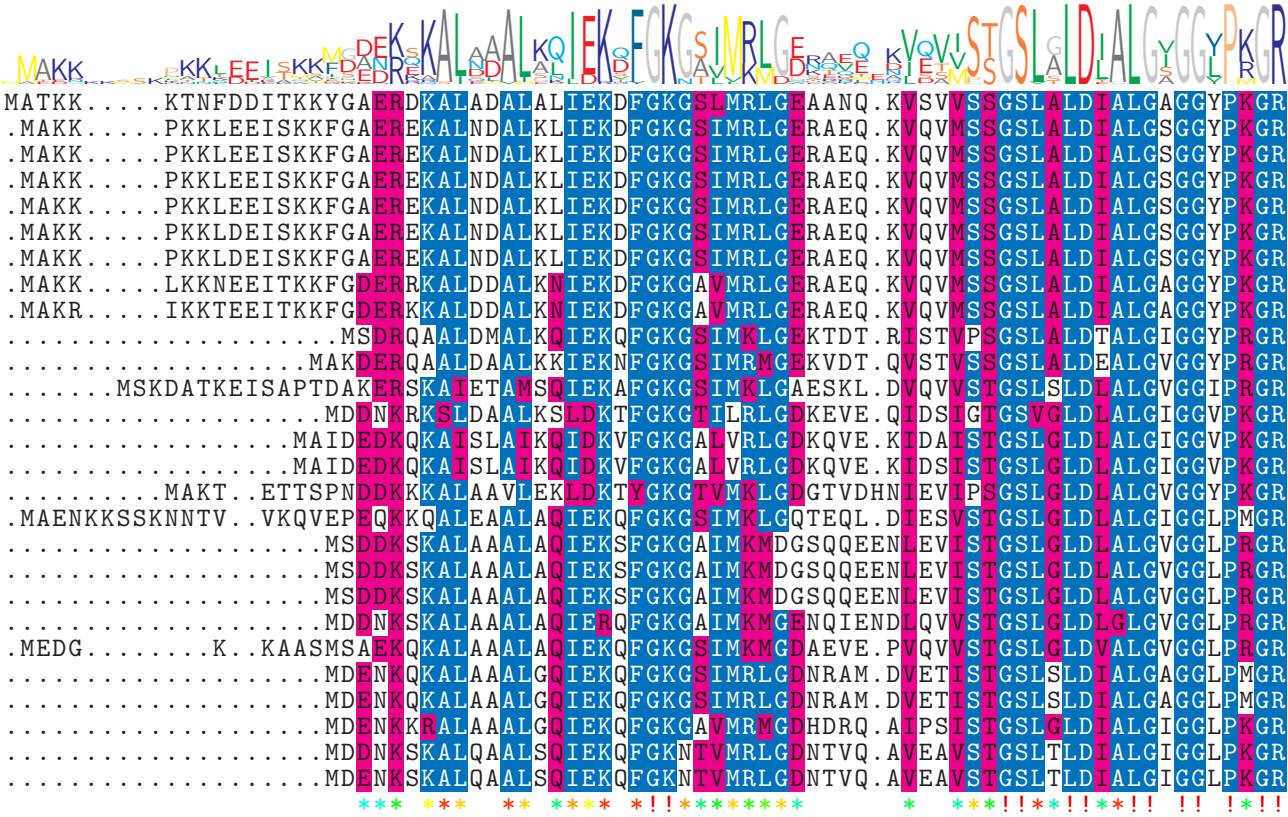
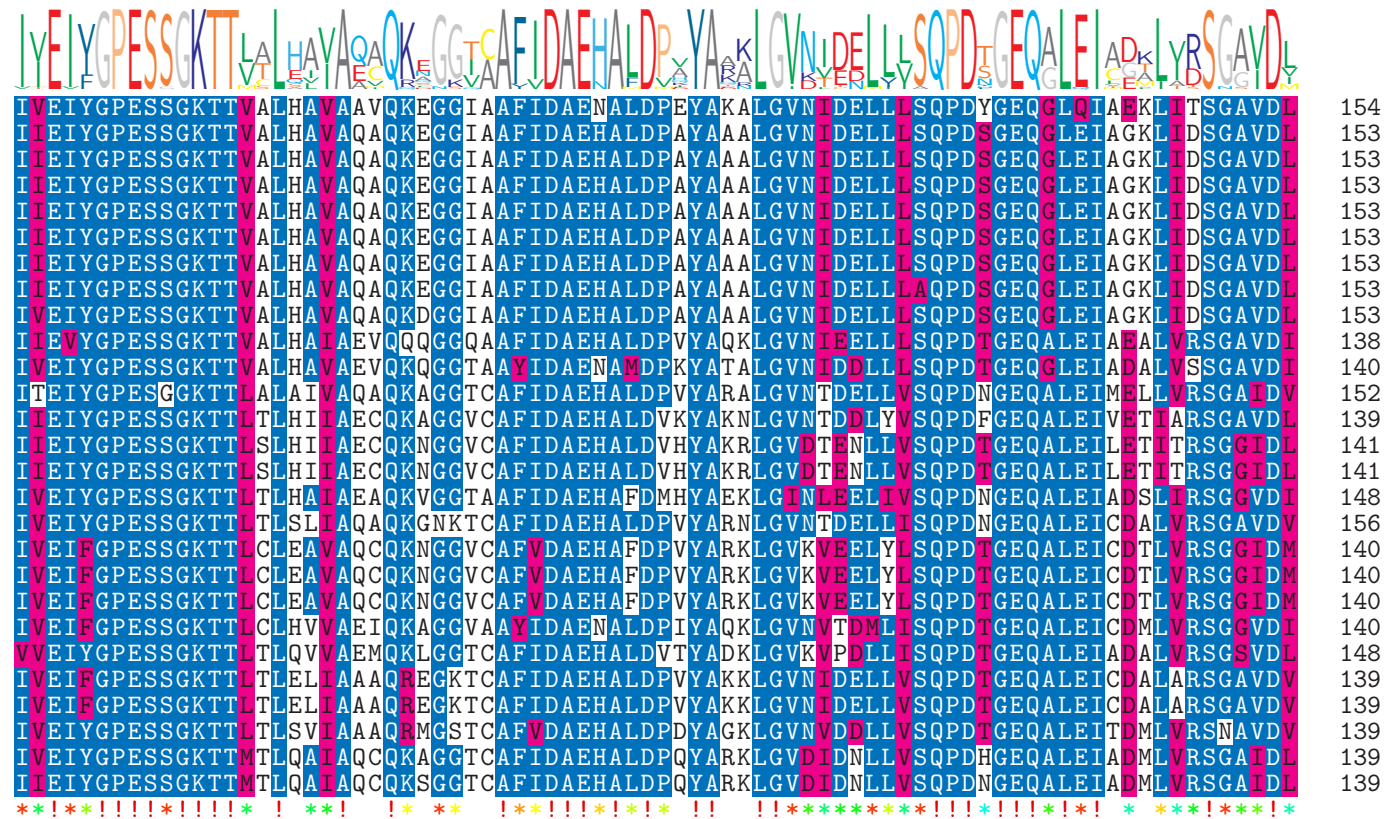


logo

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 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 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 371305 FLM21 RS07500 WP 148714976.1
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



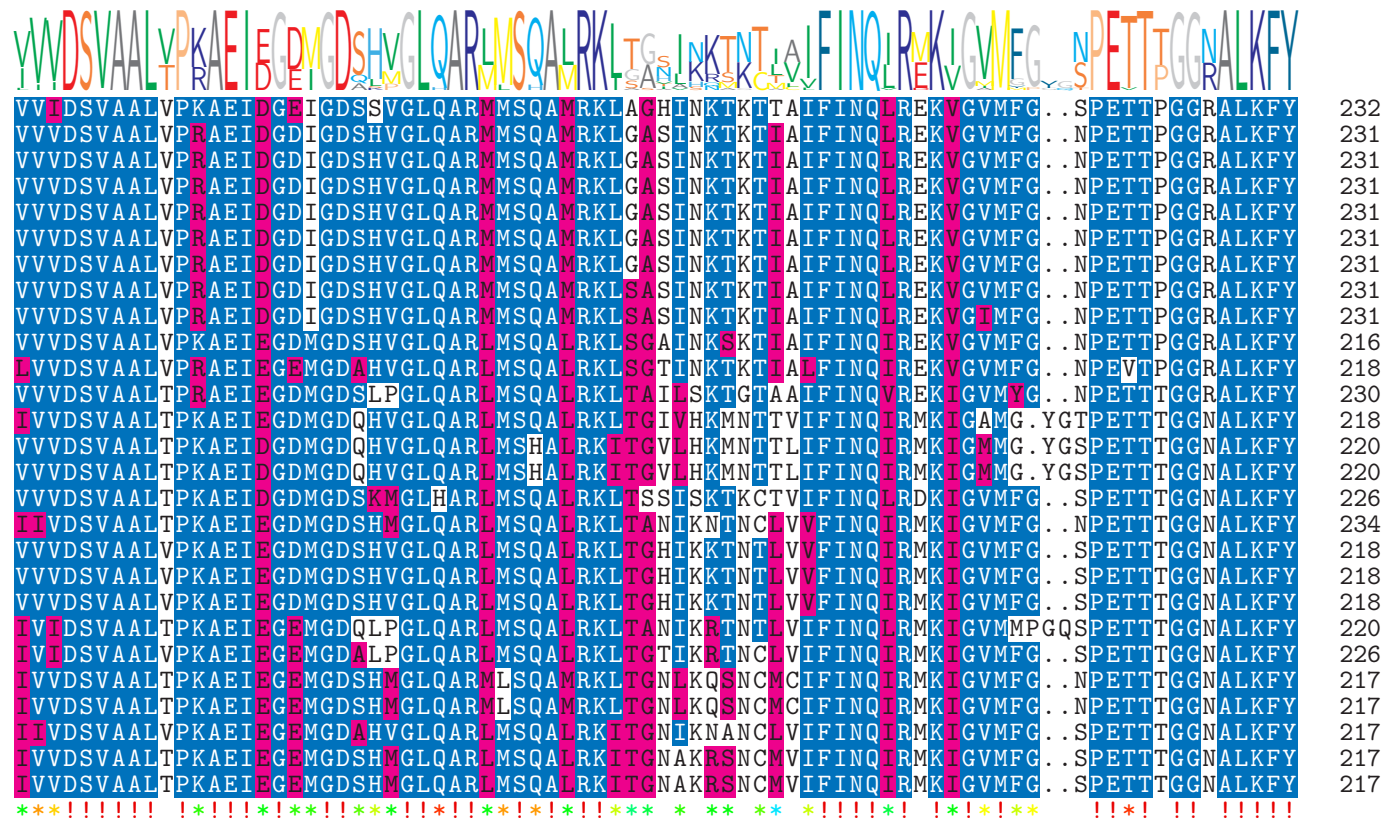
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 453 Spy49 1753c 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 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 371305 FLM21 RS07500 WP 148714976.1
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 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 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 371305 FLM21 RS07500 WP 148714976.1
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	ASVRLDVRG	STKIEEGS	.GDNKTQ	IGKITK	IKVVKNKVAPPF	KVALV	DIMF	GEGIS	STGEL	INIAVEEG	ITKK	SGAW	FAY	311			
NTDB id 269 KZH43 RS08665 WP 001085462.1	ASVRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASD	LDI	IKK	KAGAW	YSY	310		
NTDB id 228 SPD RS09265 WP 001085462.1	ASVRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASD	LDI	IKK	KAGAW	YSY	310		
NTDB id 194 SPR RS08825 WP 001085462.1	ASVRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASD	LDI	IKK	KAGAW	YSY	310		
NTDB id 159 SP RS09750 WP 001085462.1	ASVRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASD	LDI	IKK	KAGAW	YSY	310		
