

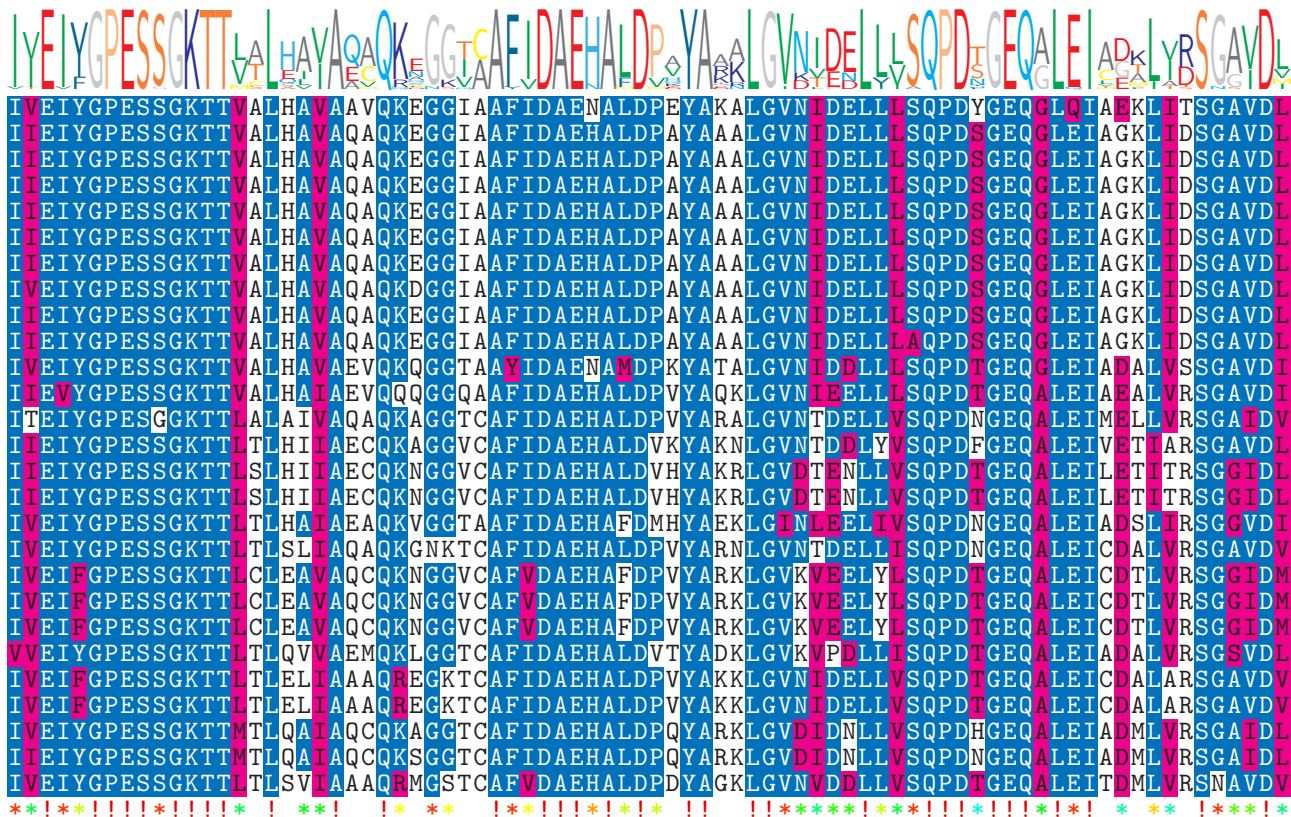
logo

NTDB	id	600	KW2	RS01765	WP	011675413.1	MATKK....KTNFDDITKKYGA	ERD	KALAD	ALAL	IEKD	FGKGS	LMRLGEA	.ANQKVSV	VSSGSL	ALD	I	ALGAGGY	PKGR	74		
NTDB	id	269	KZH43	RS08665	WP	001085462.1	.MAKK....PKKLEEISKKFGA	ERE	KALND	ALKL	IEKD	FGKGS	SIMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGSGGY	PKGR	73		
NTDB	id	228	SPD	RS09265	WP	001085462.1	.MAKK....PKKLEEISKKFGA	ERE	KALND	ALKL	IEKD	FGKGS	SIMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGSGGY	PKGR	73		
NTDB	id	194	SPR	RS08825	WP	001085462.1	.MAKK....PKKLEEISKKFGA	ERE	KALND	ALKL	IEKD	FGKGS	SIMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGSGGY	PKGR	73		
NTDB	id	159	SP	RS09750	WP	001085462.1	.MAKK....PKKLEEISKKFGA	ERE	KALND	ALKL	IEKD	FGKGS	SIMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGSGGY	PKGR	73		
NTDB	id	499	SM12261	RS08315	WP	078228268.1	.MAKK....PKKLDEISKKFGA	ERE	KALND	ALKL	IEKD	FGKGS	SIMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGSGGY	PKGR	73		
NTDB	id	527	SMSK321	RS11065	WP	001085454.1	.MAKK....PKKLDEISKKFGA	ERE	KALND	ALKL	IEKD	FGKGS	SIMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGSGGY	PKGR	73		
NTDB	id	408	SMU	RS09530	WP	002262392.1	.MAKR....IKKTEEITKKFG	DER	KKALDD	ALKN	IEKD	FGKGA	VMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGAGGY	PKGR	73		
NTDB	id	977570	MGAS37843	RS08910	WP	010922753.1	.MAKK....LKKNEEITKKFG	DERR	KALDD	ALKN	IEKD	FGKGA	VMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGAGGY	PKGR	73		
NTDB	id	453	Spy49	1753c	ACI	62003.1	.MAKK....LKKNEEITKKFG	DERR	KALDD	ALKN	IEKD	FGKGA	VMRLGER	.AEQKVQVM	SSSGSL	ALD	I	ALGAGGY	PKGR	73		
