

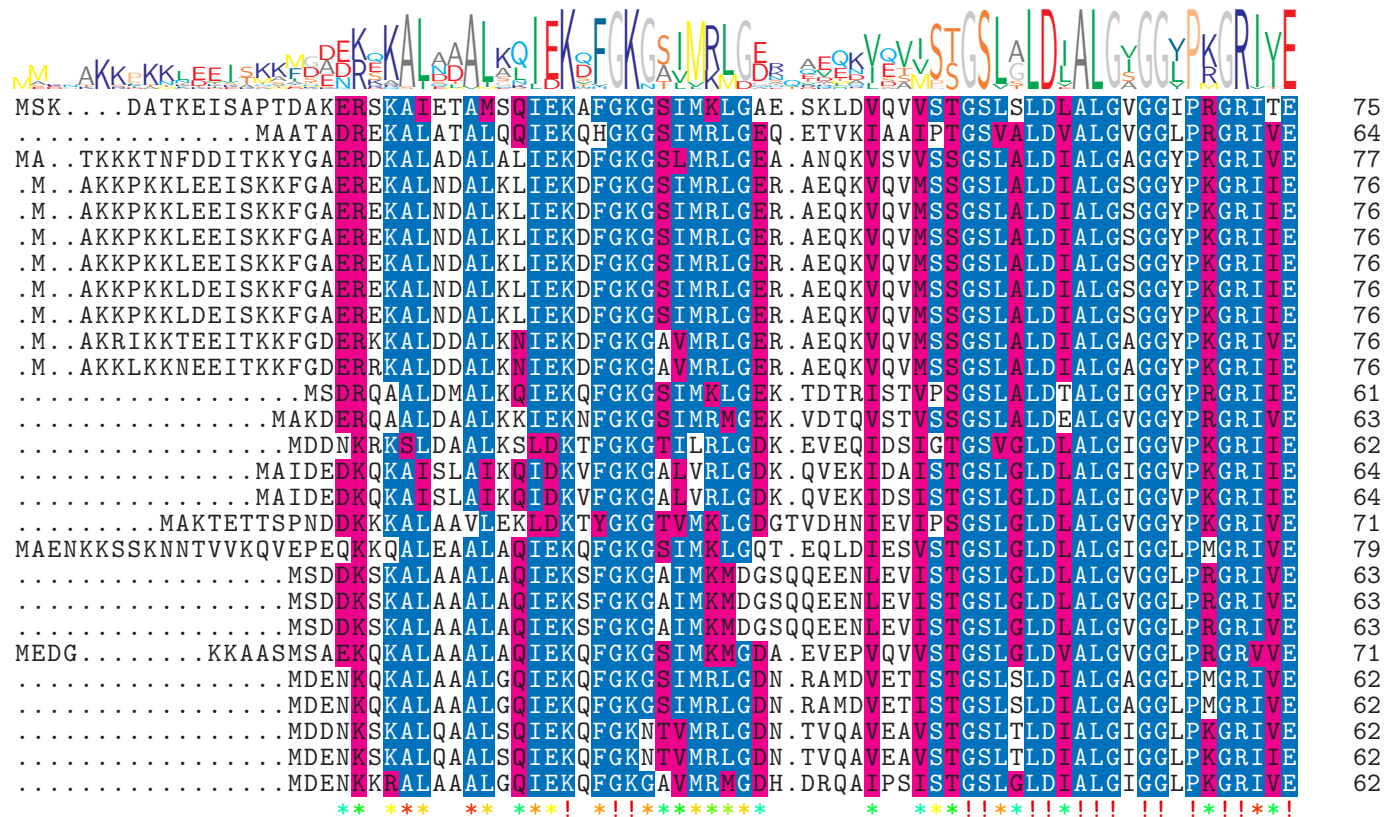
logo

```

NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 27664 HMPREF0675 RS05175 WP 002515492.1
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 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJ3M300 05545 AFN77183.1

```

consensus



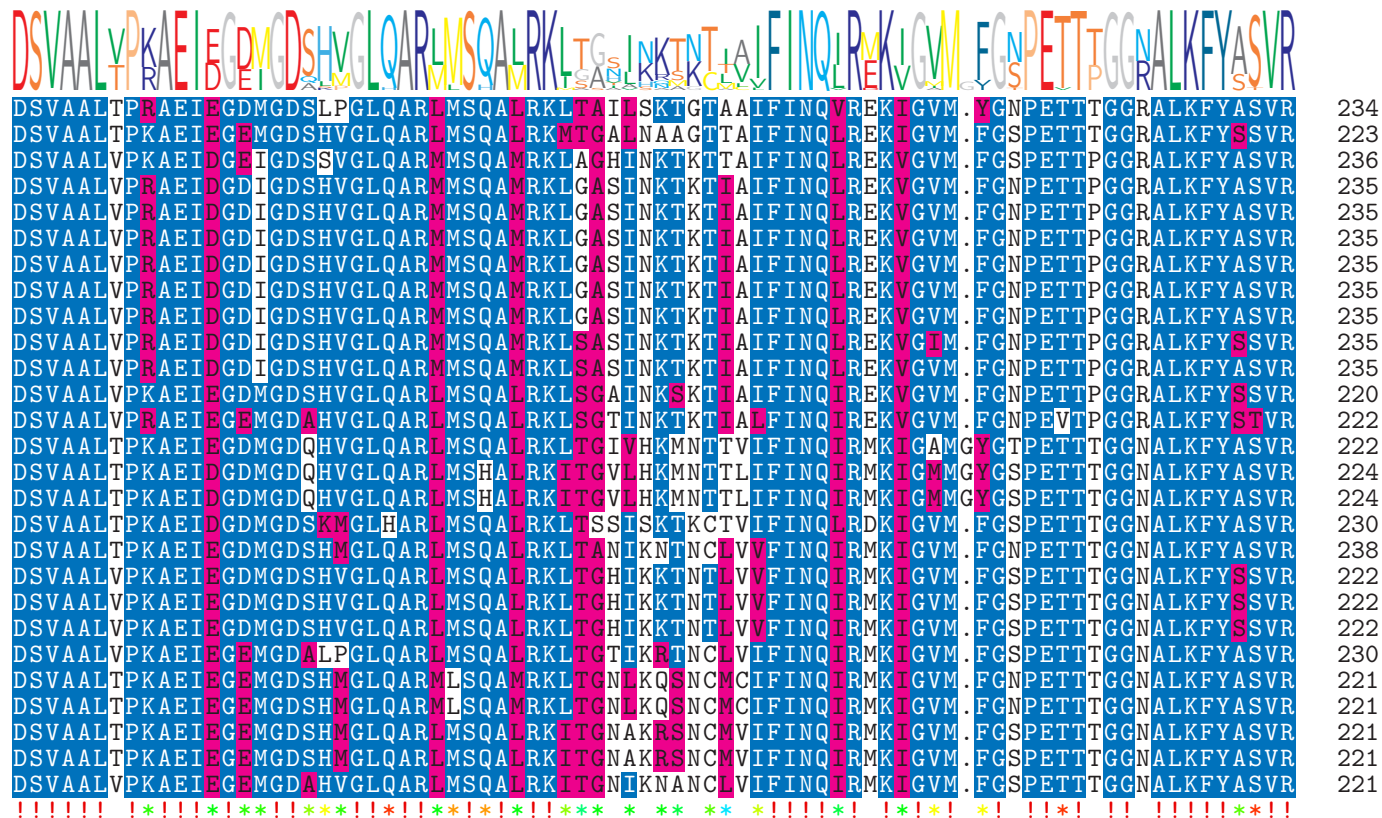
logo

NTDB id 1313 DR RS12030 WP 010888966.1	IYGPESGGKTTALAI	155
NTDB id 27664 HMPREF0675 RS05175 WP 002515492.1	IYGPESGGKTTVALHAI	144
NTDB id 600 KW2 RS01765 WP 011675413.1	IYGPESGGKTTVALHAVA	157
NTDB id 269 KZH43 RS08665 WP 001085462.1	IYGPESGGKTTVALHAVAQAQKEGGIAAFIDA	156
NTDB id 228 SPD RS09265 WP 001085462.1	IYGPESGGKTTVALHAVAQAQKEGGIAAFIDA	156
NTDB id 194 SPR RS08825 WP 001085462.1	IYGPESGGKTTVALHAVAQAQKEGGIAAFIDA	156
NTDB id 159 SP RS09750 WP 001085462.1	IYGPESGGKTTVALHAVAQAQKEGGIAAFIDA	156
NTDB id 499 SM12261 RS08315 WP 078228268.1	IYGPESGGKTTVALHAVAQAQKEGGIAAFIDA	156
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IYGPESGGKTTVALHAVAQAQKEGGIAAFIDA	156
NTDB id 408 SMU RS09530 WP 002262392.1	IYGPESGGKTTVALHAVAQAQKDG	156
NTDB id 453 Spy49 1753c ACI62003.1	IYGPESGGKTTVALHAVAQAQKEGGIAAFIDA	156
NTDB id 115 BSU 16940 NP 389576.2	IYGPESGGKTTVALHAI	141
NTDB id 625 LCA RS02525 WP 011374196.1	IYGPESGGKTTVALHAVA	143
NTDB id 1245 Cj1673c YP 002345041.1	IYGPESGGKTTTLHII	142
NTDB id 1214 NCTC11637 00359 SQJ03206.1	IYGPESGGKTTLSLHII	144
NTDB id 1211 C694 RS00795 WP 000963128.1	IYGPESGGKTTLSLHII	144
