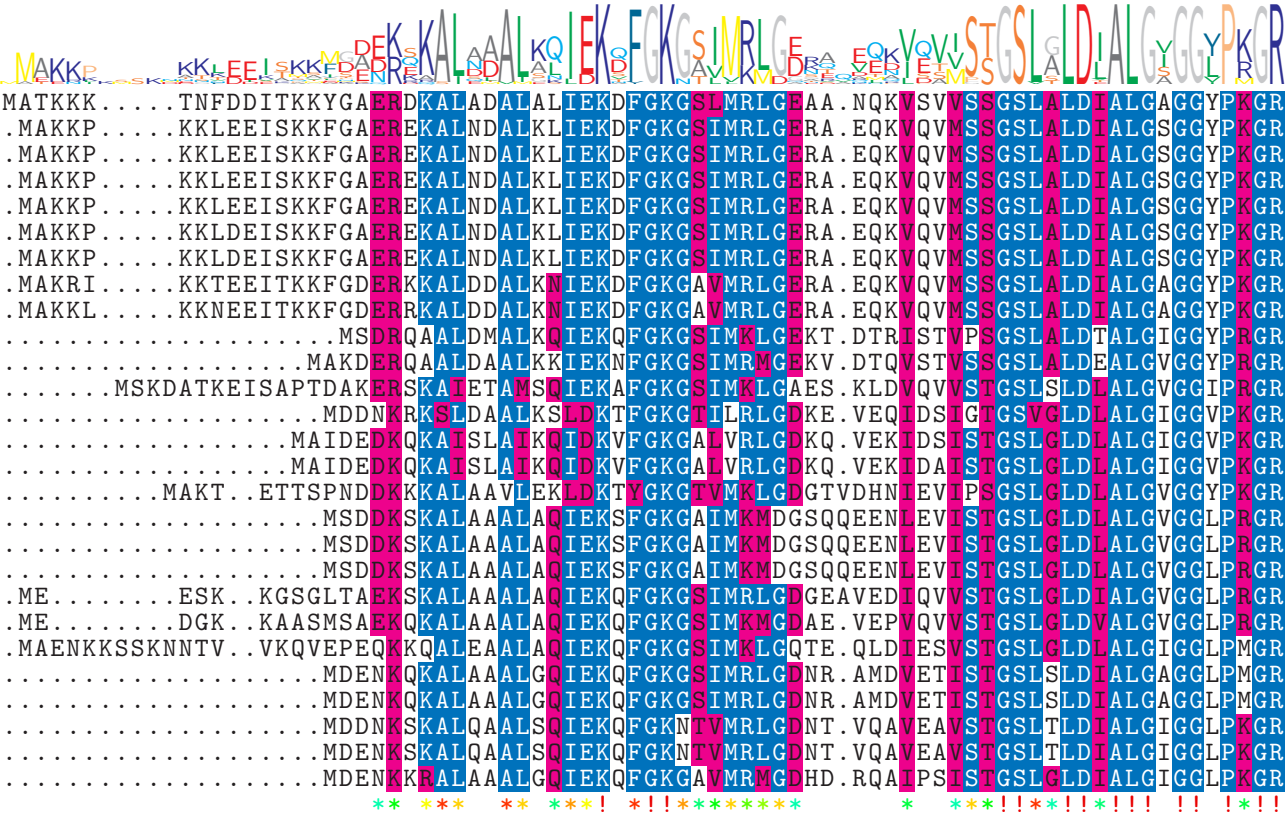


logo

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 453 Spy49 1753c ACI62003.1
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 208530 BOC57 RS15055 WP 004189458.1
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

