

logo



NTDB id 600 KW2 RS01765 WP 011675413.1	MATKKK....TNFDDITKKYGAERDKALADALALIEKD	FGKGSIMRLGER	.ANQKVS	VSSGSLALDI	ALGAGGYPKGR	74	
NTDB id 269 KZH43 RS08665 WP 001085462.1	.MAKKP....KKLEEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73	
NTDB id 228 SPD RS09265 WP 001085462.1	.MAKKP....KKLEEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73	
NTDB id 194 SPR RS08825 WP 001085462.1	.MAKKP....KKLEEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73	
NTDB id 159 SP RS09750 WP 001085462.1	.MAKKP....KKLEEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	.MAKKP....KKLDEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73	
NTDB id 499 SM12261 RS08315 WP 078228268.1	.MAKKP....KKLDEISKKFGE	EREKALNDALKLIEKD	FGKGSIMRLGER	.AEQKVQVMSSGSLALDI	ALGSGGYPKGR	73	
NTDB id 453 Spy49 1753c ACI62003.1	.MAKKL....KKNEEITKKFGE	DERKALDDALKNIEKD	FGKGVMLRGER	.AEQKVQVMSSGSLALDI	ALGAGGYPKGR	73	
NTDB id 408 SMU RS09530 WP 002262392.1	.MAKRI....KKTEEITKKFGE	DERKALDDALKNIEKD	FGKGVMLRGER	.AEQKVQVMSSGSLALDI	ALGAGGYPKGR	73	
NTDB id 115 BSU 16940 NP 389576.2	.....MSDRQAALDMALKQIEKQ	FGKGSIMKLG	TDTRISTVPSGSLALDI	TALGIGGYPKGR	58		
NTDB id 625 LCA RS02525 WP 011374196.1	.....MAKDERQAALDAALKKIEKN	FGKGSIMRMGEK	VDTQVSTVSSGSLALDEAL	GVGGYPKGR	60		
NTDB id 1313 DR RS12030 WP 010888966.1	.....MSKDATKEISAPTDAKERSKAT	ETAMSQIEKAFGKGSIMKLGAE	SKLDVQVVSTGSLSLDL	ALGVGGIPKGR	72		
NTDB id 1245 Cj1673c YP 002345041.1	.....MDNKRKSLDAALKS	LDKTFGKGTILRLGDK	EVEQIDSIGTGSVGLDL	ALGIGGVPKGR	59		
NTDB id 1214 NCTC11637 00359 SQJ03206.1	.....MAIDEDKQKATISLAIKQID	KVFGKGAIVRLGDK	QVEKIDAI	ISTGSLGLDL	ALGIGGVPKGR	61	
NTDB id 1211 C694 RS00795 WP 000963128.1	.....MAIDEDKQKATISLAIKQID	KVFGKGAIVRLGDK	QVEKIDAI	ISTGSLGLDL	ALGIGGVPKGR	61	
NTDB id 1334 RAOC RS04870 WP 004918236.1	.....MAKT..ETTSPNDDKKK	ALAAVLEKLDKTYGKGTVMKLG	GTVDHNI	IEVIPS	SGSLGLDL	ALGVGGYPKGR	68
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.MAENKKS	SKNNTV.VKQVEPEQKKQ	ALEAALAIQIEKQ	FGKGSIMKLG	QTEQLDIESVSTGSLGLDL	ALGIGGLPMGR	76
NTDB id 1130 NGFG RS03960 WP 003688695.1	.....MSDDKSKALAAALAIQIEKS	FGKGAIMKMDGSQ	QEEENLEVISTGSLGLDL	ALGVGGLPRGR	60		
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NTDB id 1123 OK783 RS03845 WP 003688695.1	.....MSDDKSKALAAALAIQIEKS	FGKGAIMKMDGSQ	QEEENLEVISTGSLGLDL	ALGVGGLPRGR	60		
NTDB id 1427 RS RS02760 WP 011000510.1	.MED.....GK..KAASMSAEKQ	KALAAALAIQIEKQ	FGKGSIMKMDA	.EVEPVQV	VSTGSLGLDVALGVGGLPRGR	68	
NTDB id 72665 SSYIS1 RS13380 WP 149590919.1	.....MAIDENKQKALAAALGQIEKQ	FGKGSIMRLGED	.RSMDVET	ISTGSLSLDI	ALGAGGLPMGR	61	
NTDB id 1165 A1552VC RS01565 WP 000344154.1	.....MDENKQKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSLSLDI	ALGAGGLPMGR	59	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	.....MDENKQKALAAALGQIEKQ	FGKGSIMRLGDN	.RAMDVET	ISTGSLSLDI	ALGAGGLPMGR	59	
NTDB id 1205 PSJM300 05545 AFN77183.1	.....MDENKQRALAAALGQIEKQ	FGKGAIVRMGDH	.DRQAIP	ISTGSLGLDI	ALGIGGLPKGR	59	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....MDNKS	KALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEAV	STGSLTLDI	ALGIGGLPKGR	59
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.....MDENK	SKALQAALSQIEKQ	FGKNTVMRLGDN	.TVQAVEAV	STGSLTLDI	ALGIGGLPKGR	59
consensus	*** **	***	**	***!	*!!*****	*	***!!*!!*!!*!!*!!*!!*!!*!!