NTDB id 1334 RA0C RS04870 WP 004918236.1	IYGPESGGKTTTLHAI	151
NTDB id 1389 A4U84 RS07560 WP 021112712.1	IYGPESGGKTTTLTSL	159
NTDB id 1130 NGFG RS03960 WP 003688695.1	IFGPESGGKTTLCLEA	143
NTDB id 1124 NGFG RS03960 WP 003688695.1	IFGPESGGKTTLCLEA	143
NTDB id 1123 OK783 RS03845 WP 003688695.1	IFGPESGGKTTLCLEA	143
NTDB id 1427 RS RS02760 WP 011000510.1	IYGPESGGKTTTLQV	151
NTDB id 1165 A1552VC RS01565 WP 000344154.1	IFGPESGGKTTLTLEL	142
NTDB id 1142 GTF74 RS11550 WP 000344154.1	IFGPESGGKTTLTLEL	142
NTDB id 1022 ACIAD RS06390 WP 004925639.1	IYGPESGGKTTMTLQ	142
NTDB id 1074 ABD1 RS10195 WP 000344167.1	IYGPESGGKTTMTLQ	142
NTDB id 1205 PSJM300 05545 AFN77183.1	IYGPESGGKTTTL	142
consensus		

```

NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 27664 HMPREF0675 RS05175 WP 002515492.1
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 AC162003.1
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 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 1313 DR RS12030 WP 010888966.1	LDVRRIGQ...PTKVGND	VANTV	KIKTVKNKVA	APFK	KEVELA	LVYCGK	GFDQLSD	LVGLA	ADMD	DI	KKAGS	FYSY	GDER	310
NTDB id 27664 HMPREF0675 RS05175 WP 002515492.1	LDVRRVETLKDGS....EM	VGNRT	RVKVA	KNKVAPP	FKQAE	FD	ILYCG	GIS	REGSL	ID	MGVDC	GI	ITKSG	SWFSYNNEQ
NTDB id 600 KW2 RS01765 WP 011675413.1	LDVRGSTKIEEGS.GDNKTQ	IGKIT	TKIKVV	KNKVAPP	FKVAL	VD	IMF	GEGIS	SSTGEL	LN	IAVEE	GI	IKKSG	GAWFAYNDEK
NTDB id 269 KZH43 RS08665 WP 001085462.1	LDVRGNTQIKGTG.DQKETN	VGKETK	IKVV	KNKVAPP	FKEA	AVV	EIMY	GEGIS	KTGEL	LK	IASDL	DI	IKKAG	AWSYSKDEK