NTDB id 499 SM12261 RS08315 WP 078228268.1	ASVRLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVVKNKVAPPF	KEAFV	EIMY	GEGIS	KTGEL	LKIASD	LDI	IKK	KAGAW	YSY	310		
NTDB id 527 SMSK321 RS11065 WP 001085454.1	ASVRLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVVKNKVAPPF	KEAFV	EIMY	GEGIS	KTGEL	LKIASD	LDI	IKK	KAGAW	YSY	310		
NTDB id 453 Spy49 1753c ACI62003.1	ASVRLDVRG	TTQIKGTG	.DQKDS	IGKETK	IKVVKNKVAPPF	KVAEV	EIMY	GEGIS	RTGEL	VKIASD	LDI	IQK	KAGAW	FSY	310		
NTDB id 408 SMU RS09530 WP 002262392.1	SSVRLDVRG	NTQIKGTG	.EQKDSN	IGKETK	IKVVKNKVAPPF	KEAFV	EIIY	GEGIS	RTGEL	VKIASD	LDI	IQK	KAGAW	YSY	310		
NTDB id 115 BSU 16940 NP 389576.2	SSVRLEVR	RAEQLKQGN	....	DVMGN	KTIK	KNKVAPPF	RTAEV	DIMY	GEGIS	KEGE	IIDL	GTDEL	DIVQK	SGS	WYSY	291	
NTDB id 625 LCA RS02525 WP 011374196.1	STVRLEVR	RAETIKNGT	....	DMIGN	RARI	KNKVAPPF	KVAEV	DIMY	GGIS	RTGEL	VDMAVE	KDIIN	KSGS	WYSY	293		
NTDB id 1313 DR RS12030 WP 010888966.1	ASVRLDVR	KIGQ....	PTKVGND	AVANT	VKIK	TVKNKVA	APFKE	VELA	LVLV	GKGF	DQLSD	LVGL	AADMD	ITKK	KAGS	FFSY	306
NTDB id 1245 Cj1673c YP 002345041.1	ASVRLDVR	KKVAT....	L.KQNEEP	IGNRV	KVKV	KNKVAPPF	RQAEF	DVMF	GEG	LSR	EGEL	IDYGV	KLD	DIVDK	SGAW	FSY	293
NTDB id 1214 NCTC11637 00359 SQJ03206.1	ASVRIDIR	RIAA....	L.KQNEQH	IGNRA	KA	KNKVAPPF	REAEF	DIMF	GEGIS	KEGE	IIDY	GVKLD	DIVDK	SGAW	LSY	295	
NTDB id 1211 C694 RS00795 WP 000963128.1	ASVRIDIR	RIAS....	L.KQNEQH	IGNRA	KA	KNKVAPPF	REAEF	DIMF	GEGIS	KEGE	IIDY	GVKLD	DIVDK	SGAW	LSY	295	
