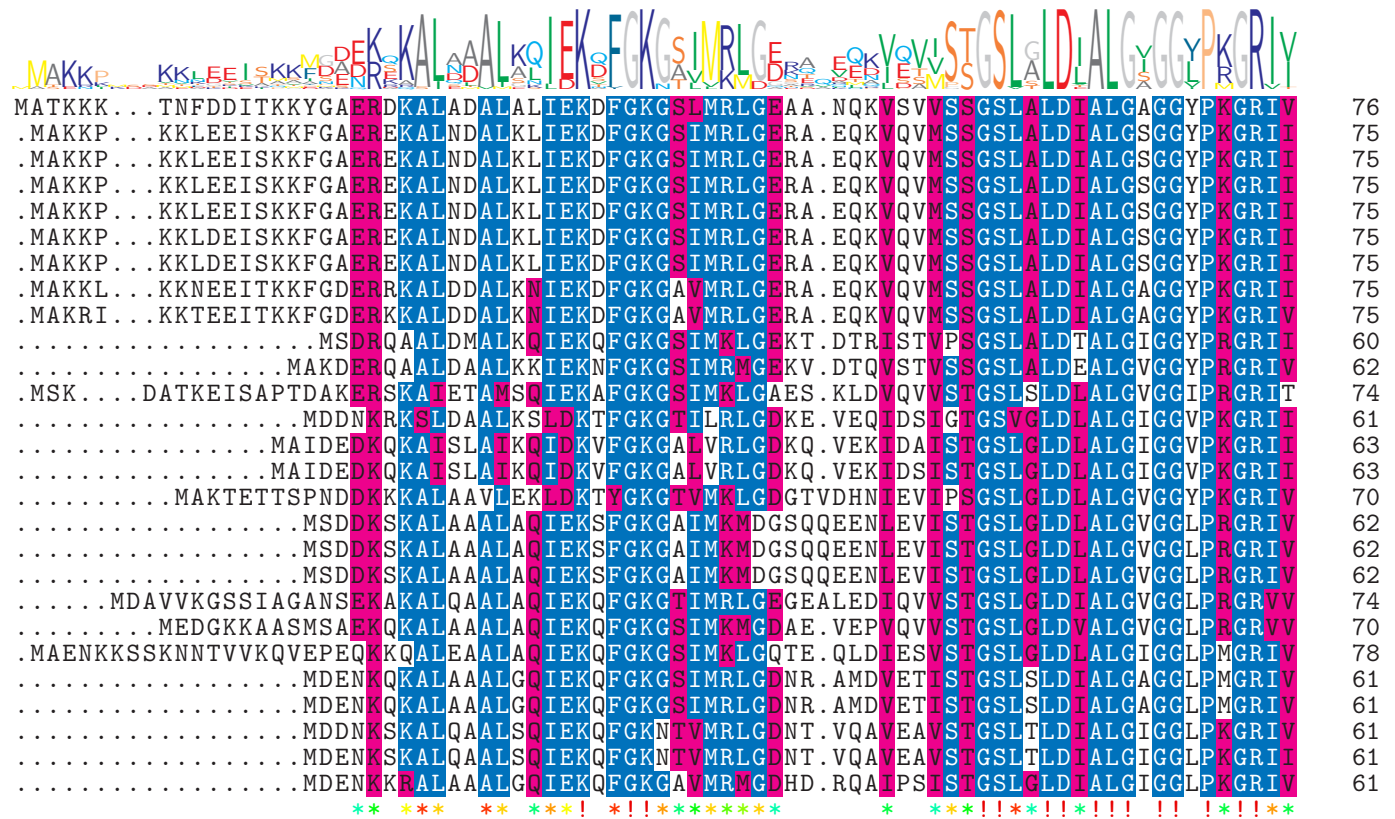


```

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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1044520 ACEN9J RS21350 WP 057593705.1
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

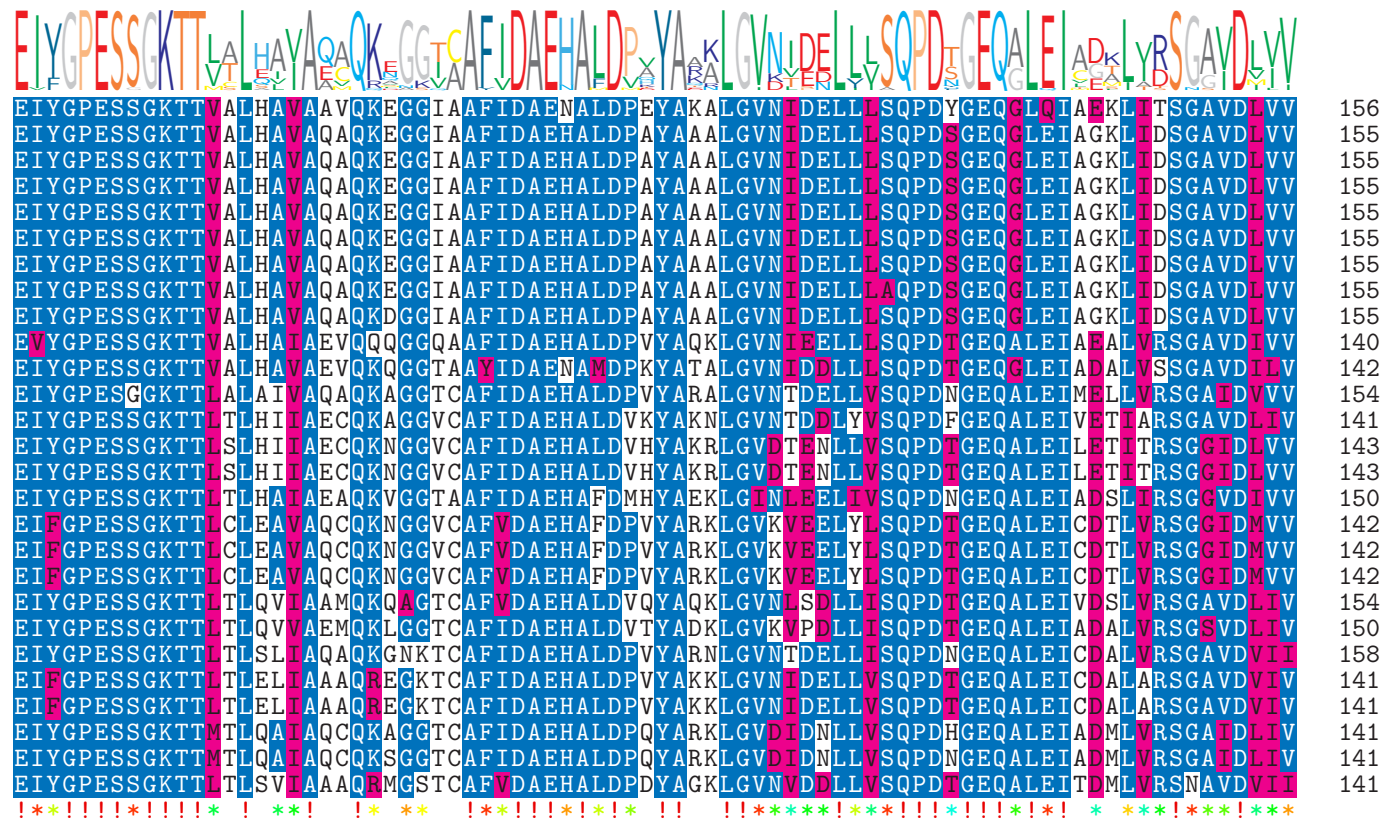
```



```

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 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 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1044520 ACEN9J RS21350 WP 057593705.1
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 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 000918236.1
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 1044520 ACEN9J RS21350 WP 057593705.1
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 PSJ3M300 05545 AFN77183.1

```

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	IMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313	
NTDB id 228 SPD RS09265 WP 001085462.1	RLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVV	KNKVAPPF	KEAVVE	IMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313	
NTDB id 194 SPR RS08825 WP 001085462.1	RLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVV	KNKVAPPF	KEAVVE	IMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313	
NTDB id 159 SP RS09750 WP 001085462.1	RLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVV	KNKVAPPF	KEAVVE	IMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313	
NTDB id 499 SM12261 RS08315 WP 078228268.1	RLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVV	KNKVAPPF	KEAFVE	IMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	RLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVV	KNKVAPPF	KEAFVE	IMY	GEGISKT	GELLK	IASDL	DIIKK	KAGAWYSY	KDE	313	