NTDB id 228 SPD RS09265 WP 001085462.1	LDVRGNTQIKGTG.DQKETN	VGKETK	IKVV	KNKVAPP	FKEA	AVV	EIMY	GEGIS	KTGEL	LK	IASDL	DI	IKKAG	AWSYSKDEK
NTDB id 194 SPR RS08825 WP 001085462.1	LDVRGNTQIKGTG.DQKETN	VGKETK	IKVV	KNKVAPP	FKEA	AVV	EIMY	GEGIS	KTGEL	LK	IASDL	DI	IKKAG	AWSYSKDEK
NTDB id 159 SP RS09750 WP 001085462.1	LDVRGNTQIKGTG.DQKETN	VGKETK	IKVV	KNKVAPP	FKEA	AVV	EIMY	GEGIS	KTGEL	LK	IASDL	DI	IKKAG	AWSYSKDEK
NTDB id 499 SM12261 RS08315 WP 078228268.1	LDVRGSTQIKGTG.DQKDTN	VGKETK	IKVV	KNKVAPP	FKEA	AVV	EIMY	GEGIS	KTGEL	LK	IASDL	DI	IKKAG	AWSYSKDEK
NTDB id 527 SMSK321 RS11065 WP 001085454.1	LDVRGNTQIKGTG.DQKDTN	VGKETK	IKVV	KNKVAPP	FKEA	AVV	EIMY	GEGIS	KTGEL	LK	IASDL	DI	IKKAG	AWSYSKDEK
NTDB id 408 SMU RS09530 WP 002262392.1	LDVRGNTQIKGTG.EQKDSN	IGKETK	IKVV	KNKVAPP	FKEA	AVV	EIMY	GEGIS	R	TGEL	VK	IASDL	GI	IQKAGAWSYNGEK
NTDB id 453 Spy49 1753c ACI62003.1	LDVRGTTQIKGTG.DQKDS	IGKETK	IKVV	KNKVAPP	FKVA	EV	EIMY	GEGIS	R	TGEL	VK	IASDL	DI	IKKAGAWFSYNGEK
NTDB id 115 BSU 16940 NP 389576.2	LEVRRAEQLKQGN....DV	MGNK	TKIKVV	KNKVAPP	FR	TA	EV	IMY	GEGIS	KE	GE	II	D	LGTEL
NTDB id 625 LCA RS02525 WP 011374196.1	LEVRRAEQIKNGT....DM	IGNRA	RIKVV	KNKVAPP	FKVA	EV	DI	MY	G	GIS	R	TGEL	VD	MAVEK
NTDB id 1245 Cj1673c YP 002345041.1	LDVRRVAT....L.KQNEEP	IGNRV	KV	KNKVAPP	FR	QAE	FD	IMF	GEG	LS	REGEL	ID	YGVK	LD
NTDB id 1214 NCTC11637 00359 SQJ03206.1	IDIRRIAA....L.KQNEQH	IGNRA	KA	KNKVAPP	FR	EA	EF	IMF	GEGIS	KE	GE	II	D	YGVK
NTDB id 1211 C694 RS00795 WP 000963128.1	IDIRRIAS....L.KQNEQH	IGNRA	KA	KNKVAPP	FR	EA	EF	IMF	GEGIS	KE	GE	II	D	YGVK
