

```

NTDB id 1313 DR RS12030 WP 010888966.1
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
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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 625 LCA RS02525 WP 011374196.1
NTDB id 366837 FGY92 RS07110 WP 002448773.1
NTDB id 115 BSU 16940 NP 389576.2

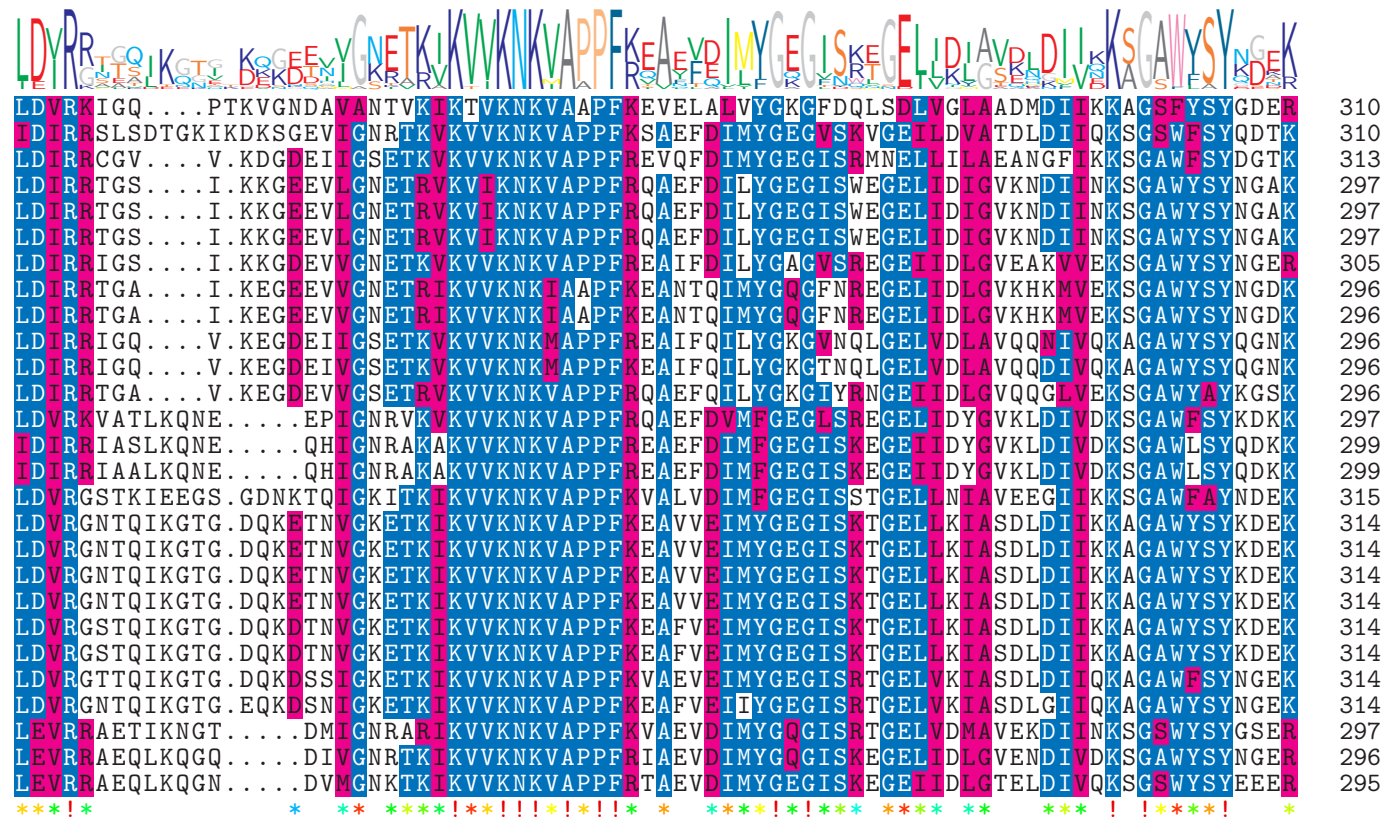
```

