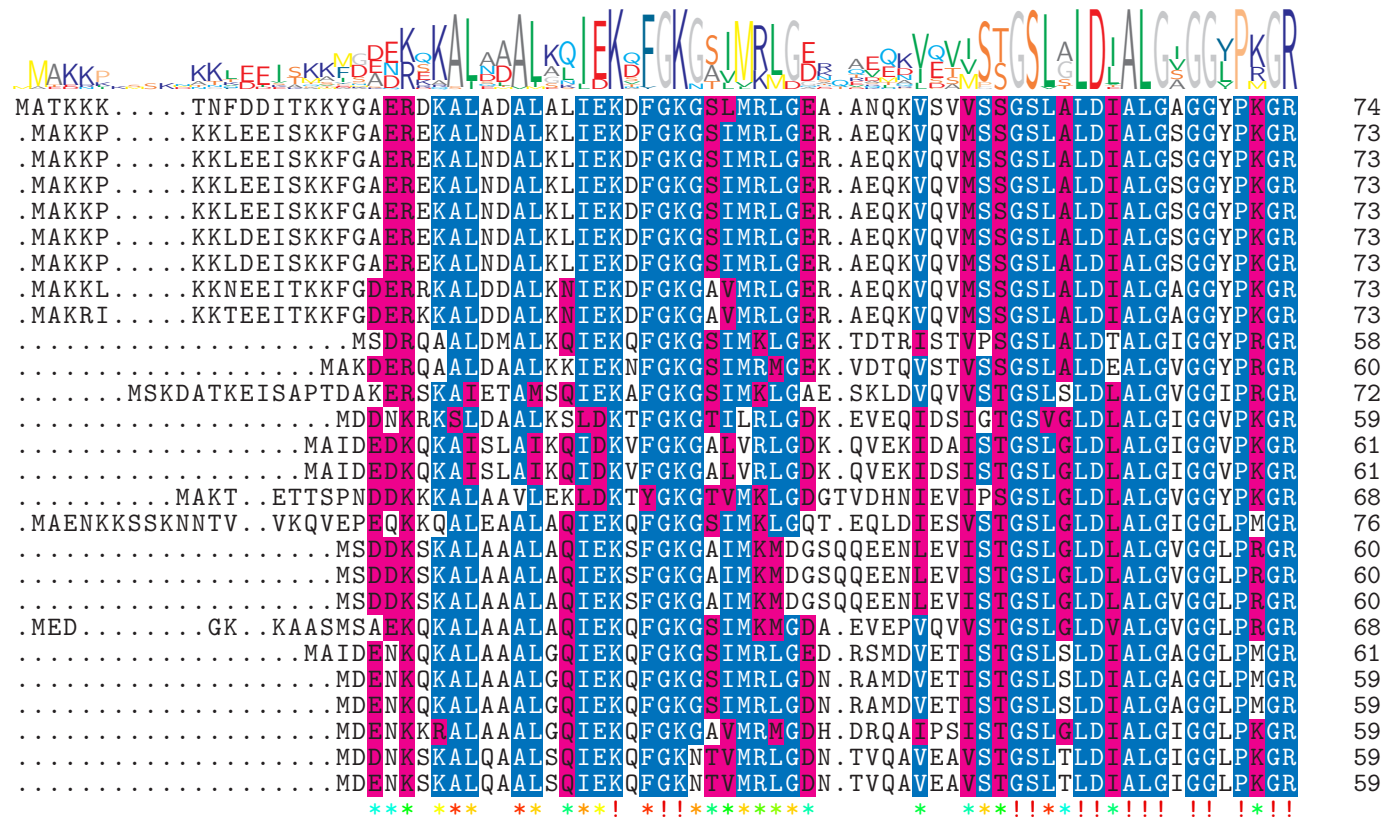


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NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
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NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
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 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
NTDB id 1130 NGFG RS03960 WP 003688695.1
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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
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NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

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NTDB	id	600	KW2	RS01765	WP	011675413.1	VV	IDSVAAL	VP	KA	EID	GE	IGDSSVGLQAR	MSQAMRKL	GA	CH	INKTKT	TTA	IFINQLREK	VGVM	.FGSPETT	P	GG	RALKFYA	233		
NTDB	id	269	KZH43	RS08665	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	IGDSHVGLQAR	MSQAMRKL	GA	SI	INKTKT	TTA	IFINQLREK	VGVM	.FGNPETT	P	GG	RALKFYA	232		
NTDB	id	228	SPD	RS09265	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	IGDSHVGLQAR	MSQAMRKL	GA	SI	INKTKT	TTA	IFINQLREK	VGVM	.FGNPETT	P	GG	RALKFYA	232		
NTDB	id	194	SPR	RS08825	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	IGDSHVGLQAR	MSQAMRKL	GA	SI	INKTKT	TTA	IFINQLREK	VGVM	.FGNPETT	P	GG	RALKFYA	232		
NTDB	id	159	SP	RS09750	WP	001085462.1	VV	DSVAAL	VP	RA	EID	GD	IGDSHVGLQAR	MSQAMRKL	GA	SI	INKTKT	TTA	IFINQLREK	VGVM	.FGNPETT	P	GG	RALKFYA	232		
NTDB	id	527	SMSK321	RS11065	WP	001085454.1	VV	DSVAAL	VP	RA	EID	GD	IGDSHVGLQAR	MSQAMRKL	GA	SI	INKTKT	TTA	IFINQLREK	VGVM	.FGNPETT	P	GG	RALKFYA	232		
NTDB	id	499	SM12261	RS08315	WP	078228268.1	VV	DSVAAL	VP	RA	EID	GD	IGDSHVGLQAR	MSQAMRKL	GA	SI	INKTKT	TTA	IFINQLREK	VGVM	.FGNPETT	P	GG	RALKFYA	232		
NTDB	id	453	Spy49	1753c	ACI	62003.1	VV	DSVAAL	VP	RA	EID	GD	IGDSHVGLQAR	MSQAMRKL	SA	SI	INKTKT	TTA	IFINQLREK	VGVM	.FGNPETT	P	GG	RALKFYA	232		
NTDB	id	408	SMU	RS09530	WP	002262392.1	VV	DSVAAL	VP	RA	EID	GD	IGDSHVGLQAR	MSQAMRKL	SA	SI	INKTKT	TTA	IFINQLREK	VGIM	.FGNPETT	P	GG	RALKFYS	232		
NTDB	id	115	BSU	16940	NP	389576.2	VV	DSVAAL	VP	KA	EIE	GD	MGDSHVGLQAR	LSQALRKLS	GA	AI	NSKT	IA	IFINQIREK	VGVM	.FGNPETT	P	GG	RALKFYS	217		
NTDB	id	625	LCA	RS02525	WP	0011374196.1	L	V	DSVAAL	VP	RA	EIE	GE	MGD	AHVGLQAR	LSQALRKLS	GT	INKTKT	IA	IFINQIREK	VGVM	.FGNPEVT	P	GG	RALKFYS	219	