NTDB id 1334 RAOC RS04870 WP 004918236.1	ASVRIDIR	RSLSDTG	KIKDKS	GEVIGN	RTKV	KNKVAPPF	KSAEF	DIMY	GEGV	SKVGE	ILDV	ATDL	DIQK	SGS	WFSY	306	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	ASVRLDIR	RCGV....	V.KDGDEI	IGSET	KVKV	KNKVAPPF	REVQF	DIMY	GEGIS	RMNELL	ILAE	ANGF	ITKK	SGAW	FSY	309	
NTDB id 1130 NGFG RS03960 WP 003688695.1	SSVRLDIR	RTGS....	I.KKGE	EVLGN	ETRV	KVKNKVAPPF	RQAEF	DILY	GEGIS	WEGEL	IDIG	VKND	IIN	KSGAW	YSY	293	
NTDB id 1124 NGFG RS03960 WP 003688695.1	SSVRLDIR	RTGS....	I.KKGE	EVLGN	ETRV	KVKNKVAPPF	RQAEF	DILY	GEGIS	WEGEL	IDIG	VKND	IIN	KSGAW	YSY	293	
NTDB id 1123 OK783 RS03845 WP 003688695.1	SSVRLDIR	RTGS....	I.KKGE	EVLGN	ETRV	KVKNKVAPPF	RQAEF	DILY	GEGIS	WEGEL	IDIG	VKND	IIN	KSGAW	YSY	293	
NTDB id 371305 FLM21 RS07500 WP 148714976.1	ASVRLDIR	RIGA....	V.KKGDEI	IGNQ	TKVK	IAKNKVAPPF	RIVTF	DILY	GEGIS	REGE	IIDH	GVTH	KVV	EKSGAW	YSY	295	
NTDB id 1427 RS RS02760 WP 011000510.1	ASVRLDIR	RIGS....	I.KKGDEV	VGNET	KVKV	KNKVAPPF	REAI	FIDILY	GAGV	SREGE	IIDL	GV	EAKV	VVEK	SGAW	YSY	301
NTDB id 1165 A1552VC RS01565 WP 000344154.1	ASVRLDIR	RTGA....	I.KEGE	EVLGN	ETRI	KNVKNK	IAAPF	KEANTQ	IMYG	GGFN	REGEL	IDLG	VKHK	MVEK	SGAW	YSY	292
NTDB id 1142 GTF74 RS11550 WP 000344154.1	ASVRLDIR	RTGA....	I.KEGE	EVLGN	ETRI	KNVKNK	IAAPF	KEANTQ	IMYG	GGFN	REGEL	IDLG	VKHK	MVEK	SGAW	YSY	292
NTDB id 1205 PSJM300 05545 AFN77183.1	ASVRLDIR	RTGA....	V.KEGDEV	VGSET	RVKN	KNKVAPPF	RQAEF	QILY	GKGI	YRNGE	IIDL	GV	QGL	VEK	SGAW	YAY	292
NTDB id 1022 ACIAD RS06390 WP 004925639.1	ASVRLDIR	RIGQ....	V.KEGDEI	IGSET	KVKV	KNKMAPPF	REAI	FQILY	GKGV	NQLG	ELVD	LAV	QQN	IVQK	KAGAW	YSY	292