NTDB	id	625	LCA	RS02525	WP	0011374196.1	MAK	DERQAALDA	ALKK	IEKN	FGKGS	SIMRMGEK	.VDTQVST	VSSGSL	ALDE	AL	LG	VGGY	PRGR	60		
NTDB	id	115	BSU	16940	NP	389576.2	MS	DRQAALDM	ALKQ	IEKQ	FGKGS	SIMKLGEK	.TDTRIST	VP	SGSL	ALD	TAL	GIGGY	PRGR	58		
NTDB	id	1313	DR	RS12030	WP	010888966.1	MSKDATKEISAPTD	AKERS	KALET	AMS	QIEKA	AFGKGS	SIMKLGA	E.SKLD	VQVV	ST	GS	SLD	LAL	GVGGIP	PRGR	72
NTDB	id	1245	Cj1673c	YP	002345041.1	MD	DNKRKSLDA	AALKS	LDKT	FGKGT	ILRLGDK	.EVEQIDS	IGT	GS	VGLD	LAL	GIGGY	PKGR	59			
NTDB	id	1214	NCTC11637	00359	SQJ	03206.1	MAID	EDKQKAISL	AIKQ	IDKV	FGKGA	LVRLGDK	.QVEKIDA	IST	GS	LGLD	LAL	GIGGY	PKGR	61		
NTDB	id	1211	C694	RS00795	WP	000963128.1	MAID	EDKQKAISL	AIKQ	IDKV	FGKGA	LVRLGDK	.QVEKIDS	IST	GS	LGLD	LAL	GIGGY	PKGR	61		
NTDB	id	1334	RAOC	RS04870	WP	004918236.1	MAKT	.ETTSPN	DDKK	KALAAV	LEKLDKT	YGKGTVM	KLGD	GTVDHNI	EV	IP	SGSL	LGLD	LAL	GVGGY	PKGR	68
NTDB	id	1389	A4U84	RS07560	WP	021112712.1	.MAENKKSSKNNTV	.VKQVEP	EQQKQALEA	ALAAQ	IEKQ	FGKGS	SIMKLGT	.EQLDIES	V	ST	GS	LGLD	LAL	GIGGLP	MGR	76
NTDB	id	1130	NGFG	RS03960	WP	003688695.1	MS	DDKS	KALAAALAAQ	IEKS	FGKGA	IMKMDGS	QQUEEN	LEV	IST	GS	LGLD	LAL	GVGGLP	PRGR	60	
NTDB	id	1124	NGFG	RS03960	WP	003688695.1	MS	DDKS	KALAAALAAQ	IEKS	FGKGA	IMKMDGS	QQUEEN	LEV	IST	GS	LGLD	LAL	GVGGLP	PRGR	60	
NTDB	id	1123	OK783	RS03845	WP	003688695.1	MS	DDKS	KALAAALAAQ	IEKS	FGKGA	IMKMDGS	QQUEEN	LEV	IST	GS	LGLD	LAL	GVGGLP	PRGR	60	
NTDB	id	1427	RS	RS02760	WP	011000510.1	.MEDG.....K	.KAASMA	EKKQKALAA	ALAAQ	IEKQ	FGKGS	IMKMGDA	.EVEPVQV	V	ST	GS	LGLD	LAL	GVGGLP	PRGR	68
NTDB	id	1165	A1552VC	RS01565	WP	000344154.1	MD	ENKQKALAA	ALGQ	IEKQ	FGKGS	SIMRLGDN	.RAMDVET	IST	GS	SLD	I					

