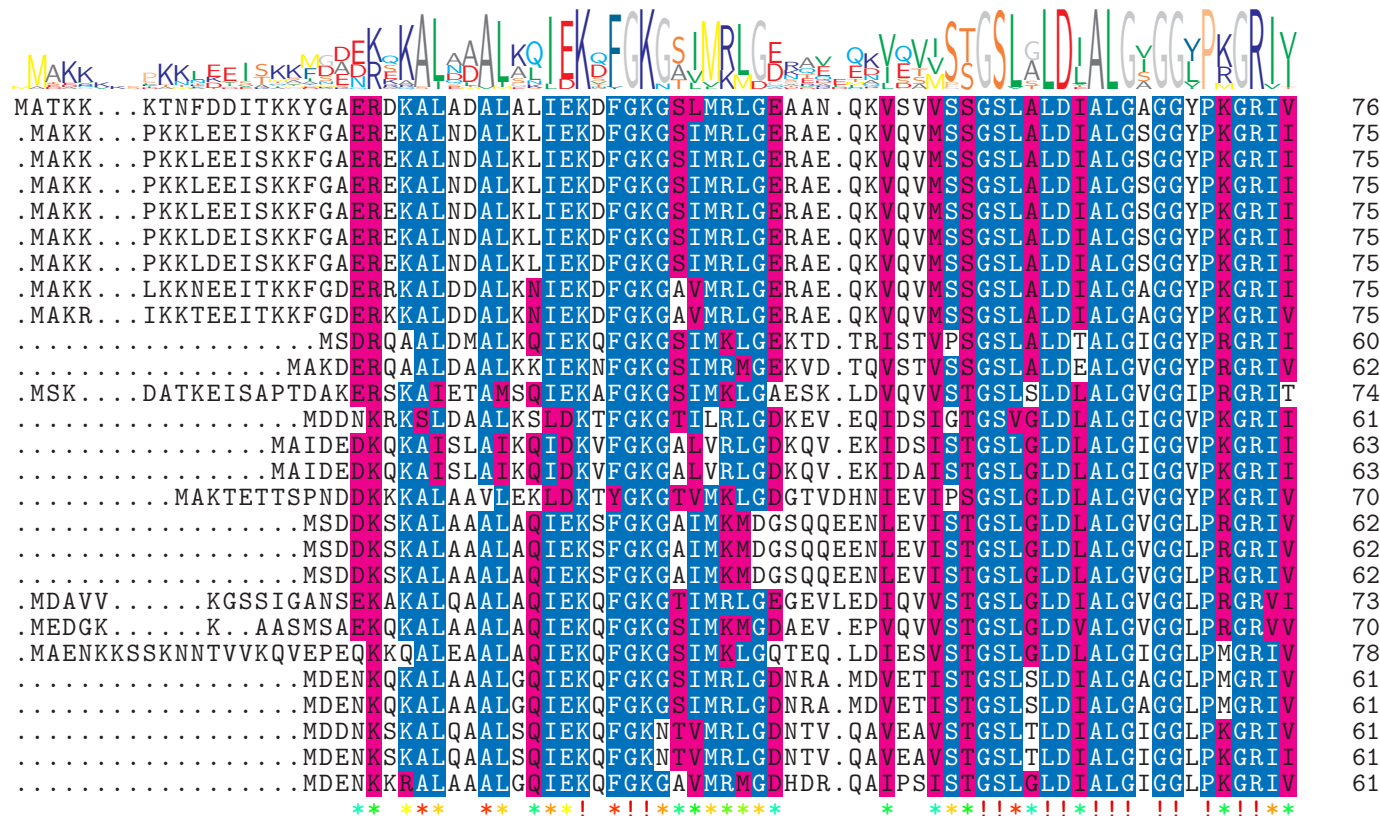


logo

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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1007901 ABL839 RS29180 WP 019653815.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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

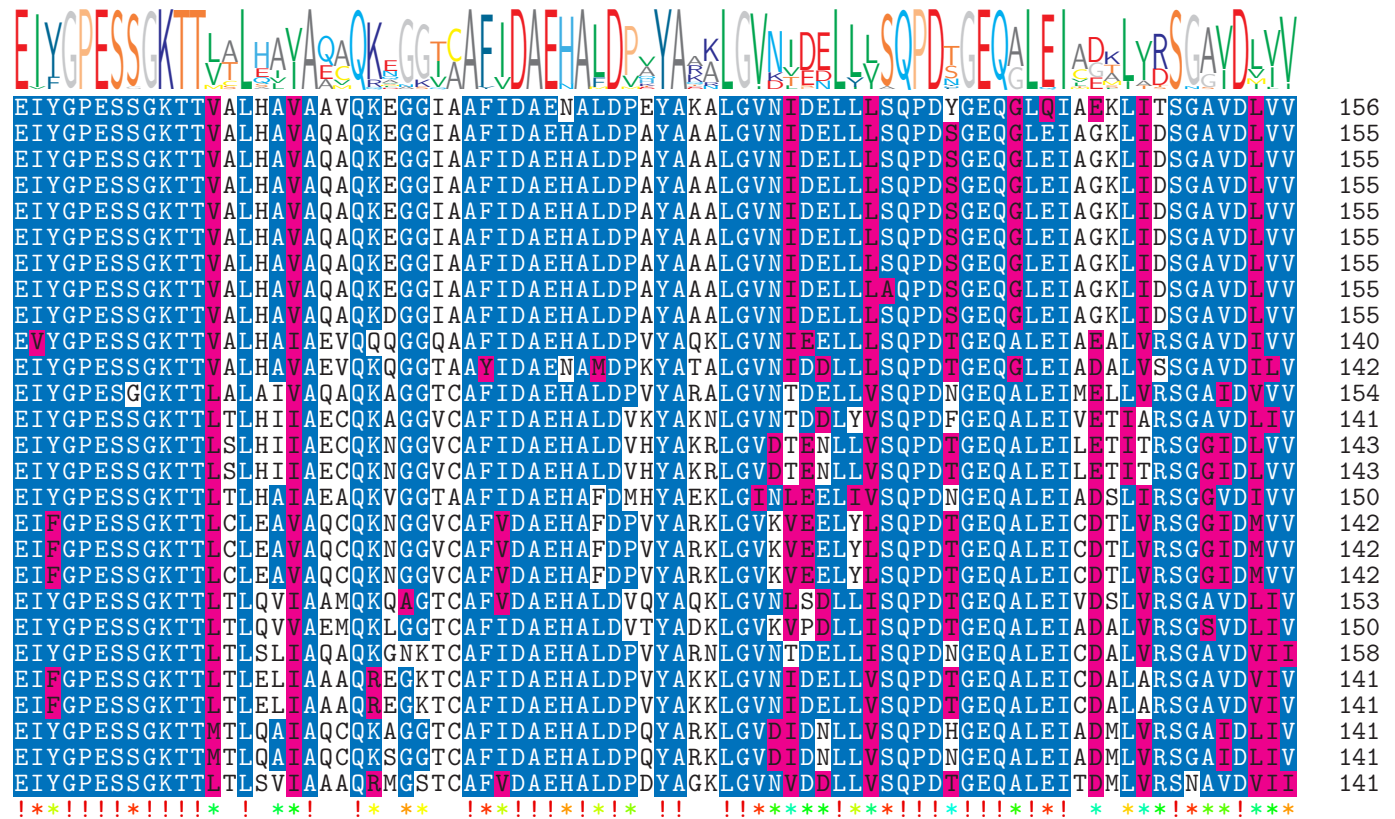
consensus



```

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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1007901 ABL839 RS29180 WP 019653815.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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 600 KW2 RS01765 WP 011675413.1	RLDVRG	STKIEEGS	.GDNKTQ	IGKI	TKIKVV	KNKVAPPF	KVALV	DIMF	GEGISST	GELIN	IAVEEG	I	IKKSGAW	FAYNDE	314			
NTDB id 269 KZH43 RS08665 WP 001085462.1	RLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVV	KNKVAPPF	KEAVVE	EIMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313			
NTDB id 228 SPD RS09265 WP 001085462.1	RLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVV	KNKVAPPF	KEAVVE	EIMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313			
NTDB id 194 SPR RS08825 WP 001085462.1	RLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVV	KNKVAPPF	KEAVVE	EIMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313			
NTDB id 159 SP RS09750 WP 001085462.1	RLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVV	KNKVAPPF	KEAVVE	EIMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313			