	MA	KK	KK	EE	SK	KK	FD	EN	RE	K	K	AL	AA	AL	KQ	IE	FK	GS	IM	RL	E	AE	QK	ES	VM	ST	SL	LD	AL	GL	GG	Y	PK	GR	IE																									
...MSKD.ATKEISAPTDAK	E	R	S	K	A	I	E	T	A	M	S	Q	I	E	K	A	F	G	K	G	S	I	M	K	L	G	A	E	.	S	K	L	D	V	Q	V	S	T	G	S	L	S	L	D	A	L	G	V	G	G	I	P	R	G	R	I	T	E	75	
.....MAKTETTSPPND	D	K	K	A	L	A	A	V	L	E	K	D	K	T	Y	G	K	G	T	V	M	K	L	G	D	T	V	D	H	N	E	V	I	P	S	G	S	L	G	L	D	A	L	G	V	G	G	P	K	G	R	I	V	E	71					
MAENKKSSKNNTTVVKQVEPQKQ	F	G	K	E	A	S	I	M	K	L	G	T	V	D	H	N	E	V	I	P	S	G	S	L	G	L	D	A	L	G	I	G	G	L	P	M	G	R	I	V	E	79																		
.....MSD	D	K	S	K	A	L	A	A	A	L	A	Q	I	E	K	S	F	G	K	G	A	I	M	K	M	D	G	S	Q	Q	E	E	N	L	E	V	I	S	T	G	S	L	G	L	D	A	L	G	V	G	G	L	P	R	G	R	I	V	E	63
.....MSD	D	K	S	K	A	L	A	A	A	L	A	Q	I	E	K	S	F	G	K	G	A	I	M	K	M	D	G	S	Q	Q	E	E	N	L	E	V	I	S	T	G	S	L	G	L	D	A	L	G	V	G	G	L	P	R	G	R	I	V	E	63
.....MSD	D	K	S	K	A	L	A	A	A	L	A	Q	I	E	K	S	F	G	K	G	A	I	M	K	M	D	G	S	Q	Q	E	E	N	L	E	V	I	S	T	G	S	L	G	L	D	A	L	G	V	G	G	L	P	R	G	R	I	V	E	63
MEDG.....KKAASMSA	E	K	Q	K	A	L	A	A	A	L	A	Q	I	E	K	Q	F	G	K	G	S	I	M	K	M	D	A	E	V	E	P	V	Q	V	S	T	G	S	L	G	L	D	A	L	G	V	G	G	L	P	R	G	R	I	V	E	71			
.....MDEN	K	Q	K	A	L	A	A	L	G	Q	I	E	K	Q	F	G	K	G	S	I	M	R	L	G	D	N	.	R	A	M	D	V	E	T	I	S	T	G	S	L	S	L	D	I	A	L	G	A	G	G	L	P	M	G	R	I	V	E	62	
.....MDEN	K	Q	K	A	L	A	A	L	G	Q	I	E	K	Q	F	G	K	G	S	I	M	R	L	G	D	N	.	R	A	M	D	V	E	T	I	S	T	G	S	L	S	L	D	I	A	L	G	A	G	G	L	P	M	G	R	I	V	E	62	
.....MDDN	K	S	K	A	L	Q	A	A	L	S	Q	I	E	K	Q	F	G	K	N	T	V	M	R	L	G	D	N	.	T	V	Q	A	V	E	A	V	S	T	G	S	L	T	L	D	I	A	L	G	I	G	G	L	P	K	G	R	I	V	E	62
.....MDEN	K	S	K	A	L	Q	A	A	L	S	Q	I	E	K	Q	F	G	K	N	T	V	M	R	L	G	D	N	.	T	V	Q	A	V	E	A	V	S	T	G	S	L	T	L	D	I	A	L	G	I	G	G	L	P	K	G	R	I	V	E	62
.....MDEN	K	R	A	L	A	A	L	G	Q	I	E	K	Q	F	G	K	G	A	V	M	R	M	G	D	H	.	D	R	Q	A	I	P	S	I	S	T	G	S	L	G	L	D	I	A	L	G	I	G	G	L	P	K	G	R	I	V	E	62		
.....MDDN	K	R	K	S	L	D	A	A	L	K	S	L	D	K	T	F	G	K	G	T	I	L	R	L	G	D	K	.	E	V	E																													


```

NTDB id 1313 DR RS12030 WP 010888966.1
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
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
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 625 LCA RS02525 WP 011374196.1
NTDB id 366837 FGY92 RS07110 WP 002448773.1
NTDB id 115 BSU 16940 NP 389576.2
consensus

