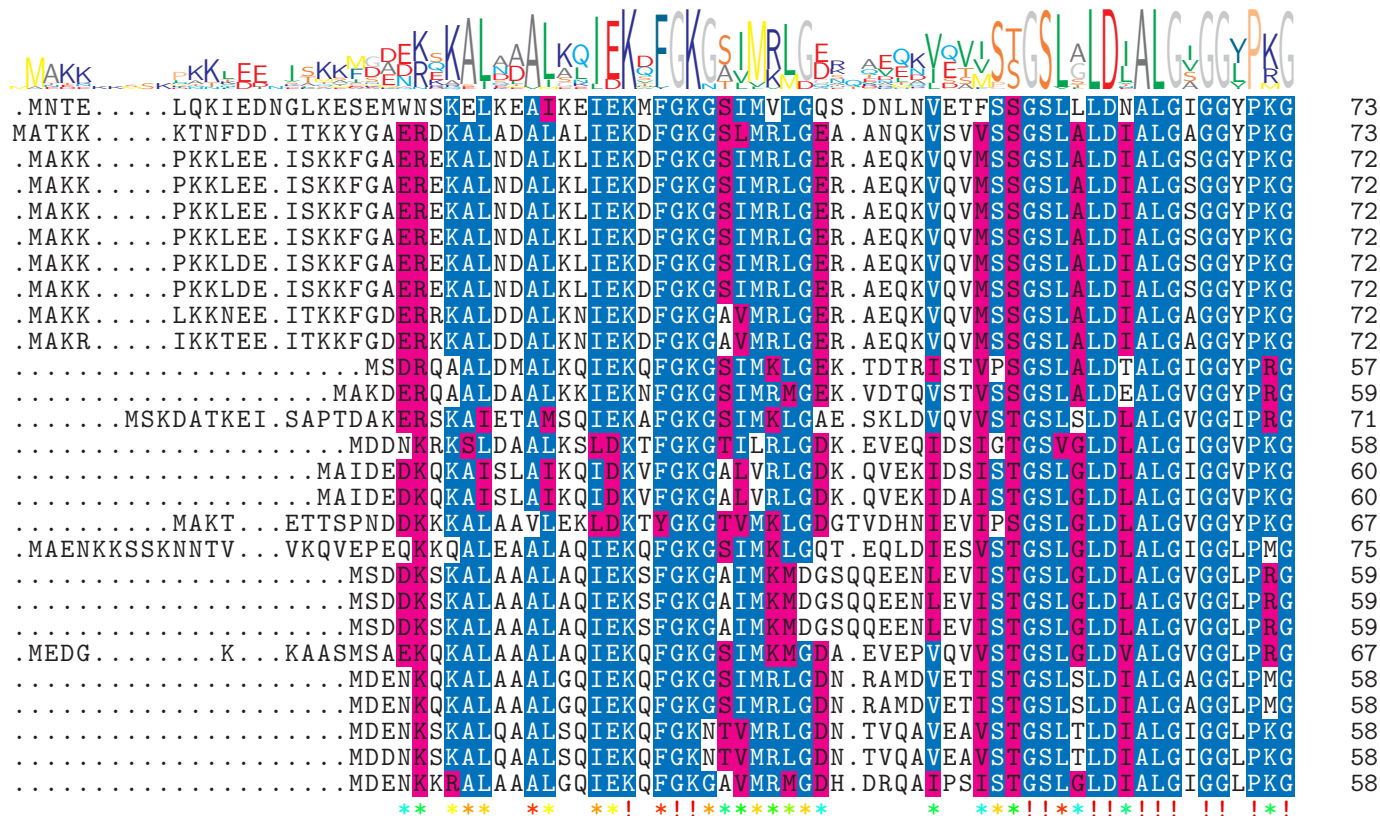


logo

NTDB id 25181 MCAP RS02785 WP 041594345.1
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 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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1