NTDB id 1074 ABD1 RS10195 WP 000344167.1	ASVRLDIR	RIGQ....	V.KEGDEI	VGSET	KVKV	KNKMAPPF	KEAI	FQILY	GKGT	NQLG	ELVD	LAV	QQD	IVQK	KAGAW	YSY	292
consensus	*!*																

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	NDEKIGQGAEKAKNYLKEHQDVFEIDHKVRAAHGILDDSEVAET..E.EETTASKTKAKAKKEEKAVETEEIELELED.	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	KDEKIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQ..D.TENKKDE....PKKEEA..VNEEVPLDLGDE	381
NTDB id 228 SPD RS09265 WP 001085462.1	KDEKIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQ..D.TENKKDE....PKKEEA..VNEEVPLDLGDE	381
NTDB id 194 SPR RS08825 WP 001085462.1	KDEKIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQ..D.TENKKDE....PKKEEA..VNEEVPLDLGDE	381
NTDB id 159 SP RS09750 WP 001085462.1	KDEKIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQ..D.TENKKDE....PKKEEA..VNEEVPLDLGDE	381
NTDB id 499 SM12261 RS08315 WP 078228268.1	KDEKIGQGSENAKKYLDNPEIFDEIDHQVRVQFGLIDGEEIAES.....KKDE....AAQVDS..VNEEVTLDLGDE	377
NTDB id 527 SMSK321 RS11065 WP 001085454.1	KDEKIGQGSENAKKYLDNPEVFAEIDHQVRVQFGLIDGEEAAES.....KKDE....VAQVDS..VNEEVTLDLGDE	377
NTDB id 453 Spy49 1753c ACI62003.1	NGEKIGQGSENAKRYLADHPQLFDEIDRKVRVKFGLLEEESEESA..M.AVASE.....E.....TDDLALDLNG	373
NTDB id 408 SMU RS09530 WP 002262392.1	NGEKIGQGSENAKKFLADNPEIFDDIDHKVRVQYGLIEEDNTEEK..Q.SSKEK.....ETDEK..ADKNLVLELDDT	378