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 408 SMU RS09530 WP 002262392.1
NTDB id 977570 MGAS37843 RS08910 WP 010922753.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 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 PSJM300 05545 AFN77183.1

consensus



154
153
153
153
153
153
153
153
153
153
153
140
138
152
139
141
141
148
156
140
140
140
148
139
139
139
139
139

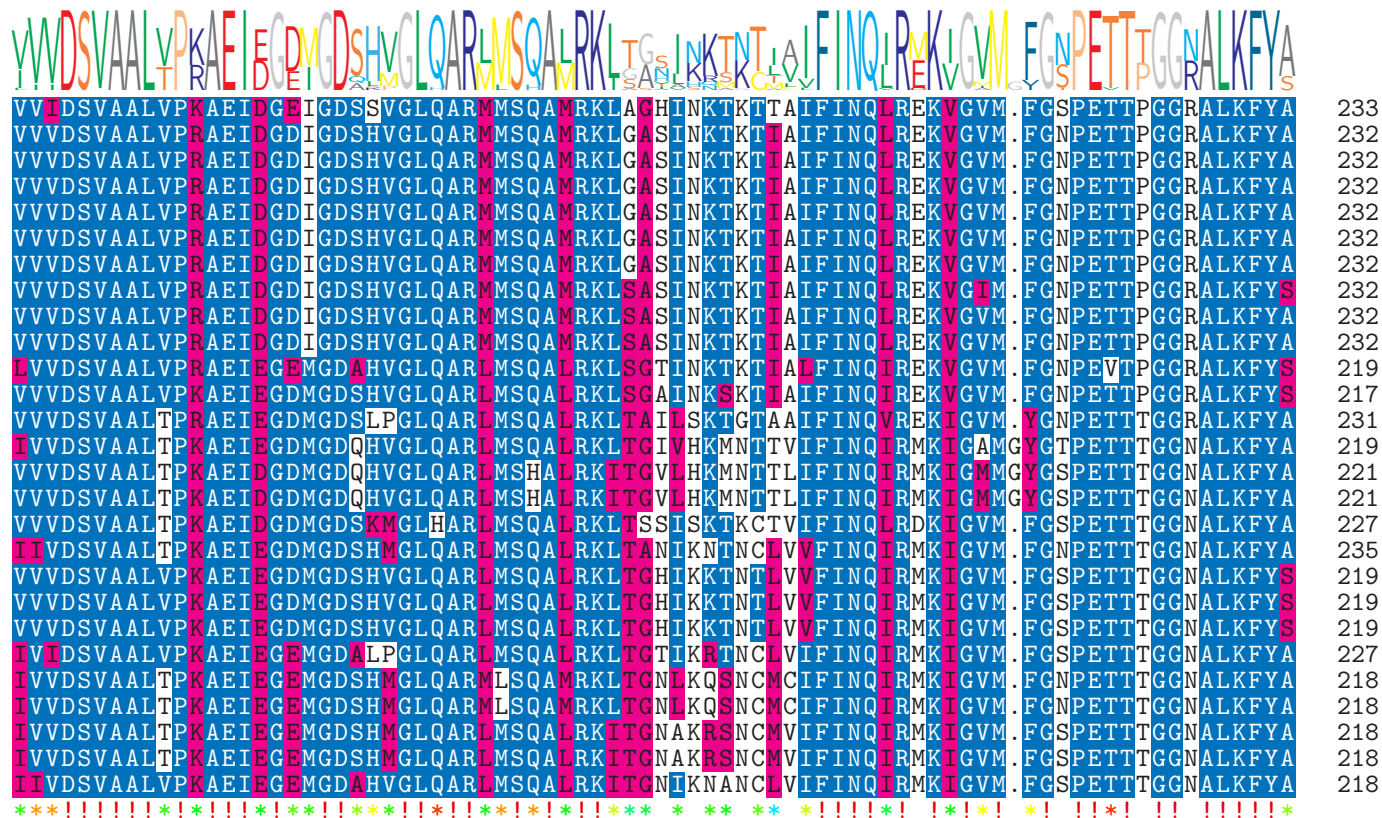
logo

```

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 408 SMU RS09530 WP 002262392.1
NTDB id 977570 MGAS37843 RS08910 WP 010922753.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 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 ABI1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1

