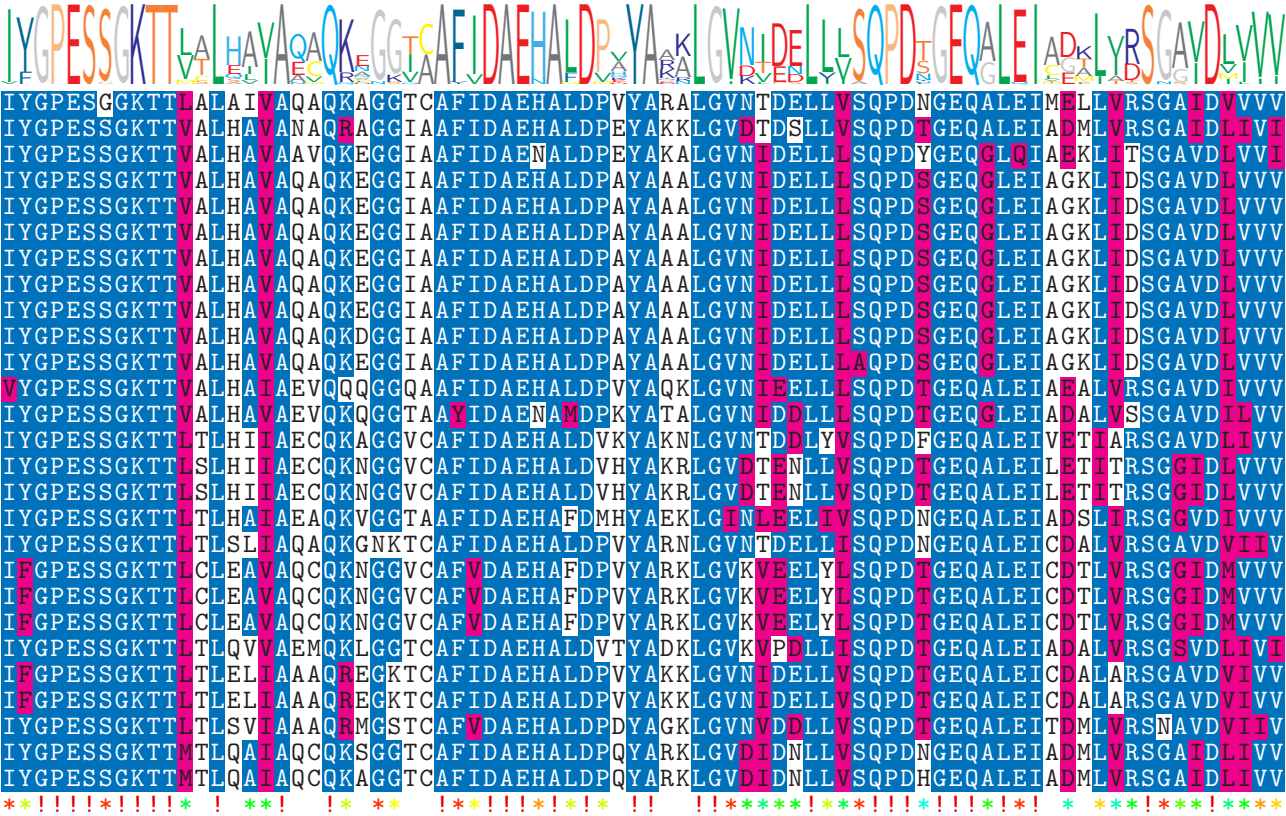
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 345024 EXM25 RS15180 WP 005057169.1
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 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 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
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 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
consensus

```



logo

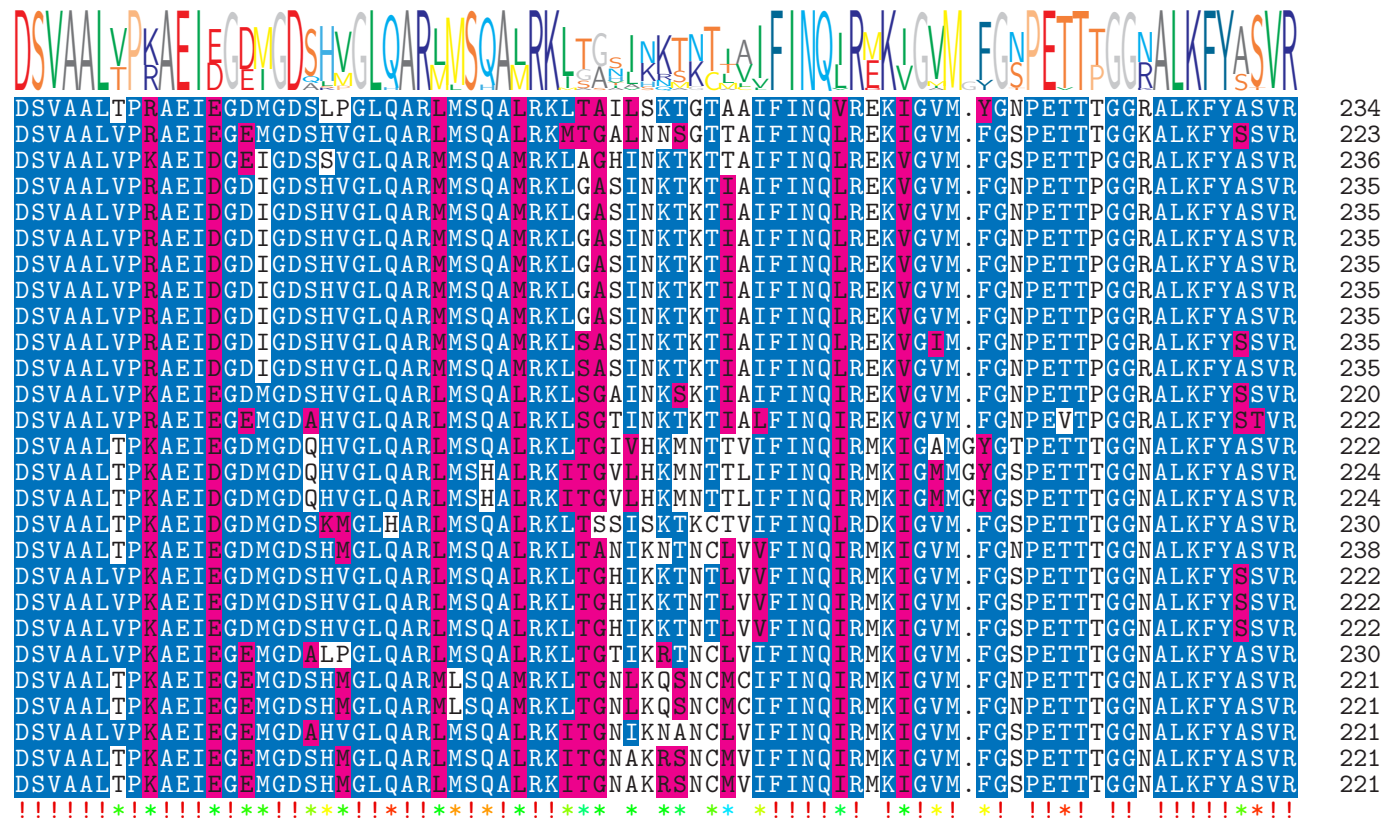
NTDB id 1313 DR RS12030 WP 010888966.1	IYGPESGGKTTT	155
NTDB id 345024 EXM25 RS15180 WP 005057169.1	IYGPESGGKTTT	144
NTDB id 600 KW2 RS01765 WP 011675413.1	IYGPESGGKTTT	157
NTDB id 269 KZH43 RS08665 WP 001085462.1	IYGPESGGKTTT	156
NTDB id 228 SPD RS09265 WP 001085462.1	IYGPESGGKTTT	156
NTDB id 194 SPR RS08825 WP 001085462.1	IYGPESGGKTTT	156
NTDB id 159 SP RS09750 WP 001085462.1	IYGPESGGKTTT	156
NTDB id 499 SM12261 RS08315 WP 078228268.1	IYGPESGGKTTT	156
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IYGPESGGKTTT	156
NTDB id 408 SMU RS09530 WP 002262392.1	IYGPESGGKTTT	156
NTDB id 453 Spy49 1753c ACI62003.1	IYGPESGGKTTT	156
NTDB id 115 BSU 16940 NP 389576.2	IYGPESGGKTTT	141
NTDB id 625 LCA RS02525 WP 011374196.1	IYGPESGGKTTT	143
NTDB id 1245 Cj1673c YP 002345041.1	IYGPESGGKTTT	142
NTDB id 1214 NCTC11637 00359 SQJ03206.1	IYGPESGGKTTT	144
NTDB id 1211 C694 RS00795 WP 000963128.1	IYGPESGGKTTT	144
NTDB id 1334 RAOC RS04870 WP 004918236.1	IYGPESGGKTTT	151
NTDB id 1389 A4U84 RS07560 WP 021112712.1	IYGPESGGKTTT	159
NTDB id 1130 NGFG RS03960 WP 003688695.1	IYGPESGGKTTT	143
NTDB id 1124 NGFG RS03960 WP 003688695.1	IYGPESGGKTTT	143
NTDB id 1123 OK783 RS03845 WP 003688695.1	IYGPESGGKTTT	143
NTDB id 1427 RS RS02760 WP 011000510.1	IYGPESGGKTTT	151
NTDB id 1165 A1552VC RS01565 WP 000344154.1	IYGPESGGKTTT	142
NTDB id 1142 GTF74 RS11550 WP 000344154.1	IYGPESGGKTTT	142
NTDB id 1205 PSJM300 05545 AFN77183.1	IYGPESGGKTTT	142