NTDB id 527 SMSK321 RS11065 WP 001085454.1	RLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVV	KNKVAPPF	KEAFVE	EIMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313			
NTDB id 499 SM12261 RS08315 WP 078228268.1	RLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVV	KNKVAPPF	KEAFVE	EIMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313			
NTDB id 453 Spy49 1753c ACI62003.1	RLDVRG	TTQIKGTG	.DQKDSS	IGKETK	IKVV	KNKVAPPF	KVAEVE	EIMY	GEGISRT	GELVK	IASDL	DIIQK	KAGAWFSY	NGE	313			
NTDB id 408 SMU RS09530 WP 002262392.1	RLDVRG	NTQIKGTG	.EQKDSN	IGKETK	IKVV	KNKVAPPF	KEAFVE	EIIY	GEGISRT	GELVK	IASDL	GIIQK	KAGAWYSY	NGE	313			
NTDB id 115 BSU 16940 NP 389576.2	RLEVR	RAEQLKQGN	DVM	GNKTKI	KVV	KNKVAPPF	RTAEVD	DIMY	GEGISKEGE	IIDL	LGTEL	DIVQK	SGSWSY	EEEE	294			
NTDB id 625 LCA RS02525 WP 011374196.1	RLEVR	RAETIKNGT	DM	IGNRARI	KVV	KNKVAPPF	KVAEVD	DIMY	GGISRT	GELVD	MAVEKD	IINKS	SGSWSY	SGSE	296			
NTDB id 1313 DR RS12030 WP 010888966.1	RLDVR	KIGQ....	PTKVG	NDAA	NTVKKI	KT	VKNKVA	APPKE	VELAL	LVY	GKGF	DQLS	DLVGL	AADM	DIIKKAGS	FSYSGDE	309	
NTDB id 1245 Cj1673c YP 002345041.1	RLDVR	KKVAT....	L.KQNE	EPI	GNRV	KV	KVVKNKVAPP	FRQAEF	DVMF	GEGLS	REGEL	IDYGV	KLDIV	DKSGAW	FSYKDK	296		
NTDB id 1211 C694 RS00795 WP 000963128.1	RIDIR	RIAS....	L.KQNE	QHI	GNRA	KA	KVVKNKVAPP	FRQAEF	DIMF	GEGISKEGE	IIDYGV	KLDIV	DKSGAW	LSYQDK	298			