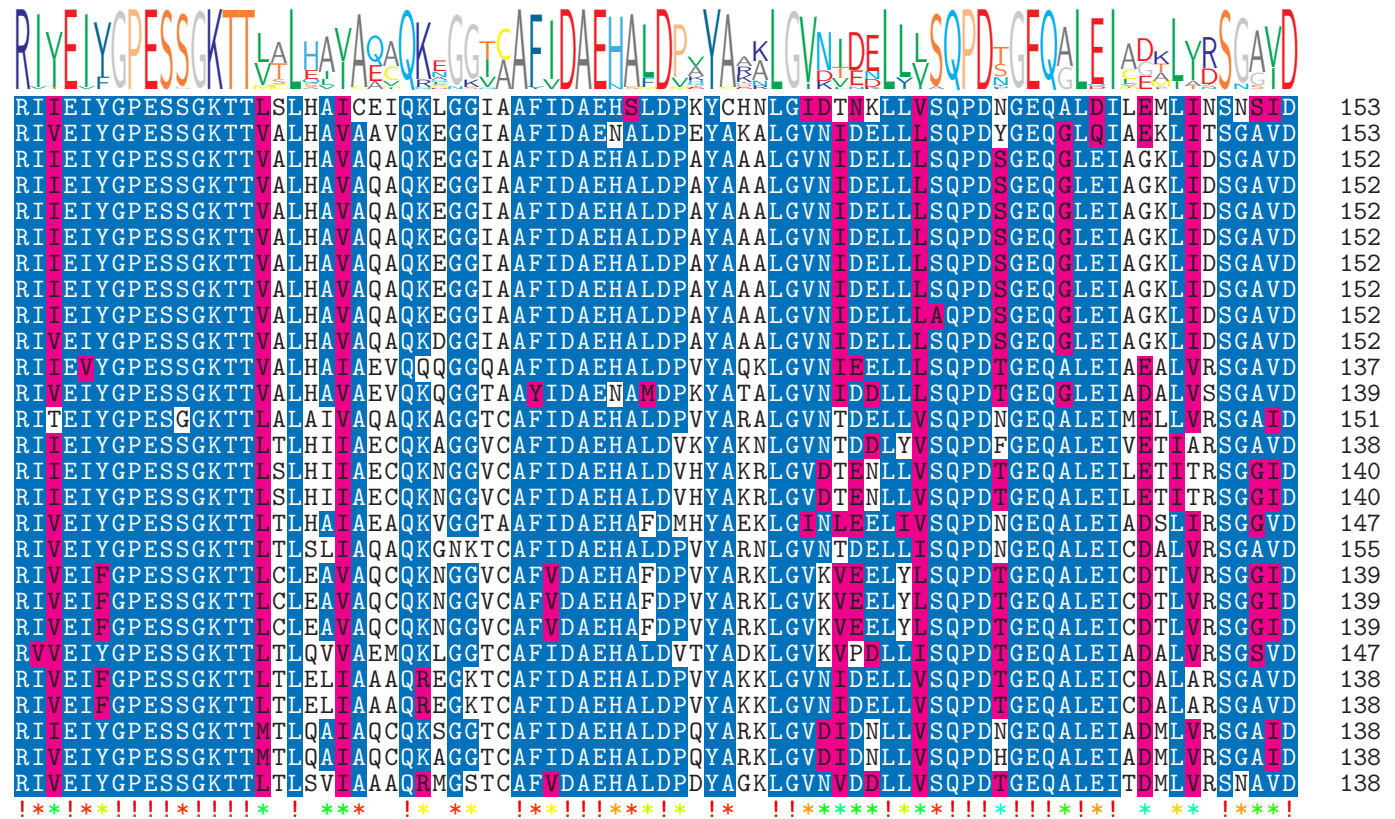
consensus



```

NTDB id 25181 MCAP RS02785 WP 041594345.1
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 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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