NTDB id 1074 ABD1 RS10195 WP 000344167.1	IYGPESGGKTTT	142
NTDB id 1022 ACIAD RS06390 WP 004925639.1	IYGPESGGKTTT	142
consensus		



```

NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 345024 EXM25 RS15180 WP 005057169.1
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 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
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 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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
consensus

```



logo

NTDB id 1313 DR RS12030 WP 010888966.1	LDVRRIGQ...PTKVGND	AVANTV	IKTVKNKVA	APFKE	VELAL	VYGGKGF	DLQSL	DLVGL	LAADM	DI	IKK	AGS	FYSY	GDER	310	
NTDB id 345024 EXM25 RS15180 WP 005057169.1	LDVRR	IETLKDGT....DA	VGNRT	RVKVVKNKV	SPPFK	QAEF	DILY	GKGIS	KEGSL	IDMG	VEQGF	IRKSG	SWFTY	EGEQ	298	
NTDB id 600 KW2 RS01765 WP 011675413.1	LDVRG	STKIEEGS.GDNKT	QIGKIT	IKVVKNKV	VAPPFK	VALVD	IMF	GEGIS	STGEL	LNIA	VEEG	TI	IKKSG	AWFAYNDEK	315	
NTDB id 269 KZH43 RS08665 WP 001085462.1	LDVRG	NTQIKGTG.DQKE	TNVGKET	IKVVKNKV	VAPPFKE	AVVE	EIMY	GEGIS	KTGEL	LKIAS	DLDI	IKKAG	AWYSY	KDEK	314	
NTDB id 228 SPD RS09265 WP 001085462.1	LDVRG	NTQIKGTG.DQKE	TNVGKET	IKVVKNKV	VAPPFKE	AVVE	EIMY	GEGIS	KTGEL	LKIAS	DLDI	IKKAG	AWYSY	KDEK	314	
NTDB id 194 SPR RS08825 WP 001085462.1	LDVRG	NTQIKGTG.DQKE	TNVGKET	IKVVKNKV	VAPPFKE	AVVE	EIMY	GEGIS	KTGEL	LKIAS	DLDI	IKKAG	AWYSY	KDEK	314	
NTDB id 159 SP RS09750 WP 001085462.1	LDVRG	NTQIKGTG.DQKE	TNVGKET	IKVVKNKV	VAPPFKE	AVVE	EIMY	GEGIS	KTGEL	LKIAS	DLDI	IKKAG	AWYSY	KDEK	314	
NTDB id 499 SM12261 RS08315 WP 078228268.1	LDVRG	STQIKGTG.DQK	DTNVGKET	IKVVKNKV	VAPPFKE	AFVE	EIMY	GEGIS	KTGEL	LKIAS	DLDI	IKKAG	AWYSY	KDEK	314	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	LDVRG	STQIKGTG.DQK	DTNVGKET	IKVVKNKV	VAPPFKE	AFVE	EIMY	GEGIS	KTGEL	LKIAS	DLDI	IKKAG	AWYSY	KDEK	314	
NTDB id 408 SMU RS09530 WP 002262392.1	LDVRG	NTQIKGTG.EQK	DSNIGKET	IKVVKNKV	VAPPFKE	AFVE	EIIY	GEGIS	R	TGEL	VKIAS	DLGII	QKAG	AWYSYNGEK	314	