NTDB	id	1313	DR	RS12030	WP	010888966.1	VV	DSVAAL	TP	RA	EIE	GE	MDGDS	LPGLQAR	LSQALRKLT	AI	LSKT	GTAA	IFINQVREK	IGVM	.YGNPETTT		GG	RALKFYA	231		
NTDB	id	1245	Cj1673c	YP	002345041.1	L	V	DSVAAL	TP	KA	EIE	GE	MDG	QHVGLQAR	LSQALRKLT	GI	IVHKMNT	TV	IFINQIRMK	IGAMGY	YGT	PETT	T	GG	NALKFYA	219	
NTDB	id	1214	NCTC11637	00359	SQJ	03206.1	VV	DSVAAL	TP	KA	EID	GE	MDG	QHVGLQAR	LSHAI	LRKIT	GV	LHKMNT	TL	IFINQIRMK	IGMMGY	YGS	PETT	T	GG	NALKFYA	221
NTDB	id	1211	C694	RS00795	WP	000963128.1	VV	DSVAAL	TP	KA	EID	GE	MDG	QHVGLQAR	LSHAI	LRKIT	GV	LHKMNT	TL	IFINQIRMK	IGMMGY	YGS	PETT	T	GG	NALKFYA	221
NTDB	id	1334	RAOC	RS04870	WP	004918236.1	VV	DSVAAL	TP	KA	EID	GE	MDGDS	KMGLHAR	LSQALRKLT	SS	ISKTCTV	IFINQLRDK	IGVM	.FGSPETT	T	GG	NALKFYA	227			
NTDB	id	1389	A4U84	RS07560	WP	021112712.1	L	I	V	DSVAAL	TP	KA	EIE	GE	MDGDS	HMLQAR	LSQALRKLT	ANIKNT	NCLV	VFINQIRMK	IGVM	.FGNPETT	T	GG	NALKFYA	235	
NTDB	id	1130	NGFG	RS03960	WP	003688695.1	VV	DSVAAL	VP	KA	EIE	GE	MDGDSHVGLQAR	LSQALRKLT	GHI	IKKTNT	LV	VFINQIRMK	IGVM	.FGSPETT	T	GG	NALKFYS	219			
NTDB	id	1124	NGFG	RS03960	WP	003688695.1	VV	DSVAAL	VP	KA	EIE	GE	MDGDSHVGLQAR	LSQALRKLT	GHI	IKKTNT	LV	VFINQIRMK	IGVM	.FGSPETT	T	GG	NALKFYS	219			
NTDB	id	1123	OK783	RS03845	WP	003688695.1	VV	DSVAAL	VP	KA	EIE	GE	MDGDSHVGLQAR	LSQALRKLT	GHI	IKKTNT	LV	VFINQIRMK	IGVM	.FGSPETT	T	GG					

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NTDB id 600 KW2 RS01765 WP 011675413.1	SVRLDVRGSTKIEEGS.GDNKTQIGKITKIKVVKNKVAPPFKVALVDIMFGEGISSTGELINIAVEEGI	I	IKKSGAWFAYN	312		
NTDB id 269 KZH43 RS08665 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKAEAVVEIMYEGEGISKTGELLKIASDL	D	IIKKAGAWYSYK	311	
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NTDB id 194 SPR RS08825 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKAEAVVEIMYEGEGISKTGELLKIASDL	D	IIKKAGAWYSYK	311	
NTDB id 159 SP RS09750 WP 001085462.1	SVRLDVRGNTQIKGTG.DQKETN	VGKETKIKVVKNKVAPPFKAEAVVEIMYEGEGISKTGELLKIASDL	D	IIKKAGAWYSYK	311	
NTDB id 527 SMSK321 RS11065 WP 001085454.1	SVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKAEAFVEIMYEGEGISKTGELLKIASDL	D	IIKKAGAWYSYK	311	
NTDB id 499 SM12261 RS08315 WP 078228268.1	SVRLDVRGSTQIKGTG.DQKDTN	VGKETKIKVVKNKVAPPFKAEAFVEIMYEGEGISKTGELLKIASDL	D	IIKKAGAWYSYK	311	