```



logo

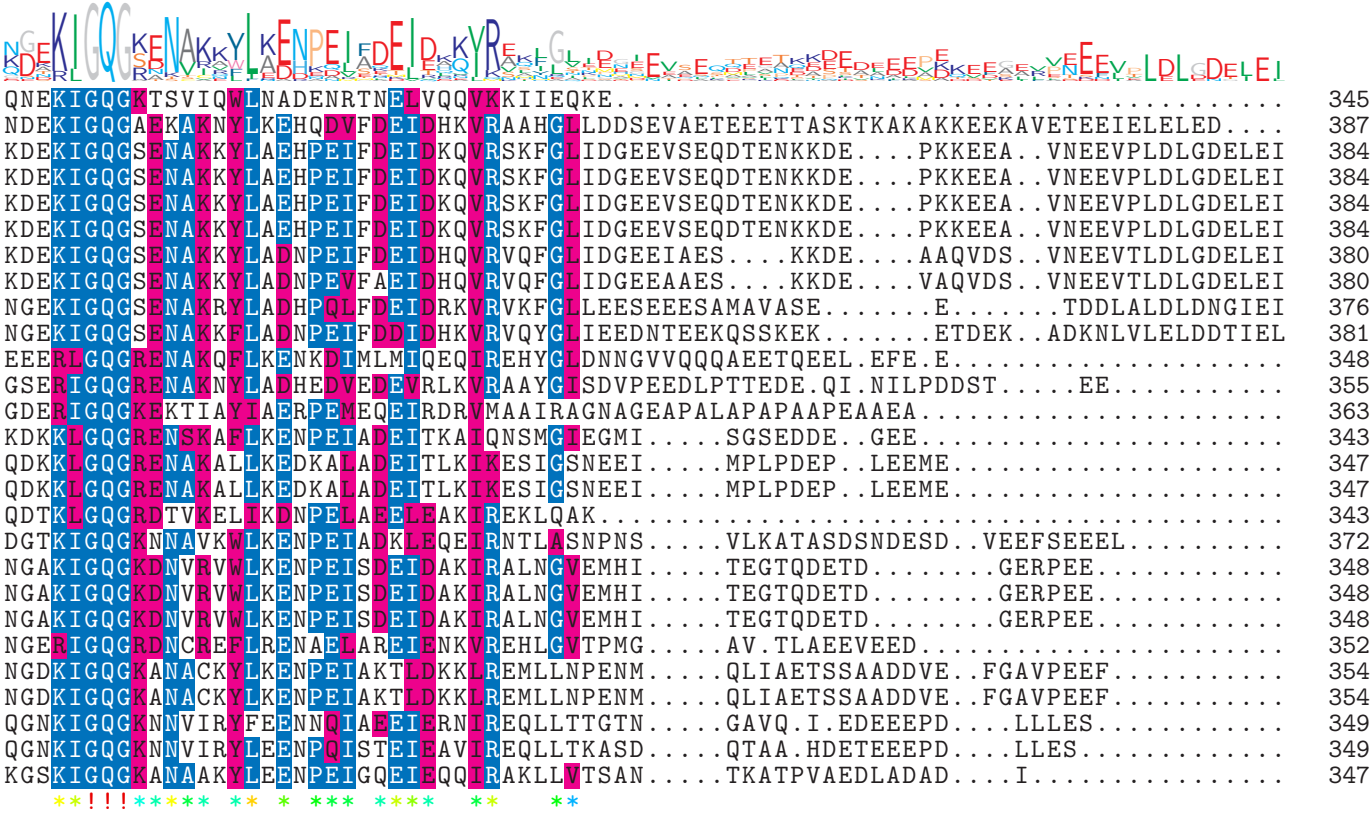
NTDB id 25181 MCAP RS02785 WP 041594345.1	LIIIVDSVAALVPKTELEGEEMSDQSIGLQARMMSKALRKLNGLIAKSNTTVIFINQLREKIGVI.FGNPETTTGGKALKFF	232
NTDB id 600 KW2 RS01765 WP 011675413.1	LVVIDSVAALVPKAEIDGEIGDSSVGLQARMMSQAMRKLAGHINKTKTTAIFINQLREKVGVM.FGSPETTPGGRALKFY	232
NTDB id 269 KZH43 RS08665 WP 001085462.1	LVVVDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTTAIFINQLREKVGVM.FGNPETTPGGRALKFY	231
NTDB id 228 SPD RS09265 WP 001085462.1	LVVVDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTTAIFINQLREKVGVM.FGNPETTPGGRALKFY	231
NTDB id 194 SPR RS08825 WP 001085462.1	LVVVDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTTAIFINQLREKVGVM.FGNPETTPGGRALKFY	231
NTDB id 159 SP RS09750 WP 001085462.1	LVVVDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTTAIFINQLREKVGVM.FGNPETTPGGRALKFY	231
NTDB id 499 SM12261 RS08315 WP 078228268.1	LVVVDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTTAIFINQLREKVGVM.FGNPETTPGGRALKFY	231
NTDB id 527 SMSK321 RS11065 WP 001085454.1	LVVVDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTTAIFINQLREKVGVM.FGNPETTPGGRALKFY	231
NTDB id 453 Spy49 1753c ACI62003.1	LVVVDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLSASINKTKTTAIFINQLREKVGVM.FGNPETTPGGRALKFY	231
NTDB id 408 SMU RS09530 WP 002262392.1	LVVVDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLSASINKTKTTAIFINQLREKVGIM.FGNPETTPGGRALKFY	231
NTDB id 115 BSU 16940 NP 389576.2	IVVVDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAINKSKTTAIFINQIREKVGVM.FGNPETTPGGRALKFY	216
NTDB id 625 LCA RS02525 WP 011374196.1	ILVVDSVAALVPRAEIEGEMGDHVGLQARLMSQALRKLSGTINKTKTTALFINQIREKVGVM.FGNPEVTPGGRALKFY	218
NTDB id 1313 DR RS12030 WP 010888966.1	VVVVDSVAALTTPRAEIEGDMGDSLPGQLARLMSQALRKLTAILSKTGTAAFINQVREKIGVM.YGNPETTTGGGRALKFY	230