NTDB id 453 Spy49 1753c ACI62003.1	LDVRG	TTQIKGTG.DQK	DSSIGKET	IKVVKNKV	VAPPFK	VAEV	EIMY	GEGIS	R	TGEL	VKIAS	DLI	QKAG	AWFSYNGEK	314	
NTDB id 115 BSU 16940 NP 389576.2	LEVRR	AEQLKQGN....D	VMGNK	TKIKVVKNKV	VAPPFR	TAEV	DIMY	GEGIS	KEGEI	IDL	GTELDI	VQKSG	SWSY	EEEE	295	
NTDB id 625 LCA RS02525 WP 011374196.1	LEVRR	AETIKNGT....D	MIGNR	ARIKVVKNKV	VAPPFK	VAEV	DIMY	GQGIS	R	TGEL	VDMA	VEKDI	IINKSG	SWSYG	SER	297
NTDB id 1245 Cj1673c YP 002345041.1	LDVRK	VAT....L.KQNE	EPIGNR	VKVVVKNKV	VAPPFR	QAEF	DVMF	GEGLS	R	EGEL	IDY	GVKLDI	VDKSG	AWFSYKDKK	297	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	IDIRRI	AA....L.KQNE	EQHIGNR	AKAVVKNKV	VAPPFR	EAEF	DIMF	GEGIS	KEGEI	IDY	GVKLDI	VDKSG	AWLSYQDKK		299	
NTDB id 1211 C694 RS00795 WP 000963128.1	IDIRRI	AS....L.KQNE	EQHIGNR	AKAVVKNKV	VAPPFR	EAEF	DIMF	GEGIS	KEGEI	IDY	GVKLDI	VDKSG	AWLSYQDKK		299	
NTDB id 1334 RAOC RS04870 WP 004918236.1	IDIRRS	LSDTGKIKDKS	GEVIGNR	TKVVVVKNKV	VAPPFK	SAEF	DIMY	GEGVSKV	GEILD	VATDL	DI	IQKSG	SWFSYQDTK		310	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	LDIRRC	CGV....V.KDGE	IEIGSE	TKVVVVKNKV	VAPPFR	EVQF	DIMY	GEGIS	R	MNELLILAE	ANGFI	KKSG	AWFSYDGTK		313	
NTDB id 1130 NGFG RS03960 WP 003688695.1	LDIRRT	TGS....I.KKGE	EEVLGN	ETRVKV	IKNVVAPP	FRQAEF	DILY	GEGIS	WEGEL	IDIG	VKNDI	IINKSG	AWYSYNGAK		297	
NTDB id 1124 NGFG RS03960 WP 003688695.1	LDIRRT	TGS....I.KKGE	EEVLGN	ETRVKV	IKNVVAPP	FRQAEF	DILY	GEGIS	WEGEL	IDIG	VKNDI	IINKSG	AWYSYNGAK		297	
NTDB id 1123 OK783 RS03845 WP 003688695.1	LDIRRT	TGS....I.KKGE	EEVLGN	ETRVKV	IKNVVAPP	FRQAEF	DILY	GEGIS	WEGEL	IDIG	VKNDI	IINKSG	AWYSYNGAK		297	
NTDB id 1427 RS RS02760 WP 011000510.1	LDIRRI	IGS....I.KKGE	DEVGN	ETKV	VVVKNKV	VAPPFR	EAI	FQ	DILY	GAGVSR	EGEI	IDLG	VEAKVVEKSG	AWYSYNGER	305	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	LDIRRT	TGA....I.KEGE	EEVGN	ETRIKVVKNK	IAAPFKE	ANTQ	IMYGG	GFNR	EGEL	IDLG	VKHKMVEKSG	AWYSYNGDK		296		