NTDB id 453 Spy49 1753c ACI62003.1	SVRLDVRGTTQIKGTG.DQKDSN	IGKETKIKVVKNKVAPPFKVAEVEIMYEGEGISRTGELVKIASDL	D	IIQKAGAWFSYN	311	
NTDB id 408 SMU RS09530 WP 002262392.1	SVRLDVRGNTQIKGTG.EQKDSN	IGKETKIKVVKNKVAPPFKAEAFVEIIMYEGEGISRTGELVKIASDL	G	IIQKAGAWYSYN	311	
NTDB id 115 BSU 16940 NP 389576.2	SVRLEVRRAEQLKQGN.....	DVMGNKTKIKVVKNKVAPPFR	TAEVDIMYEGEGISKEGE	IIDLGTELDIVQKSGSWYSYE	292	
NTDB id 625 LCA RS02525 WP 011374196.1	TVRLEVRRAETIKNGT.....	DMIGNRARIKVVKNKVAPPFKVAEVDIMYGGISRTGELVDMAVEKD	I	INKSGSWYSYG	294	
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NTDB id 1245 Cj1673c YP 002345041.1	SVRLDVRKVAT....L.KQNEE	PIGNRVKVVKNKVAPPFRQAEFDVMFGEGLS	REGELIDYGVKLD	D	IVDKSGAWFSYK	294
NTDB id 1214 NCTC11637 00359 SQJ03206.1	SVRLDIRRIAA....L.KQNEQH	IGNRAKAKVVKNKVAPPFR	AEAFDIMFGEGISKEGE	IIDYGVKLD	DIVDKSGAWLSYQ	296
NTDB id 1211 C694 RS00795 WP 000963128.1	SVRLDIRRIAS....L.KQNEQH	IGNRAKAKVVKNKVAPPFR	AEAFDIMFGEGISKEGE	IIDYGVKLD	DIVDKSGAWLSYQ	296
NTDB id 1334 RAOC RS04870 WP 004918236.1	SVRLDIRRSLSDTGKIKDKSGEV	IGNRTKVVKNKVAPPFKSAEFDIMYEGEGVSKV	GEILDVATDLD	IIQKSGSWFSYQ	307	
NTDB id 1389 A4U84 RS07560 WP 021112712.1	SVRLDIRRCGV....V.KDGDEI	IGSETKVVKNKVAPPFR	EVQFDIMYEGEGISRMNELL	ILAEANGFIKKSGAWFSYD	310	
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NTDB id 1123 OK783 RS03845 WP 003688695.1	SVRLDIRRTGS....I.KKGEV	VLGNETRVKVIKNKVAPPFRQAEFDILYEGEGISWEGELID	IGVKN	DIINKSGAWYSYN	294	
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NTDB id 1165 A1552VC RS01565 WP 000344154.1	SVRLDIRRTGA....I.KEGEV	VGNETRIKVVKNKIAAPFKEANTQIMYGGGFNR	REGELIDLGVKHK	MVEKSGAWYSYN	293	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	SVRLDIRRTGA....I.KEGEV	VGNETRIKVVKNKIAAPFKEANTQIMYGGGFNR	REGELIDLGVKHK	MVEKSGAWYSYN	293	
NTDB id 1205 PSJM300 05545 AFN77183.1	SVRLDIRRTGA....V.KEGDEV	VGSETRVKVVKNKVAPPFRQAEFQILYGKGIYRNGE	IIDLGVQQGL	VEKSGAWYAYK	293	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	SVRLDIRRIGQ....V.KEGDEI	IGSETKVVKNKMAPPFR	AEAFQILYGKGVNQLGELVD	LAVQQN	IVQKAGAWYSYQ	293
NTDB id 1074 ABD1 RS10195 WP 000344167.1	SVRLDIRRIGQ....V.KEGDEI	VGSETRKVVKNKMAPPFK	AEAFQILYGKGTNQLGELVD	LAVQQD	IVQKAGAWYSYQ	293
consensus	*!!**!* *	*	** *****!*****!*****!*	*	*****!*!***** ***** *	*** ! !*****!