```

consensus



logo

NTDB	id	600	KW2	RS01765	WP	011675413.1	SVRLDVRG	STKIEEGS	.GDNKTQ	IGKITKI	KVVKNKV	APPFKE	AVLV	DIMF	GEGIS	STGEL	LNIA	VEEG	TKK	SGAW	FAYN	312				
NTDB	id	269	KZH43	RS08665	WP	001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGKETKI	KVVKNKV	APPFKE	AVV	EIMY	GEGIS	KTGEL	LKIAS	SDL	DII	KKAG	AWYSYK	311				
NTDB	id	228	SPD	RS09265	WP	001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGKETKI	KVVKNKV	APPFKE	AVV	EIMY	GEGIS	KTGEL	LKIAS	SDL	DII	KKAG	AWYSYK	311				
NTDB	id	194	SPR	RS08825	WP	001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGKETKI	KVVKNKV	APPFKE	AVV	EIMY	GEGIS	KTGEL	LKIAS	SDL	DII	KKAG	AWYSYK	311				
NTDB	id	159	SP	RS09750	WP	001085462.1	SVRLDVRG	NTQIKGTG	.DQKETN	VGKETKI	KVVKNKV	APPFKE	AVV	EIMY	GEGIS	KTGEL	LKIAS	SDL	DII	KKAG	AWYSYK	311				
NTDB	id	499	SM12261	RS08315	WP	078228268.1	SVRLDVRG	STQIKGTG	.DQKDTN	VGKETKI	KVVKNKV	APPFKE	AFV	EIMY	GEGIS	KTGEL	LKIAS	SDL	DII	KKAG	AWYSYK	311				
NTDB	id	527	SMSK321	RS11065	WP	001085454.1	SVRLDVRG	STQIKGTG	.DQKDTN	VGKETKI	KVVKNKV	APPFKE	AFV	EIMY	GEGIS	KTGEL	LKIAS	SDL	DII	KKAG	AWYSYK	311				
NTDB	id	408	SMU	RS09530	WP	002262392.1	SVRLDVRG	NTQIKGTG	.EQKDSN	IGKETKI	KVVKNKV	APPFKE	AFV	EIIY	GEGIS	RTGEL	VKIAS	SDL	GII	QKAG	AWYSYN	311				
NTDB	id	977570	MGAS37843	RS08910	WP	010922753.1	SVRLDVRG	TQTQIKGTG	.DQKDS	IGKETKI	KVVKNKV	APPFKE	VAE	EIMY	GEGIS	RTGEL	VKIAS	SDL	DII	QKAG	AWFSYN	311				
NTDB	id	453	Spy49	1753c	ACI62003.1		SVRLDVRG	TQTQIKGTG	.DQKDS	IGKETKI	KVVKNKV	APPFKE	VAE	EIMY	GEGIS	RTGEL	VKIAS	SDL	DII	QKAG	AWFSYN	311				