NTDB id 1245 Cj1673c YP 002345041.1	LIVVDSVAALTTPKAEIEGDMGDQHVGLQARLMSQALRKLTGIVHKMNTTVIFINQIRMKIGAMGYGTPETTTGGNALKFY	218
NTDB id 1211 C694 RS00795 WP 000963128.1	LVVVDSVAALTTPKAEIDGDMGDQHVGLQARLMSHALRKITGVLHKMNTTLIFINQIRMKIGMMGYGSPETTTGGNALKFY	220
NTDB id 1214 NCTC11637 00359 SQJ03206.1	LVVVDSVAALTTPKAEIDGDMGDQHVGLQARLMSHALRKITGVLHKMNTTLIFINQIRMKIGMMGYGSPETTTGGNALKFY	220
NTDB id 1334 RAOC RS04870 WP 004918236.1	IVVVDSVAALTTPKAEIDGDMGDSKMGLHARLMSQALRKLTSSISKTKCTVIFINQLRDKIGVM.FGSPETTTGGNALKFY	226
NTDB id 1389 A4U84 RS07560 WP 021112712.1	VIIIVDSVAALTTPKAEIEGDMGDSHMGQLARLMSQALRKLTANIKNTNCLVVFINQIRMKIGVM.FGNPETTTGGNALKFY	234
NTDB id 1130 NGFG RS03960 WP 003688695.1	MVVVDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFY	218
NTDB id 1124 NGFG RS03960 WP 003688695.1	MVVVDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFY	218
NTDB id 1123 OK783 RS03845 WP 003688695.1	MVVVDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFY	218
NTDB id 1427 RS RS02760 WP 011000510.1	LIVIDSVAALVPKAEIEGEMGDALPGLQARLMSQALRKLTGTIKRTNCLVIFINQIRMKIGVM.FGSPETTTGGNALKFY	226
NTDB id 1165 A1552VC RS01565 WP 000344154.1	VIVVDSVAALTTPKAEIEGEMGDSHMGQLQARMLSQAMRKLTGNLQKSNCMCIFINQIRMKIGVM.FGNPETTTGGNALKFY	217
NTDB id 1142 GTF74 RS11550 WP 000344154.1	VIVVDSVAALTTPKAEIEGEMGDSHMGQLQARMLSQAMRKLTGNLQKSNCMCIFINQIRMKIGVM.FGNPETTTGGNALKFY	217
NTDB id 1074 ABD1 RS10195 WP 000344167.1	LIVVDSVAALTTPKAEIEGEMGDSHMGQLARLMSQALRKITGNAKRSNCMVIFINQIRMKIGVM.FGSPETTTGGNALKFY	217
NTDB id 1022 ACIAD RS06390 WP 004925639.1	LIVVDSVAALTTPKAEIEGEMGDSHMGQLARLMSQALRKITGNAKRSNCMVIFINQIRMKIGVM.FGSPETTTGGNALKFY	217
NTDB id 1205 PSJM300 05545 AFN77183.1	VIIIVDSVAALVPKAEIEGEMGDHVGLQARLMSQALRKITGNIKNANCLVIFINQIRMKIGVM.FGSPETTTGGNALKFY	217
consensus	*****!!!!!!*!*!*!*!*!*!*!*!*!*!!!!!!*!*!*!*!*!*!*!*!*!*!*!*!*!*!*!!!!!!*	