```



logo

NTDB id 1313 DR RS12030 WP 010888966.1	IGQGKEKTIA	YIAERP	PEMEQEIRDR	VMAAIRAGNAGEAPALAPAP	AA	PEAAEA	363
NTDB id 1334 RAOC RS04870 WP 004918236.1	LGQGRD	TVKELIK	DNPELA	EELEAK	IREKLQAK		343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	IGQGGKNN	AVKWLKEN	PEIADKLE	QEI	RNTLASNPNSVLKATASDSNDES	DVEEFSEEL	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	IGQGGKDN	VRVWLKEN	PEISDEID	AKIRALNG	VEMHITEGTQDET	DGER	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	IGQGGKDN	VRVWLKEN	PEISDEID	AKIRALNG	VEMHITEGTQDET	DGER	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	IGQGGKDN	VRVWLKEN	PEISDEID	AKIRALNG	VEMHITEGTQDET	DGER	348
NTDB id 1427 RS RS02760 WP 011000510.1	IGQGRD	NCREFL	RENAEL	AREIENK	VREHLGV	TPMGAVTLA	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	IGQGGK	ANACKYLKEN	PEIAKTLD	KKLREMLLN	PENMQLIAETSSAADD	VEFGAVPEEF	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	IGQGGK	ANACKYLKEN	PEIAKTLD	KKLREMLLN	PENMQLIAETSSAADD	VEFGAVPEEF	354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	IGQGGKNN	VIRYLEEN	PQISTE	IEAVIREQLL	TKASDQTAA	HDETEEEP	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	IGQGGKNN	VIRYFEEN	NQIAEE	IERNIREQLL	TTGTNGAVQ	I	349
NTDB id 1205 PSJM300 05545 AFN77183.1	IGQGGKANA	AKYLEEN	PEIGQE	IEQQIRAKLL	VTSANTKATPVAED	LADADI	347
NTDB id 1245 Cj1673c YP 002345041.1	LGQGRENS	KAFLEN	PEIADE	ITKAIQNSMG	IEGMISG	SEDDE	343
NTDB id 1211 C694 RS00795 WP 000963128.1	LGQGRENA	KALLKED	KALADE	ITLKI	KESIGSNEE	IMPLPDEP	347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	LGQGRENA	KALLKED	KALADE	ITLKI	KESIGSNEE	IMPLPDEP	347
NTDB id 600 KW2 RS01765 WP 011675413.1	IGQGAEK	KAKNYLKE	HQDV	FDEIDHKV	RAAHGL	DDSEVAETEE	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	IGQGS	ENAKKYLA	EHPEIF	DEIDKQ	VRSKFGL	IDGEEVSEQ	387
NTDB id 228 SPD RS09265 WP 001085462.1	IGQGS	ENAKKYLA	EHPEIF	DEIDKQ	VRSKFGL	IDGEEVSEQ	387
NTDB id 194 SPR RS08825 WP 001085462.1	IGQGS	ENAKKYLA	EHPEIF	DEIDKQ	VRSKFGL	IDGEEVSEQ	387
NTDB id 159 SP RS09750 WP 001085462.1	IGQGS	ENAKKYLA	EHPEIF	DEIDKQ	VRSKFGL	IDGEEVSEQ	387
NTDB id 499 SM12261 RS08315 WP 078228268.1	IGQGS	ENAKKYLA	DNPEIF	DEIDHQ	VRVQFGL	IDGEEIAES	383
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IGQGS	ENAKKYLA	DNPEVFAE	IDHQ	VRVQFGL	IDGEEAAES	383
NTDB id 453 Spy49 1753c ACI62003.1	IGQGS	ENAKRYLA	DHPQLF	DEIDRK	VRVKFGL	LEESEES	378
NTDB id 408 SMU RS09530 WP 002262392.1	IGQGS	ENAKKFLA	DNPEIF	DDIDHK	VRVQYGL	IEEDNTEEK	383
NTDB id 625 LCA RS02525 WP 011374196.1	IGQGRENA	KNYLA	DHEDVE	DEVRLK	VRAAYGIS	DVPEEDLPTTE	355
NTDB id 366837 FGY92 RS07110 WP 002448773.1	MGQGGKEN	VKTYLKEN	PQIKDE	IDRK	LREKLG	IFDGDVEENED	348
NTDB id 115 BSU 16940 NP 389576.2	LGQGRENA	KQFLKEN	KDIM	LMIQE	QIREHYGL	DNNGVVQQQA	348
consensus	***	***	***	***	***	***	

logo

NTDB id 1313 DR RS12030 WP 010888966.1	.	363
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 1022 ACIAD RS06390 WP 004925639.1	.	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.	349
NTDB id 1205 PSJM300 05545 AFN77183.1	.	347
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 600 KW2 RS01765 WP 011675413.1	.	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 625 LCA RS02525 WP 011374196.1	.	355
NTDB id 366837 FGY92 RS07110 WP 002448773.1	.	348
NTDB id 115 BSU 16940 NP 389576.2	.	348

consensus

 non conserved
 similar
 ≥ 50% conserved