NTDB	id	625	LCA	RS02525	WP	011374196.1	TVRLEVR	RAETIKNGT	DM	IGNRARI	KVVKNKV	APPFKE	VAE	VDIMY	GGIS	RTGEL	VDMA	VEKDI	INKS	GSWYSY	294					
NTDB	id	115	BSU	16940	NP	389576.2	SVRLEVR	RAEQLKQGN	DV	MGNKTKI	KVVKNKV	APPFRT	AEV	VDIMY	GEGIS	KEGETI	DLGTEL	DI	VQKS	GSWYSY	292					
NTDB	id	1313	DR	RS12030	WP	010888966.1	SVRLDVR	KIGQ....	PTKVGND	AVANTVK	IKTVKNK	VAAPFKE	VELA	LVY	GKGF	DQLSD	LVGL	ADMD	DI	KKAG	CSFYSY	307				
NTDB	id	1245	Cj1673c	YP	002345041.1		SVRLDVR	KVAT....	L.KQNE	EPIGNRV	KVKV	KNVAP	PFRA	EFD	DMF	GEGIS	RE	GELIDY	GVKL	DI	VDKS	GAWFSYK	294			
NTDB	id	1214	NCTC11637	00359	SQJ03206.1		SVRIDIR	RIAA....	L.KQNE	EQHIGNRA	KA	KVVKNK	VAPPF	RAE	AFD	DMF	GEGIS	KEGETI	IDYGVKL	DI	VDKS	GAWLSYQ	296			
NTDB	id	1211	C694	RS00795	WP	000963128.1	SVRIDIR	RIAS....	L.KQNE	EQHIGNRA	KA	KVVKNK	VAPPF	RAE	AFD	DMF	GEGIS	KEGETI	IDYGVKL	DI	VDKS	GAWLSYQ	296			
NTDB	id	1334	RAOC	RS04870	WP	004918236.1	SVRIDIR	RRSLSD	TGKIKDKS	GEHIGNR	TKV	KVVKNK	VAPPF	RAE	AFD	DMY	GEGIS	VSKV	GEIIDL	VAT	DL	DIIQKS	GSWFSYQ	307		
NTDB	id	1389	A4U84	RS07560	WP	021112712.1	SVRLDIR	RCGV....	V.KDGE	IEGSE	TKVK	VVVKNK	VAPPF	REV	QFD	IMY	GEGIS	RMNELL	LILAE	ANGFI	KKSG	AWFSYD	310			
NTDB	id	1130	NGFG	RS03960	WP	003688695.1	SVRLDIR	RTGS....	I.KKGE	EV	LGN	ETRV	KVI	KNKV	APPF	RAE	FD	DILY	GEGIS	WE	GELID	IGVKN	DI	INKS	GAWYSYN	294
NTDB	id	1124	NGFG	RS03960	WP	003688695.1	SVRLDIR	RTGS....	I.KKGE	EV	LGN	ETRV	KVI	KNKV	APPF	RAE	FD	DILY	GEGIS	WE	GELID	IGVKN	DI	INKS	GAWYSYN	294
NTDB	id	1123	OK783	RS03845	WP	003688695.1	SVRLDIR	RTGS....	I.KKGE	EV	LGN	ETRV	KVI	KNKV	APPF	RAE	FD	DILY	GEGIS	WE	GELID	IGVKN	DI	INKS		