NTDB id 453 Spy49 1753c ACI62003.1	RLDVRG	TTQIKGTG	.DQKDSS	IGKETK	IKVV	KNKVAPPF	KVAEVE	IMY	GEGISRT	GELVK	IASDL	DIIQK	KAGAWFSY	NGE	313	
NTDB id 408 SMU RS09530 WP 002262392.1	RLDVRG	NTQIKGTG	.EQKDSN	IGKETK	IKVV	KNKVAPPF	KEAFVE	IIY	GEGISRT	GELVK	IASDL	GIIQK	KAGAWSY	NGE	313	
NTDB id 115 BSU 16940 NP 389576.2	RLEVR	RAEQLKQGN	DM	GNKTKI	KVV	KNKVAPPF	RTAEVD	IMY	GEGISKEGE	IIDL	LGTEL	DIVQK	SGSWSY	EEEE	294	
NTDB id 625 LCA RS02525 WP 011374196.1	RLEVR	RAETIKNGT	DM	GNRARI	KVV	KNKVAPPF	KVAEVD	IMY	QGISRT	GELVD	MAVEKD	IINKS	SGSWSY	SGSE	296	
NTDB id 1313 DR RS12030 WP 010888966.1	RLDVR	KIGQ....	PTKVGND	AVANTV	KIKT	VKNKVA	APFKEVELA	L	VY	GKGF	DLQSL	DLVG	LAADMD	IINKS	SGFSYSGDE	309
NTDB id 1245 Cj1673c YP 002345041.1	RLDVR	KKVAT....	L.KQNE	EPIGN	RVKV	VVKNKVAPPF	RQAEFD	DVMF	GEGLSR	EGELID	YGVKL	DIVDK	SGAWFSY	KDK	296	
NTDB id 1214 NCTC11637 00359 SQJ03206.1	RIDIR	RIAA....	L.KQNE	QHIGN	RAKA	KVVKNKVAPPF	REAEFD	DIMF	GEGISKEGE	IIDY	GVKLD	DIVDK	SGAWLSY	QDK	298	
NTDB id 1211 C694 RS00795 WP 000963128.1	RIDIR	RIAS....	L.KQNE	QHIGN	RAKA	KVVKNKVAPPF	REAEFD	DIMF	GEGISKEGE	IIDY	GVKLD	DIVDK	SGAWLSY	QDK	298	
NTDB id 1334 RAOC RS04870 WP 004918236.1	RIDIR	RSLSDTG	KIKDKS	GEVIGN	RTKV	VVKNKVAPPF	KSAEFD	IMY	GEGVSKV	GEILD	VATDL	DIIQK	SGSWFSY	QDT	309	
NTDB id 1130 NGFG RS03960 WP 003688695.1	RLDIR	RTGS....	I.KKG	EEVLGN	ETRV	KVIKNKVAPPF	RQAEFD	DILY	GEGISWEGEL	IDIG	VKND	IINKS	GAWYSY	NGA	296	
NTDB id 1124 NGFG RS03960 WP 003688695.1	RLDIR	RTGS....	I.KKG	EEVLGN	ETRV	KVIKNKVAPPF	RQAEFD	DILY	GEGISWEGEL	IDIG	VKND	IINKS	GAWYSY	NGA	296	
NTDB id 1123 OK783 RS03845 WP 003688695.1	RLDIR	RTGS....	I.KKG	EEVLGN	ETRV	KVIKNKVAPPF	RQAEFD	DILY	GEGISWEGEL	IDIG	VKND	IINKS	GAWYSY	NGA	296	
NTDB id 1044520 ACEN9J RS21350 WP 057593705.1	RLDIR	RIGHT....	I.KKG	DEAIGN	ETKV	KVVKNKV	SPPFKTAEF	DILF	GEGISREGE	IIDM	GVTA	IIDK	SGAWY	AYNGE	308	