NTDB id 1142 GTF74 RS11550 WP 000344154.1	LDIRRT	TGA....I.KEGE	EEVGN	ETRIKVVKNK	IAAPFKE	ANTQ	IMYGG	GFNR	EGEL	IDLG	VKHKMVEKSG	AWYSYNGDK		296		
NTDB id 1205 PSJM300 05545 AFN77183.1	LDIRRT	TGA....V.KEGE	DEVGS	ETRVVVKNKV	VAPPFR	QAEFQ	ILY	GKG	GTIYR	N	GEI	IDLG	VQQGLVEKSG	AWYAYKGSK	296	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	LDIRRI	IGQ....V.KEGE	DEIVGS	ETRVVVKNK	MAPPFKE	AI	FQ	ILY	GKG	TNQL	GELVD	LAVQQ	DI	VQKAGAWYSYQGNK	296	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	LDIRRI	IGQ....V.KEGE	DEIVGS	ETRVVVKNK	MAPPFKE	AI	FQ	ILY	GKG	VNQL	GELVD	LAVQQ	NI	VQKAGAWYSYQGNK	296	
consensus	***!*		*	*	*	*****!*****!*	*	*	*****!*****	*****	*	***	!	!*****!	*	

logo

NTDB id 1313 DR RS12030 WP 010888966.1	IGQGKEKTIAYIAERPEMEQEIRDRVMAAIRAGNAGEAPALAPAPAA.....PEAAEA.....	363
NTDB id 345024 EXM25 RS15180 WP 005057169.1	LGQGGKENARNFLLENVVDVANEIEKKIKKELGIGAVLTDDEVVPAPV....DF.....	346
NTDB id 600 KW2 RS01765 WP 011675413.1	IGQGAEKAKNYLKEHQDVDFEIDHKVRAAHGLDDSEVAETEEETTASKTAKAKKEEKAVETEEIELELED.....	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	IGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIEE	388
NTDB id 228 SPD RS09265 WP 001085462.1	IGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIEE	388
NTDB id 194 SPR RS08825 WP 001085462.1	IGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIEE	388
NTDB id 159 SP RS09750 WP 001085462.1	IGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIEE	388
NTDB id 499 SM12261 RS08315 WP 078228268.1	IGQGSENAKKYLADNPEIFDEIDHQVRVQFGLIDGEEIAES....KKDE....AAQVDS..VNEEVTLDLGDELEIEIEE	384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IGQGSENAKKYLADNPEVFAEIDHQVRVQFGLIDGEEAAES....KKDE....VAQVDS..VNEEVTLDLGDELEIEIEE	384
NTDB id 408 SMU RS09530 WP 002262392.1	IGQGSENAKKFLADNPEIFDDIDHKVVRVQYGLIEEDNTEEKQSSKEK.....ETDEK..ADKNLVLELDDTIELED..	383
NTDB id 453 Spy49 1753c ACI62003.1	IGQGSENAKRYLADHPQLFDEIDRKVRVKFGLLEESEESAMAVASE.....E.....TDDLALDLNNGIEIED..	378