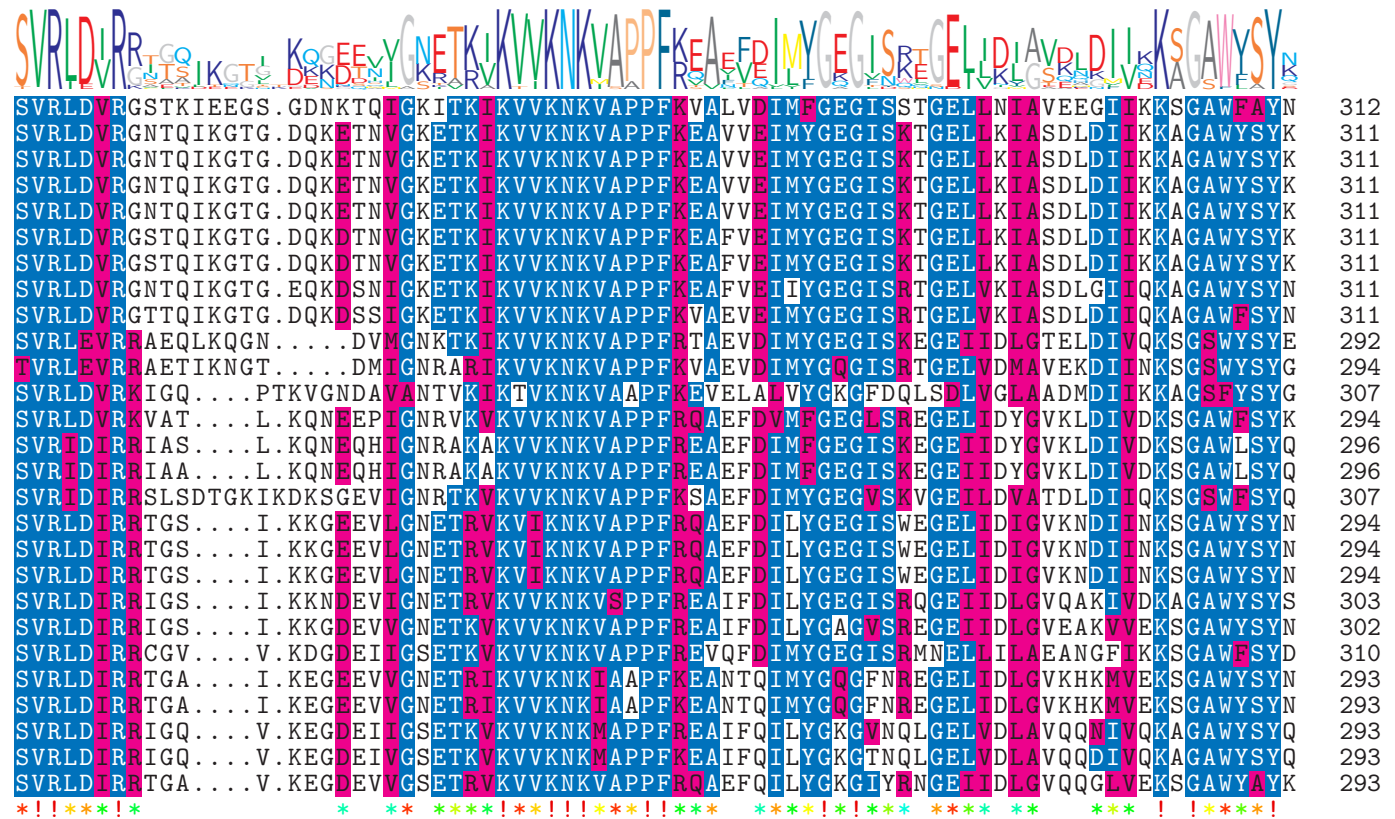


74
73
73
73
73
73
73
73
73
58
60
72
59
61
61
68
60
60
60
69
68
76
59
59
59
59
59


```

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 453 Spy49 1753c ACI62003.1
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 208530 BOC57 RS15055 WP 004189458.1
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	DEKIGQGA	EKAKNYLKEHQDVFD	DEIDHKVRAAHG	LDDSEVAETEEETT	ASKTKAKAKKEEK	AVETEEIELELED		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE	PKKEEA	..VNEEVPLDLGDELEIE	385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE	PKKEEA	..VNEEVPLDLGDELEIE	385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE	PKKEEA	..VNEEVPLDLGDELEIE	385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTEN	KKDE	PKKEEA	..VNEEVPLDLGDELEIE	385
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLADNPEIF	DEIDHQVRVQFGL	IDGEEIAES	KKDE	AAQVDS	..VNEEVTLDLGDELEIE	381
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLADNPEVFAE	IDHQVRVQFGL	IDGEEAAES	KKDE	VAQVDS	..VNEEVTLDLGDELEIE	381
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEDNTEEKQSSKEK	ETDEK	..ADKNLVLELDDTIELE		382
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEESAMAVASE	E	TDDLALDLNNGIEIE		377
NTDB id 115 BSU 16940 NP 389576.2	EERLGQGR	ENAKQFLKENKDIMLMI	QEQIREHYGL	DNNGVVQQAEETQEEL	EFEE	E		348
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQGR	ENAKNYLADHEDVE	DEVRLKVRAAYG	ISDVPPEEDLPTTEDE	QI	NILPDDST	EE	355
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQGK	EKTIAIYIAERP	EMEQEIRDRVMAAIR	AGNAGEAPALAPAPAAP	EAA	EA		363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGQGR	ENSKAFLKENPEIA	DEITKAIQNSMG	IEGMIS	GSED	DEG	EE	343
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGQGR	ENAKALLKEDKALADE	ITLKIKESIGSNEEIM	PLPD	EPL	EEME		347
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGQGR	ENAKALLKEDKALADE	ITLKIKESIGSNEEIM	PLPD	EPL	EEME		347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGQR	DTVRELKDNPELA	EELAKIREKLQAK					343
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQGD	NVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT	EGTQD	ETD	GER	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQGD	NVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT	EGTQD	ETD	GER	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQGD	NVRVWLKENPEIS	DEIDAKIRALNGV	EMHIT	EGTQD	ETD	GER	348
NTDB id 208530 BOC57 RS15055 WP 004189458.1	GEKIGQGD	NAREFLRENPEIARE	IEENRIRESLGV	AAMPQ	GAGSEA	EIM	DEE	356
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQGR	DNCREFLRENAELARE	IEENKVREHLGV	TPMGA	VT	LAEEV	EED	352
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQGD	KNNVAVKWLKENPEIA	DKLEQEI	RNTLASNPNSV	LKATAS	DSN	DESDVEEFSEEL	372
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQGD	KANACKYLVKENPEIA	AKTLDKKLREMLLN	PENMQ	LIAETSSAA	DDVEFGAVPEEF		354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQGD	KANACKYLVKENPEIA	AKTLDKKLREMLLN	PENMQ	LIAETSSAA	DDVEFGAVPEEF		354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQGD	KNNVIRYLEENPQISTE	IEAVIREQLLTK	ASDQ	TAA	HDETE	EEDLL	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQGD	KNNVIRYFEENNQIAE	EIERNIREQLLT	TGTNG	AVQ	IEDE	EEDLL	349
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQGD	KANAACKYLEENPEIG	QIEEQIRAKLL	VTSANT	KATPVA	EEDL	ADADI	347
consensus	***!!!*****	**	*****	*****	**	**	*	*

logo

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 453 Spy49 1753c ACI62003.1	D..	378
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 208530 BOC57 RS15055 WP 004189458.1	...	356
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