logo

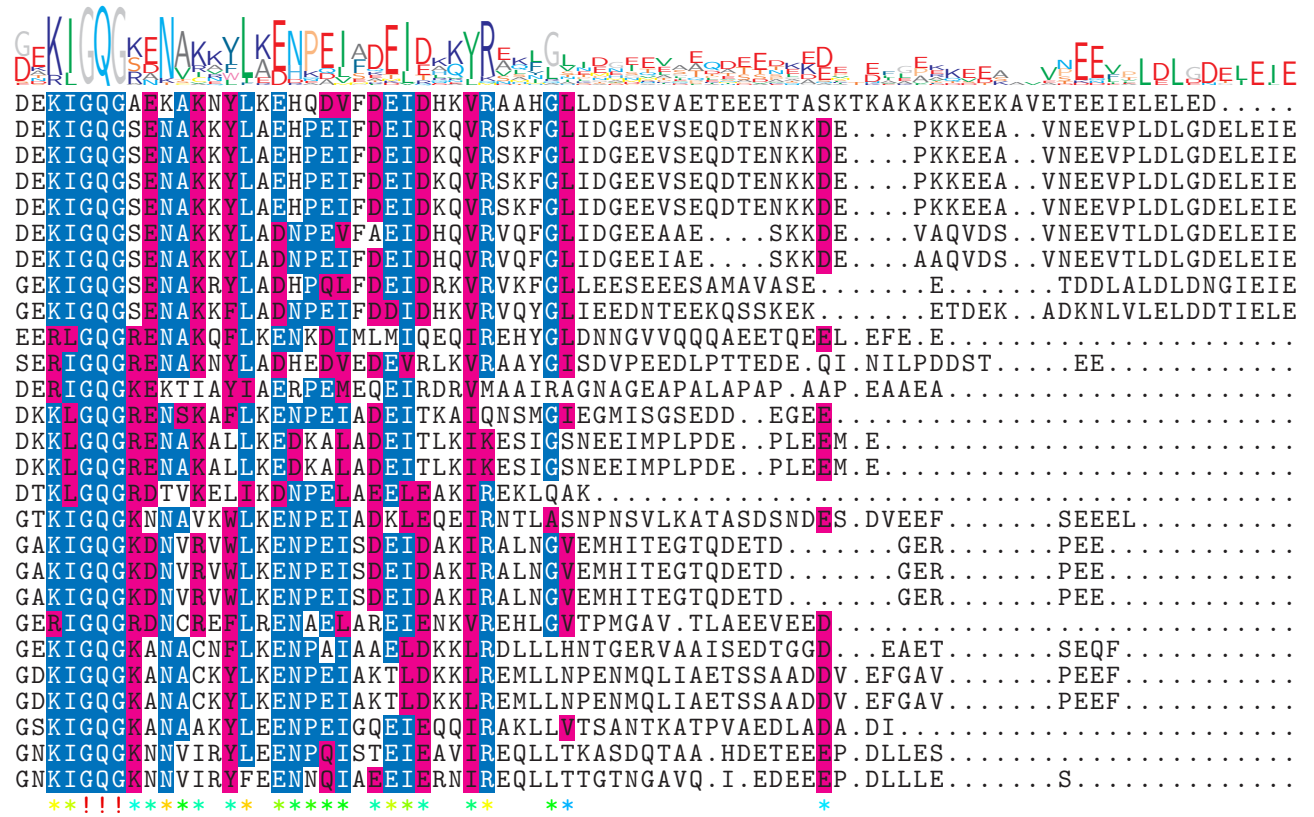


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NTDB id 269	KZH43	RS08665	WP 001085462.1	V	V	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232		
NTDB id 228	SPD	RS09265	WP 001085462.1	V	V	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232		
NTDB id 194	SPR	RS08825	WP 001085462.1	V	V	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232		
NTDB id 159	SP	RS09750	WP 001085462.1	V	V	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232		
NTDB id 527	SMSK321	RS11065	WP 001085454.1	V	V	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232		
NTDB id 499	SM12261	RS08315	WP 078228268.1	V	V	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	M	S	Q	A	M	R	K	L	G	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232		
NTDB id 453	Spy49	1753c	ACI62003.1	V	V	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	M	S	Q	A	M	R	K	L	S	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	V	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	A	232		
NTDB id 408	SMU	RS09530	WP 002262392.1	V	V	V	D	S	V	A	A	L	V	P	R	A	E	I	D	G	I	G	D	S	H	V	G	L	Q	A	R	M	S	Q	A	M	R	K	L	S	A	S	I	N	K	T	K	T	I	A	I	F	I	N	Q	L	R	E	K	V	G	T	M	.	F	G	N	P	E	T	T	P	G	G	R	A	L	K	F	Y	S	232		
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NTDB id 625	LCA	RS02525	WP 011374196.1	L	V	V	D	S	V	A	A	L	V	P	R	A	E	I	E	G	E	M	G	D	A	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	S	G	T	I	N	K	T	K	T	I	A	L	F	I	N	Q	I	R	E	K	V	G	V	M	.	F	G	N	P	E	V	T	P	G	G	R	A	L	K	F	Y	S	219
NTDB id 1313	DR	RS12030	WP 010888966.1	V	V	V	D	S	V	A	A	L	T	P	R	A	E	I	E	G	D	M	G	D	S	L	P	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	A	I	L	S	K	T	G	T	A	A	I	F	I	N	Q	V	R	E	K	I	G	V	M	.	Y	G	N	P	E	T	T	T	G	G	R	A	L	K	F	Y	A	231
NTDB id 1245	Cj1673c	YP 002345041.1	I	V	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	D	M	G	D	Q	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	I	V	H	K	M	N	T	T	V	I	F	I	N	Q	I	R	M	K	I	G	A	M	G	Y	G	T	P	E	T	T	T	G	G	N	A	L	K	F	Y	A	219	
NTDB id 1214	NCTC11637	00359	SQJ03206.1	V	V	V	D	S	V	A	A	L	T	P	K	A	E	I	D	G	D	M	G	D	Q	H	V	G	L	Q	A	R	L	M	S	H	A	L	R	K	I	T	G	V	L	H	K	M	N	T	T	L	I	F	I	N	Q	I	R	M	K	I	G	M	G	Y	G	S	P	E	T	T	T	G	G	N	A	L	K	F	Y	A	221	