NTDB id 115 BSU 16940 NP 389576.2	LGQGGRENAKQFLKENKDIMLMIQEQIREHYGLDNNGVVQQQAEETQEEL.EFE.E.....	348
NTDB id 625 LCA RS02525 WP 011374196.1	IGQGGRENAKNYLADHEDVEDEVRLKVRAAYGISDVPEEDLPTTEDE.QI.NILPDDST.....EE.....	355
NTDB id 1245 Cj1673c YP 002345041.1	LGQGGRENSKAFLENPEIADEITKAIQNSMGIEGMISGSEDDE..GEE.....	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	LGQGGRENAKALLKEDKALADEITLTIKESIGSNEEIMPLPDEP..LEEM.E.....	347
NTDB id 1211 C694 RS00795 WP 000963128.1	LGQGGRENAKALLKEDKALADEITLTIKESIGSNEEIMPLPDEP..LEEM.E.....	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	LGQGRDITVKELTKDNPELAELEAKIREKLQAK.....	343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	IGQGGKNNAVKWLENPEIADKLEQEIRNTLASNPNSVLKATASDSNDES.DVEEF.....SEEEL.....	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	IGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDET.....DGER.....PEE.....	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	IGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDET.....DGER.....PEE.....	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	IGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDET.....DGER.....PEE.....	348
NTDB id 1427 RS RS02760 WP 011000510.1	IGQGRDNCREFLRENAELAREIENKVREHLGVTPMGAVTLA.EEVEED.....	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	IGQGGKANACKYLLKENPEIAKTLDKKLREMLLNPNENMQLIAETSSAADDV.EFGAV.....PEEF.....	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	IGQGGKANACKYLLKENPEIAKTLDKKLREMLLNPNENMQLIAETSSAADDV.EFGAV.....PEEF.....	354
NTDB id 1205 PSJM300 05545 AFN77183.1	IGQGGKANAAKYLEENPEIGQEIEQQIRAKLLVTSANTKATPVAEDLADA.D..I.....	347
NTDB id 1074 ABD1 RS10195 WP 000344167.1	IGQGGKNNVIRYFEENNQIAEEIERNIREQLLTTGTNGAVQ.I.EDEEEP.D..LL.....LES.....	349
NTDB id 1022 ACIAD RS06390 WP 004925639.1	IGQGGKNNVIRYLEENPQISTEIEAVIREQLLTKASDQTAA.HDETEEEP.D..LL.....ES.....	349
consensus	*!!!!***** ** ***** ***** ** ** *	

- ☒ non conserved
- ☒ similar
- ☒ ≥ 50% conserved