logo

NTDB id 25181	MCAP RS02785	WP 041594345.1	SSIRLEVRKSENILSNS.....EI	IGNKIKIKIVKNKTAIPFKTATIS	LLYNKGIDKIGELVDLLVSY	EII	EKS	SGVWYFY	307		
NTDB id 600	KW2 RS01765	WP 011675413.1	ASVRLDVRGSTKIEEGS.GDNKTQ	IGKITKIKVVKNKVAPPFKVALV	DIMFGEGISSTGELINIAVEEG	I	IKK	SGAWFAY	311		
NTDB id 269	KZH43 RS08665	WP 001085462.1	ASVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVV	EIMYGEGISKTGELLKIASDL	DI	IKK	AGAWYSY	310		
NTDB id 228	SPD RS09265	WP 001085462.1	ASVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVV	EIMYGEGISKTGELLKIASDL	DI	IKK	AGAWYSY	310		
NTDB id 194	SPR RS08825	WP 001085462.1	ASVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVV	EIMYGEGISKTGELLKIASDL	DI	IKK	AGAWYSY	310		
NTDB id 159	SP RS09750	WP 001085462.1	ASVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKEAVV	EIMYGEGISKTGELLKIASDL	DI	IKK	AGAWYSY	310		
NTDB id 499	SM12261 RS08315	WP 078228268.1	ASVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKEAFV	EIMYGEGISKTGELLKIASDL	DI	IKK	AGAWYSY	310		
NTDB id 527	SMSK321 RS11065	WP 001085454.1	ASVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKEAFV	EIMYGEGISKTGELLKIASDL	DI	IKK	AGAWYSY	310		
NTDB id 453	Spy49 1753c	ACI62003.1	ASVRLDVRGTTQIKGTG.DQKDS	IGKETKIKVVKNKVAPPFKVAEV	EIMYGEGISRTGELVKIASDL	DI	IKK	AGAWFSY	310		
NTDB id 408	SMU RS09530	WP 002262392.1	SSVRLDVRGNTQIKGTG.EQKDSN	IGKETKIKVVKNKVAPPFKEAFV	EIIYGEISRTGELVKIASDL	GII	QK	AGAWYSY	310		
NTDB id 115	BSU 16940	NP 389576.2	SSVRLEVRRAEQLKQGN.....DV	MGNKTKIKVVKNKVAPPFR	TAEVDIMYGEGISKEGEIID	LGTEL	DI	VQKSGSWYSY	291		
NTDB id 625	LCA RS02525	WP 011374196.1	STVRLEVRRAETIKNGT.....DM	IGNRARIKVVKNKVAPPFKVAEV	DIMYGGISRTGELVDMAVEK	DI	INK	SGSWYSY	293		
NTDB id 1313	DR RS12030	WP 010888966.1	ASVRLDVRKIGQ....PTKVGND	AVANTVKIKTVKNKVAAPFKE	VELALVYGGKGFQDLS	DLVGL	AADM	DI	IKKAGSFYSY	306	
NTDB id 1245	Cj1673c	YP 002345041.1	ASVRLDVRKVAT....L.KQNEEP	IGNRVKIKVVKNKVAPPFRQA	AEFDMVFGEGLSREGELIDY	GVKLD	DI	VDKSGAWFSY	293		
NTDB id 1211	C694 RS00795	WP 000963128.1	ASVRIDIRRIAS....L.KQNEQH	IGNRAKAKVVKNKVAPPFREAE	FDIMFGEGISKEGEIIDYGV	KLD	DIV	DKSGAWLSY	295		
NTDB id 1214	NCTC11637	00359 SQJ03206.1	ASVRIDIRRIAA....L.KQNEQH	IGNRAKAKVVKNKVAPPFREAE	FDIMFGEGISKEGEIIDYGV	KLD	DIV	DKSGAWLSY	295		
NTDB id 1334	RAOC RS04870	WP 004918236.1	ASVRIDIRRSLSDTGKIKDKSGEV	IGNRTKVKKVVKNKVAPPFKSA	EFDIMYGEGVSKVGEILD	VATDL	DI	IQKSGSWFSY	306		
NTDB id 1389	A4U84 RS07560	WP 021112712.1	ASVRLDIRRCGV....V.KDGEI	IGSETKVKVVKNKVAPPFREVFQ	DDIMYGEGISRMNELLILAE	ANGFI	KKSGAWFSY		309		