NTDB id 1334 RAOC RS04870 WP 004918236.1	IDIRRLSDTGKIKDKSGEV	IGNRT	TKV	KNKVAPP	FKS	AE	FD	IMY	GEG	V	SKV	GE	ILD	VATDL
NTDB id 1389 A4U84 RS07560 WP 021112712.1	LDIRRCGV....V.KDGEI	IGSET	KV	KNKVAPP	FR	EV	QF	DI	MY	GEGIS	R	MNELL	L	LAENG
NTDB id 1130 NGFG RS03960 WP 003688695.1	LDIRRTGS....I.KKGEV	LGNET	RV	KV	KNKVAPP	FR	QAE	FD	ILY	GEGIS	WE	GEL	ID	IGVKN
NTDB id 1124 NGFG RS03960 WP 003688695.1	LDIRRTGS....I.KKGEV	LGNET	RV	KV	KNKVAPP	FR	QAE	FD	ILY	GEGIS	WE	GEL	ID	IGVKN
NTDB id 1123 OK783 RS03845 WP 003688695.1	LDIRRTGS....I.KKGEV	LGNET	RV	KV	KNKVAPP	FR	QAE	FD	ILY	GEGIS	WE	GEL	ID	IGVKN
NTDB id 1427 RS RS02760 WP 011000510.1	LDIRRIGS....I.KKGEV	VGNET	RI	KNKVAPP	FR	EA	IF	DI	LY	G	VS	REGE	IID	LGVEAK
NTDB id 1165 A1552VC RS01565 WP 000344154.1	LDIRRTGA....I.KEGEEV	VGNET	RI	KNKVKN	IA	AP	FE	EA	NTQ	IMY	G	GFNR	REGEL	ID
NTDB id 1142 GTF74 RS11550 WP 000344154.1	LDIRRTGA....I.KEGEEV	VGNET	RI	KNKVKN	IA	AP	FE	EA	NTQ	IMY	G	GFNR	REGEL	ID
NTDB id 1022 ACTAD RS06390 WP 004925639.1	LDIRRIIGQ....V.KEGDEI	IGSET	KV	KNKVKN	MA	PP	FR	EA	IFQ	ILY	CGK	V	NQLGEL	VD
NTDB id 1074 ABD1 RS10195 WP 000344167.1	LDIRRIIGQ....V.KEGDEI													

logo

NTDB id	1313 DR RS12030 WP 010888966.1	TGQGGKEKTIAYIAERPMEQEIRDRVMAAIRAGNAGEAPALAPAPAA.....PEAAEA.....	363
NTDB id	27664 HMPREF0675 RS05175 WP 002515492.1	LQGKGKNVRKFLRGNPDVANEIEDKILTHLGLIREAEVPEGVDPRTEGEVE..F.....	348
NTDB id	600 KW2 RS01765 WP 011675413.1	IGQGAEKAKNYLKHEHQDVFEIDHKVRAAHGLDDSEVAETEEETTASKTAKAKKEEAVETEIELELED.....	387