NTDB id 1427 RS RS02760 WP 011000510.1	RLDIR	RIGS....	I.KKG	DEVVGN	ETKV	KVVKNKVAPPF	REAFID	DILY	GAGVSR	EGEIID	LGVEAK	VVEKS	SGAWYSY	NGE	304	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	RLDIR	RCGV....	V.KDG	DEIIG	SETKV	KVVKNKVAPPF	REVQF	DIMY	GEGISRMNELL	ILAE	ANGFI	IKKSGAWFSY	DGT	312		
NTDB id 1165 A1552VC RS01565 WP 000344154.1	RLDIR	RTGA....	I.KEG	EEVVG	NETRI	KVVKNK	IAAPFKEANTQ	IMY	QG	GFNREGEL	IDLG	VKHK	MVEKS	SGAWYSYNGD	295	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	RLDIR	RTGA....	I.KEG	EEVVG	NETRI	KVVKNK	IAAPFKEANTQ	IMY	QG	GFNREGEL	IDLG	VKHK	MVEKS	SGAWYSYNGD	295	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	RLDIR	RIGQ....	V.KEG	DEIIG	SETKV	KVVKNKM	MAPPFREAIFQ	ILY	GKGVN	QLGELVD	LAVQQ	NIVQK	KAGAWYSY	QGN	295	
NTDB id 1074 ABD1 RS10195 WP 000344167.1	RLDIR	RIGQ....	V.KEG	DEIIG	SETKV	KVVKNKM	MAPPFKEAIFQ	ILY	GKGTN	QLGELVD	LAVQQ	DIVQK	KAGAWYSY	QGN	295	
NTDB id 1205 PSJM300 05545 AFN77183.1	RLDIR	RTGA....	V.KEG	DEVVGS	ETRV	KVVKNKVAPPF	RQAEFQ	ILY	GKGIY	RNGEIID	LG	VQQGL	LVEKS	SGAWYAYKGS	295	
consensus	!***!*		*	*	*	*****!*****!*	*	*****!*****	*****	***	***	!*****!				

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	E	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	E	388
NTDB id 228 SPD RS09265 WP 001085462.1	E	388
NTDB id 194 SPR RS08825 WP 001085462.1	E	388
NTDB id 159 SP RS09750 WP 001085462.1	E	388
NTDB id 499 SM12261 RS08315 WP 078228268.1	E	384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	E	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 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 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 1044520 ACEN9J RS21350 WP 057593705.1	.	353
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