NTDB id 1214 NCTC11637 00359 SQJ03206.1	RIDIR	RIAA....	L.KQNE	QHI	GNRA	KA	KVVKNKVAPP	FRQAEF	DIMF	GEGISKEGE	IIDYGV	KLDIV	DKSGAW	LSYQDK	298			
NTDB id 1334 RAOC RS04870 WP 004918236.1	RIDIR	RSLSDTG	KIKDKS	GEV	IGNR	TKV	KVVKNKVAPP	FKSAEF	DIMYG	GEGVSKV	GEILD	VATDL	DIIQK	SGSWFSY	QDT	309		
NTDB id 1130 NGFG RS03960 WP 003688695.1	RLDIR	RTGS....	I.KKG	EEV	LGNET	RVKVI	KNKVAPPFR	QAEF	DILY	GEGISWEGEL	IDIGV	KNDI	IINKS	GAWYSY	NGA	296		
NTDB id 1124 NGFG RS03960 WP 003688695.1	RLDIR	RTGS....	I.KKG	EEV	LGNET	RVKVI	KNKVAPPFR	QAEF	DILY	GEGISWEGEL	IDIGV	KNDI	IINKS	GAWYSY	NGA	296		
NTDB id 1123 OK783 RS03845 WP 003688695.1	RLDIR	RTGS....	I.KKG	EEV	LGNET	RVKVI	KNKVAPPFR	QAEF	DILY	GEGISWEGEL	IDIGV	KNDI	IINKS	GAWYSY	NGA	296		
NTDB id 1007901 ABL839 RS29180 WP 019653815.1	RLDIR	RIGT....	I.KKG	DEAI	GNETK	VKVV	KNKVSP	PPFKTAEF	DILF	GEGISREGE	IIDMG	VNAK	IIDK	SGAWY	AYNGE	307		
NTDB id 1427 RS RS02760 WP 011000510.1	RLDIR	RIGS....	I.KKG	DEV	VGN	ETKV	KVVKNKVAPP	FRQAEF	DILY	GAGVSR	EGEIID	LGVEAK	VVEK	SGAWYSY	NGE	304		
NTDB id 1389 A4U84 RS07560 WP 021112712.1	RLDIR	RCGV....	V.KDG	DEI	IGSE	TKV	KVVKNKVAPP	FRQAEF	DIMY	GEGISRM	NELLIL	AEANGF	I	IKKSGAW	FSYDGT	312		
NTDB id 1165 A1552VC RS01565 WP 000344154.1	RLDIR	RTGA....	I.KEG	EEV	VGN	ETRI	KVVKNK	IAAPFKE	ANTQ	IMY	QGFNR	REGEL	IDLG	VKHKM	MVEKSGAWYSY	NGD	295	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	RLDIR	RTGA....	I.KEG	EEV	VGN	ETRI	KVVKNK	IAAPFKE	ANTQ	IMY	QGFNR	REGEL	IDLG	VKHKM	MVEKSGAWYSY	NGD	295	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	RLDIR	RIGQ....	V.KEG	DEI	IGSE	TKV	KVVKNKM	APPFR	EAI	IFQ	ILY	GKGVN	QLGEL	VDLAV	QQNIVQ	KAGAWYSY	QGN	295