NTDB id 1130	NGFG RS03960	WP 003688695.1	SSVRLDIRRTGS....I.KKGEVL	GNETRVKVIKNKVAPPFRQA	AEFDILYGEISWEGELIDIG	VKN	DI	INKSGAWYSY	293		
NTDB id 1124	NGFG RS03960	WP 003688695.1	SSVRLDIRRTGS....I.KKGEVL	GNETRVKVIKNKVAPPFRQA	AEFDILYGEISWEGELIDIG	VKN	DI	INKSGAWYSY	293		
NTDB id 1123	OK783 RS03845	WP 003688695.1	SSVRLDIRRTGS....I.KKGEVL	GNETRVKVIKNKVAPPFRQA	AEFDILYGEISWEGELIDIG	VKN	DI	INKSGAWYSY	293		
NTDB id 1427	RS RS02760	WP 011000510.1	ASVRLDIRRIGS....I.KKGEV	GNETKVKVVKNKVAPPFREAI	FDILYAGVSRERGEIID	LGVEAK	VVEKSGAWYSY		301		
NTDB id 1165	A1552VC RS01565	WP 000344154.1	ASVRLDIRRTGA....I.KEGEEV	GNETRIKVVKNKIAAPFKEANT	QIMYGGFNREGELIDLGV	KHK	MVEKSGAWYSY		292		
NTDB id 1142	GTF74 RS11550	WP 000344154.1	ASVRLDIRRTGA....I.KEGEEV	GNETRIKVVKNKIAAPFKEANT	QIMYGGFNREGELIDLGV	KHK	MVEKSGAWYSY		292		
NTDB id 1074	ABD1 RS10195	WP 000344167.1	ASVRLDIRRIGQ....V.KEGDEI	VGSETKVKVVKNKMAPPFKEAIF	QILYGKGTNQLGELVDL	AVQQ	DIV	QKAGAWYSY	292		
NTDB id 1022	ACIAD RS06390	WP 004925639.1	ASVRLDIRRIGQ....V.KEGDEI	IGSETKVKVVKNKMAPPFREAI	FIQILYGKGVNQLGELVD	LAVQQ	NIV	QKAGAWYSY	292		
NTDB id 1205	PSJM300 05545	AFN77183.1	ASVRLDIRRTGA....V.KEGDEV	VGSETRVKVVKNKVAPPFRQA	AEFQILYGKGIYRNGEIID	LGVQQGL	VEKSGAWYAY		292		
consensus			***!***!*	*	**	*****!*****!*****!	*	*****!*****	*****	***	! !*****!

logo

NTDB id 25181 MCAP RS02785 WP 041594345.1
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 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 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus



logo

NTDB id 25181	MCAP RS02785	WP 041594345.1	....	345
NTDB id 600	KW2 RS01765	WP 011675413.1	....	387
NTDB id 269	KZH43 RS08665	WP 001085462.1	EIEE	388
NTDB id 228	SPD RS09265	WP 001085462.1	EIEE	388
NTDB id 194	SPR RS08825	WP 001085462.1	EIEE	388
NTDB id 159	SP RS09750	WP 001085462.1	EIEE	388
NTDB id 499	SM12261 RS08315	WP 078228268.1	EIEE	384
NTDB id 527	SMSK321 RS11065	WP 001085454.1	EIEE	384
NTDB id 453	Spy49 1753c	ACI62003.1	ED..	378
NTDB id 408	SMU RS09530	WP 002262392.1	ED..	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 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 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 1074	ABD1 RS10195	WP 000344167.1	....	349
NTDB id 1022	ACIAD RS06390	WP 004925639.1	....	349
NTDB id 1205	PSJM300 05545	AFN77183.1	....	347
consensus				

-  non conserved
-  similar
-  ≥ 50% conserved