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NTDB id 1334	RAOC	RS04870	WP 004918236.1	V	V	V	D	S	V	A	A	L	T	P	K	A	E	I	D	G	D	M	G	D	S	K	M	G	L	H	A	R	L	M	S	Q	A	L	R	K	L	T	S	S	I	S	K	T	K	C	T	V	I	F	I	N	Q	L	R	D	K	I	G	V	M	.	F	G	S	P	E	T	T	T	G	G	N	A	L	K	F	Y	A	227
NTDB id 1389	A4U84	RS07560	WP 021112712.1	I	I	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	D	M	G	D	S	H	M	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	A	N	I	K	N	T	N	C	L	V	V	F	I	N	Q	I	R	M	K	I	G	V	M	.	F	G	N	P	E	T	T	T	G	G	N	A	L	K	F	Y	A	235
NTDB id 1130	NGFG	RS03960	WP 003688695.1	V	V	V	D	S	V	A	A	L	V	P	K	A	E	I	E	G	D	M	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	H	I	K	K	T	N	T	L	V	V	F	I	N	Q	I	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	T	G	G	N	A	L	K	F	Y	S	219
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NTDB id 1123	OK783	RS03845	WP 003688695.1	V	V	V	D	S	V	A	A	L	V	P	K	A	E	I	E	G	D	M	G	D	S	H	V	G	L	Q	A	R	L	M	S	Q	A	L	R	K	L	T	G	H	I	K	K	T	N	T	L	V	V	F	I	N	Q	I	R	M	K	I	G	V	M	.	F	G	S	P	E	T	T	T	G	G	N	A	L	K	F	Y	S	219
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NTDB id 72665	SSYIS1	RS13380	WP 149590919.1	I	I	V	D	S	V	A	A	L	T	P	K	A	E	I	E	G	E	I	G	D	S	H	M	G	L	A	A	R	M	S	Q	A	M	R	K	L	A	G	N	L	K	N	A	N	T	L	L	I	F	I	N	Q	I	R	M	K	I	G	V	M	.	F	G	N	P	E	T	T	T	G	G	N	A	L	K	F	Y	A	220	
NTDB id 1165	A1552VC	RS01565	WP 000344154.1	I	V	V	D																																																																													



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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  
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 NTDB id 1074 ABD1 RS10195 WP 000344167.1  
 consensus



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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 527 SMSK321 RS11065 WP 001085454.1	IEE	384
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEE	384
NTDB id 453 Spy49 1753c ACI62003.1	D..	378
NTDB id 408 SMU RS09530 WP 002262392.1	D..	383
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NTDB id 1022 ACIAD RS06390 WP 004925639.1	...	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	...	349

consensus

 non conserved  
 similar  
 ≥ 50% conserved