NTDB id	269 KZH43 RS08665 WP 001085462.1	IGQGSENAKKYLAHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE...PKKEEA..VNEEVPLDLGDELEIEIEE	388
NTDB id	228 SPD RS09265 WP 001085462.1	IGQGSENAKKYLAHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE...PKKEEA..VNEEVPLDLGDELEIEIEE	388
NTDB id	194 SPR RS08825 WP 001085462.1	IGQGSENAKKYLAHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE...PKKEEA..VNEEVPLDLGDELEIEIEE	388
NTDB id	159 SP RS09750 WP 001085462.1	IGQGSENAKKYLAHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE...PKKEEA..VNEEVPLDLGDELEIEIEE	388
NTDB id	499 SM12261 RS08315 WP 078228268.1	IGQGSENAKKYLANPFIFFDEIDHQVRVQFGLIDGEEIAES...KKDE...AAQVDS..VNEEVTLDLGDELEIEIEE	384
NTDB id	527 SMSK321 RS11065 WP 001085454.1	IGQGSENAKKYLANPFIFFDEIDHQVRVQFGLIDGEEAAES...KKDE...VAQVDS..VNEEVTLDLGDELEIEIEE	384
NTDB id	408 SMU RS09530 WP 002262392.1	IGQGSENAKKFLADNPFIFFDEIDHKVRVQYGLIEDNTEEEKQSSEK.....ETDEK..ADKNLVLELDDTIELED..	383
NTDB id	453 Spy49 1753c ACI62003.1	IGQGSENAKRYLADHPQLFDEIDRKVRVKFGLLEESEESAMAVASE.....E.....TDDLALDLDNGIEIED..	378
NTDB id	115 BSU 16940 NP 389576.2	LQGGRENAKQFLKENKDIMLMIQEQIREHYGLDNNGVVQQQAEEETQEEL.EFE.E.....	348
NTDB id	625 LCA RS02525 WP 011374196.1	IGQGRENAKNYLADHDVEDDEVRLKVRAAYGISDVPEEDLPPTTEDE.QI.NILPDDST....EE.....	355
NTDB id	1245 Cj1673c YP 002345041.1	LQGGRNSKAFLKENPEIADAITKAIQNMSGIEGMISGSEDD..EGEE.....	343
NTDB id	1214 NCTC11637 00359 SQJ03206.1	LQGGRENAKALLKEDKALADEITLTKIKESIGSNEEIMPLPDE..PLEEM.E.....	347