NTDB id 115 BSU 16940 NP 389576.2	EEEEKIGQGRENAKQFLKENKDIMLMIQEQIREHYGLDNNGVVQQQ..A.EETQEEL.EFE.E.....	348
NTDB id 625 LCA RS02525 WP 011374196.1	GSEKIGQGRENAKNYLADHEDVEDEVRLKVRVQYGLISDVPEEDLP..T.TEDE.QI.NILPDDST.....EE.....	355
NTDB id 1313 DR RS12030 WP 010888966.1	GDERIGQGKEKTIAYIAERPMEQEIRDRVMAAIRAGNAGEAPALAPAPAAPEAAEA.....	363
NTDB id 1245 Cj1673c YP 002345041.1	KDKKIGQGRENSKAFLENPEIADEITKAIQNSMGTIEGMISG..S..E....DDEGEE.....	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	QDKKIGQGRENAKALLKEDKALADEITLKIKEKISGSNEEIMP..L..P....DEPLEEME.....	347
NTDB id 1211 C694 RS00795 WP 000963128.1	QDKKIGQGRENAKALLKEDKALADEITLKIKEKISGSNEEIMP..L..P....DEPLEEME.....	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	QDTKIGQGRDITVKELIKDNPELAEELEAKIREKLQAK.....	343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	DGTKIGQGGKNNAVKWLKENPEIADKLEQEIRNTLASNPNSVL..K..ATASDSNDESDFVEEF.....SEEEL.....	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	NGAKIGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITE..G..T...QDE...TDGER.....PEE.....	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	NGAKIGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITE..G..T...QDE...TDGER.....PEE.....	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	NGAKIGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITE..G..T...QDE...TDGER.....PEE.....	348
NTDB id 371305 FLM21 RS07500 WP 148714976.1	NGNKIGQGLENAKQFLKDNPELTDEVVRRIREKIGGAQLPIE.....PGNPLDDEAEALAE.....	350