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NTDB id 600 KW2 RS01765 WP 011675413.1	DEKIGQGA	EKAKNYLKEHQDV	DEIDHKVRAAHG	LDDSEVAETEEETT	ASKTKAKAKKEE	EKAVETEEIELELED		387
NTDB id 269 KZH43 RS08665 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLAADNPEVFAE	IDHQVRVQFGL	IDGEEAAE	SKKDE	VAQVDS	.VNEEVTLDLGDELEIE	381
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLAADNPEIF	DEIDHQVRVQFGL	IDGEEIAE	SKKDE	AAQVDS	.VNEEVTLDLGDELEIE	381
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAVASE	E	TDDLALDLN	GIEIE	377
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEEKQSSKEK	ETDEK	.ADKNLVLELDDTIELE		382
NTDB id 115 BSU 16940 NP 389576.2	EERLGGG	RENAKQFLKENKDIMLMIQE	IREHYGL	DNNGVVQQAEETQEEL	EFE	E		348
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQG	RENAKNYLADHEDVE	DEVRLKVRAAYG	ISDVPEEDLPTTEDE	.QI	.NILPDDST	EE	355
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQG	KEKTIAIYAERPEMEQE	IRDRVMAAIRAGNAGE	APALAPAPAAPEAAEA				363
NTDB id 1245 Cj1673c YP 002345041.1	DKKLGGG	RENSKAFLENPEIADEITKAI	QNSMCI	EGM	ISGSEDDE	GEE		343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKLGGG	RENAKALLKEDKALADEITLK	IKESIGSNEE	IMPLPDEP	LEEM	.E		347
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKLGGG	RENAKALLKEDKALADEITLK	IKESIGSNEE	IMPLPDEP	LEEM	.E		347
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKLGGG	RDITVKELIKDNPELAEE	LEAKIREKLQAK					343
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQG	KNNAVKWLKENPEIADKLEQE	IRNTLASNP	SVLKATASDSN	DESDF	.SEEEL		372
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEISDEIDAK	IRALNGVEMH	ITEGT	QDET	DGER	.PEE	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEISDEIDAK	IRALNGVEMH	ITEGT	QDET	DGER	.PEE	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQG	KDNVRVWLKENPEISDEIDAK	IRALNGVEMH	ITEGT	QDET	DGER	.PEE	348
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQG	RDNCREFLRENAELAREIENK	VREHLGVTPM	GAVTLAE	.EVEED			352
NTDB id 377005 FLM29 RS22125 WP 004205686.1	GDKIGQG	KANAITWLKENPAAAKEIEKKV	RELLLNQD	STPDFAVD	GNDAE	ET	.EQDF	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQG	KANACKYLLKENPEIAKTL	DKKLREMLLN	PEN	MQLIAETSSA	ADDVEFGAV	.PEEF	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQG	KANACKYLLKENPEIAKTL	DKKLREMLLN	PEN	MQLIAETSSA	ADDVEFGAV	.PEEF	354
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQG	KANAAYLEENPEIGQIEEQ	IRAKLLV	TSA	NTKATPVAED	LADADI		347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQG	KNNVIRYLEENPQISTEIE	AVIREQLLTKAS	DQTAA	.HDETEEEP	DLLES		349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQG	KNNVIRYFEENNQIAEEIERN	IREQLLTGT	NGAVQ	.I	.EDEEEP	DLLE	349
consensus	***!!!	*****	**	*****	*****	**	*	

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		IEE	
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
NTDB id 115 BSU 16940 NP 389576.2	...		348
NTDB id 625 LCA RS02525 WP 011374196.1	...		355
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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 1389 A4U84 RS07560 WP 021112712.1	...		372
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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 377005 FLM29 RS22125 WP 004205686.1	...		352
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NTDB id 1142 GTF74 RS11550 WP 000344154.1	...		354
NTDB id 1205 PSJM300 05545 AFN77183.1	...		347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	...		349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	...		349
consensus			

- X non conserved
- X similar
- X ≥ 50% conserved