NTDB id	1211 C694 RS00795 WP 000963128.1	LQGGRENAKALLKEDKALADEITLTKIKESIGSNEEIMPLPDE..PLEEM.E.....	347
NTDB id	1334 RAOC RS04870 WP 004918236.1	LQGGRDRTVKELIKDNPELAELEAKIREKLQAK.....	343
NTDB id	1389 A4U84 RS07560 WP 021112712.1	IGQGGNNNAVWVLKENPEIADKLEQEIIRNTLASNPNSVLKATASDSNDSES.DVEEFSE.....EEL.....	372
NTDB id	1130 NGFG RS03960 WP 003688695.1	IGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETGDGER.....PE.....E.....	348
NTDB id	1124 NGFG RS03960 WP 003688695.1	IGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETGDGER.....PE.....E.....	348
NTDB id	1123 OK783 RS03845 WP 003688695.1	IGQGGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETGDGER.....PE.....E.....	348
NTDB id	1427 RS RS02760 WP 011000510.1	IGQGRDNCREFLRENARELARIENKVRHLGVTPMGAVTLA.EEVEED.....	352
NTDB id	1165 A1552VC RS01565 WP 000344154.1	IGQGGKANACKYLLKENPEIAKTLDKKLREMLLNPENMQLIAETSSAADV.EFGAVPE.....EF.....	354
NTDB id	1142 GTF74 RS11550 WP 000344154.1	IGQGGKANACKYLLKENPEIAKTLDKKLREMLLNPENMQLIAETSSAADV.EFGAVPE.....EF.....	354
NTDB id	1022 ACTAD RS06390 WP 004925639.1	IGQGGKNNVIRYLEENPQISTEIEAVIREQLLTASDQTAA.HDETEEEP.DLL..ES.....	349
NTDB id	1074 ABD1 RS10195 WP 000344167.1	IGQGGKNNVIRYFEENNQIAEEIERNIIREQLLTGTNGAVQ.I.EDEEEP.DLL..LE.....S.....	349
NTDB id	1205 PSJM300 05545 AFN77183.1	IGQGGKANAAKYLEENPEIIGEIEEQIRAKLLVTSANTKATPVAEDLADA.DI.....	347
consensus		* ! ! ! * * * * * * * * * * * * * * * * * * *	

- X non conserved
- X similar
- X >50% conserved