NTDB id 1427 RS RS02760 WP 011000510.1	NGERIGQGRDNCREFLRENAELAREIENKVRHLGVTPMGAV....TLAEEVEED.....	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	NGDKIGQGGKANACKYLLKENPEIAKTLDKKLREMLLNPNENMQL..I..AETSSAADDVEFGAV.....PEEF.....	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	NGDKIGQGGKANACKYLLKENPEIAKTLDKKLREMLLNPNENMQL..I..AETSSAADDVEFGAV.....PEEF.....	354
NTDB id 1205 PSJM300 05545 AFN77183.1	KGSKIGQGGKANAAKYLEENPEIGQIEEQIRAKLLVTSANTK..A..TPVAEDLADADI.....	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	QGNKIGQGGKNNVIRYLEENPQISTEIEAVIREQLLTKASDQT..A..A.HDETEEEPDLL.....ES.....	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	QGNKIGQGGKNNVIRYFEENNQIAEEIERNIREQLLTTGTNGA..V..Q.I.EDEEEPDLL.....LES.....	349
consensus	***!!!***** ** ***** ***** ** *	

logo

		LEIELEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	.....		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	LEIEIEE		388
NTDB id 228 SPD RS09265 WP 001085462.1	LEIEIEE		388
NTDB id 194 SPR RS08825 WP 001085462.1	LEIEIEE		388
NTDB id 159 SP RS09750 WP 001085462.1	LEIEIEE		388
NTDB id 499 SM12261 RS08315 WP 078228268.1	LEIEIEE		384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	LEIEIEE		384
NTDB id 453 Spy49 1753c ACI62003.1	IEIED..		378
NTDB id 408 SMU RS09530 WP 002262392.1	IELED..		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 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 371305 FLM21 RS07500 WP 148714976.1	.....		350
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