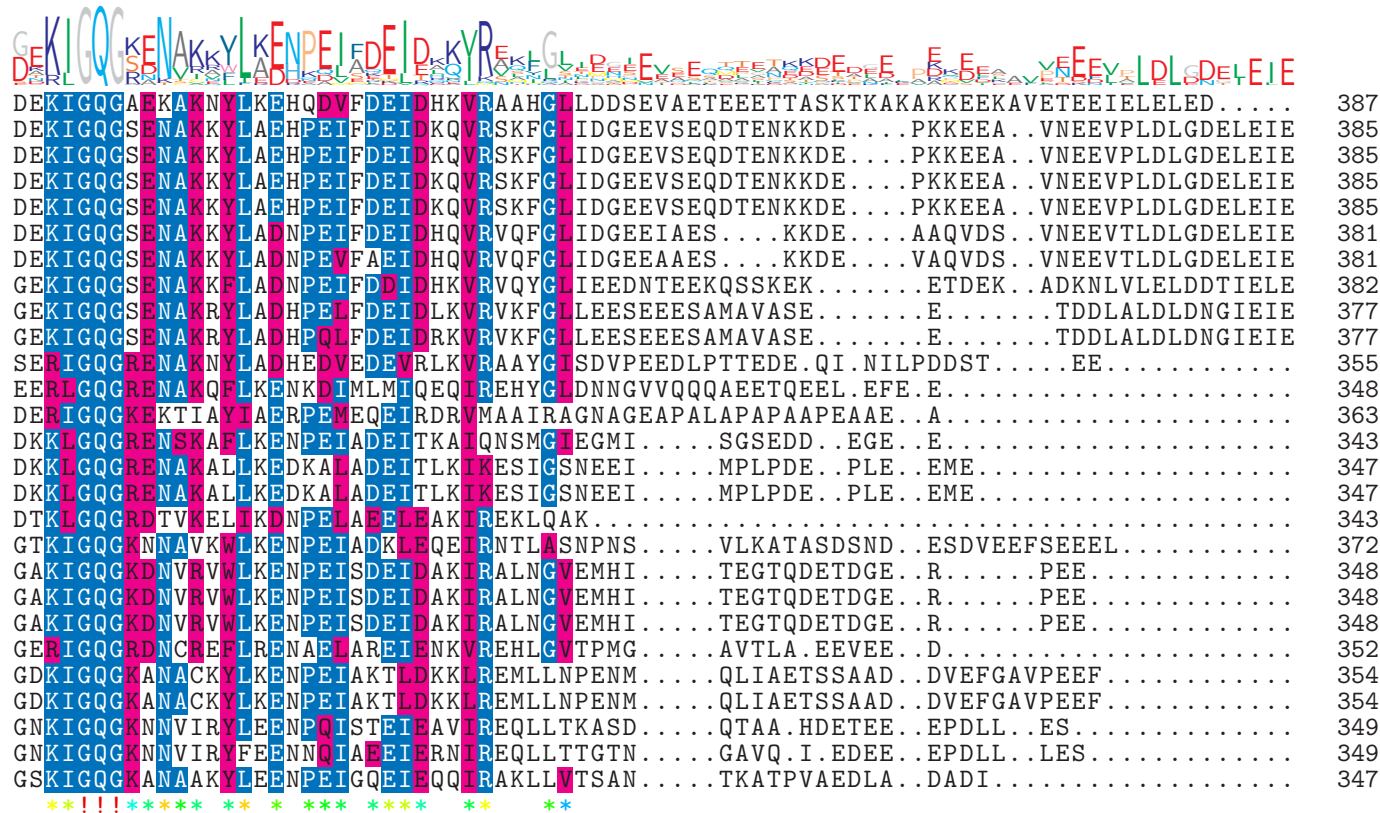
logo

```

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 408 SMU RS09530 WP 002262392.1
NTDB id 977570 MGAS37843 RS08910 WP 010922753.1
NTDB id 453 Spy49 1753c AC162003.1
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 115 BSU 16940 NP 389576.2
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 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 PSJM300 05545 AFN77183.1

```

consensus



logo

		IEE	
NTDB id 600 KW2 RS01765 WP 011675413.1	...	387	
NTDB id 269 KZH43 RS08665 WP 001085462.1	IEE	388	
NTDB id 228 SPD RS09265 WP 001085462.1	IEE	388	
NTDB id 194 SPR RS08825 WP 001085462.1	IEE	388	
NTDB id 159 SP RS09750 WP 001085462.1	IEE	388	
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEE	384	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEE	384	
NTDB id 408 SMU RS09530 WP 002262392.1	D..	383	
NTDB id 977570 MGAS37843 RS08910 WP 010922753.1	D..	378	
NTDB id 453 Spy49 1753c ACI62003.1	D..	378	
NTDB id 625 LCA RS02525 WP 011374196.1	...	355	
NTDB id 115 BSU 16940 NP 389576.2	...	348	
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 RA0C 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 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