NTDB id 1074 ABD1 RS10195 WP 000344167.1	RLDIR	RIGQ....	V.KEG	DEI	IGSE	TKV	KVVKNKM	APPFR	EAI	IFQ	ILY	GKGVN	QLGEL	VDLAV	QQNIVQ	KAGAWYSY	QGN	295
NTDB id 1205 PSJM300 05545 AFN77183.1	RLDIR	RTGA....	V.KEG	DEV	VGS	ETRV	KVVKNKVAPP	FRQAEF	Q	ILY	GKGIY	RNGE	IIDL	LG	VQQGLVEK	SGAWY	AYKGS	295
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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1007901 ABL839 RS29180 WP 019653815.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
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

		EE	
NTDB id 600 KW2 RS01765 WP 011675413.1	..	387	
NTDB id 269 KZH43 RS08665 WP 001085462.1	EE	388	
NTDB id 228 SPD RS09265 WP 001085462.1	EE	388	
NTDB id 194 SPR RS08825 WP 001085462.1	EE	388	
NTDB id 159 SP RS09750 WP 001085462.1	EE	388	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	EE	384	
NTDB id 499 SM12261 RS08315 WP 078228268.1	EE	384	
NTDB id 453 Spy49 1753c ACI62003.1	..	378	
NTDB id 408 SMU RS09530 WP 002262392.1	..	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 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 1007901 ABL839 RS29180 WP 019653815.1	..	367	
NTDB id 1427 RS RS02760 WP 011000510.1	..	352	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	..	372	
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