

1.

Enterobacteria phage P1	- - M Q S I N F R T A R G N L S E V L N N V E A G E E V E I T R R G R E P A V I V S K A T F E A Y K K A A L D A E F A S L F D T L D S T N K E L V N R
Salmonella enterica Choleraesuis SC-B67	- - M R T V N Y S E A R O N L A E V L E S A V T G G P V T I T R R G H K S A V I I S A E E F E R Y Q T A R M D D E F A A I M A V H G N E L R E L A D K
Salmonella typhimurium LT2	M F M R T V N Y S E A R O N L A E V L E S A V T G G P V T I T R R G H K S A V I I S A E E F E R Y Q T A R M D D E F A A I M A V H G N E L R E L A D K
Sodalis glossinidius 'morsitans'	- - M R T Y T T S Q A R O N I A E V M E A A T A G E P V E I T R R D G S A A V L I S R D D F N T W O E T K L D A E F A E I M G R H G C T I K A L A D R
Yersinia mollaretii ATCC 43969	- - M R T Y T T S T Q A R A N I S E V L D A A T H G E P I E I T R R D G S A A V V I S K A E F E A Y Q N A K L D A E F D L M M Q R H G H T L A A L T D R
Consensus	- - M r i X n X s X A R q N l a E V l e X a X X G e p v e l T R R g X X X A V i i S X X e F e X y q X a X l D a E F a X i m X X h g X t l X e l a d r

2.

Pseudomonas aeruginosa PA01	- - - - - M S R S L R K S K K L V I P P R P R D E V V R A R P A L G
Salmonella enterica Typhi Ty2	- - - M V L N C P Q P L K V I I N S L D V F T S Y N - - - L R K H C Q T C M R V I I M G H A L K K A D R L Y I P P R D K S M V A K P R A A I S
Yersinia pestis CO92	M Q L I R Y S L S Y T L C I N K N G Y N P F T T A E N S M C Q R F S I Y N S E D N V M S H A L K N A D R L Y I P P R D K G T K A Y P R A S M D
Yersinia pestis KIM	M Q L I R Y S L S Y T L C I N K N G Y N P F T T A E N S M C Q R F S I Y N S E D N V M S H A L K N A D R L Y I P P R D K G T K A Y P R A S M D
Yersinia pestis Medievalis 91001	M Q L I R Y S L S Y T L C I N K N G Y N P F T T A E N S M C Q R F S I Y N S E D N V M S H A L K N A D R L Y I P P R D K G T K A Y P R A S M D
Consensus	m q l i r y s l s y t l c i n k n g y n p f t t a e n s m c q r f s i y n s e d n v M s h a L k n a d r L y I P P R d k g t k a y p R a s m d

Pseudomonas aeruginosa PA01	- - - E H Q K Q V E N A F A L A F E R Y E K T F E E L A K V
Salmonella enterica Typhi Ty2	K A C S H T G Q V K N A F E F G F A R Y E K A M E E L S K V
Yersinia pestis CO92	T S S T H A D Q V K N A F A F G F S R Y E K A M E E L S K V
Yersinia pestis KIM	T S S T H A D Q V K N A F A F G F S R Y E K A M E E L S K V
Yersinia pestis Medievalis 91001	T S S T H A D Q V K N A F A F G F S R Y E K A M E E L S K V
Consensus	t s s t H a d Q V k N A F a f g F s R Y E K a m E E L s K V

3.

Shewanella baltica OS155	M L N E T K K Y G V N I V E R P H V K A N K K L D L T G G C G K Q I V H S E T K L V L R T H K N T F R K K L A D M
Vibrio cholerae O1 eltor N 16961	M N R K V E A Y G V D A V E R P K I K A S K K L D L T G D A G R Q I V K S E T K L A L R T H Q K T F T K L A D M
Vibrio cholerae RC385	M N R K V E A Y G V D A V E R P K I K A S K K L D L T G D A G R Q I V K S E T K L A L R T H Q K T F T K L A D M
Vibrio cholerae V52	M N R K V E A Y G V D A V E R P K I K A S K K L D L T G D A G R Q I V K S E T K L A L R T H Q K T F T K L A D M
Vibrio metschnikovii CIP A267	M N R K V E A Y G V D A V E R P K I K A S K K L D L T G D A G R Q I V K S E T K L A L R T H Q K T F T K L A D M
Consensus	M n r k v e a Y G V d a V E R P k i K A s K K L D L T G d a G r Q I V k S E T K L a L R T H q k T F t K L A D M

4.

Frankia sp. Ccl3	M T L R L T D D E A <sup>10</sup> E A L R L R S E L E <sup>20</sup> Q R S M Q E I A R E A I R E Y I E A H S R A E L L D Q V L <sup>30</sup> D E E L P R Y A E A L R W L G E -
Frankia sp. EAN1pec	M T L R L T D D E T E A L R L R S E L E R R S M Q E I A R Q A I R E Y I E A H S R A E L L D Q V L <sup>40</sup> D E E L P R Y A E A L R R L G E -
Mycobacterium avium paratuberculosis K-10	M T L R P S E Q Q A E A L R R Q A T A E G R S M Q A V A L S A I D E Y I A R R A H K T K V A A A L <sup>50</sup> Q W V V R E E A G V L E R L K D A
Consensus	M T L R l t d d e a E A L R l r s e l e X R S M Q e i A r X A I r E Y I e a h s r a e l l d q v L d e e l p r y A e a L r r L g e -

5.

Mycobacterium flavescens PYR-GCK	M P A L N I E F T D D E L A T V R A A A S G S G T S M R A F A R Q A I L D R A V D R E G R I R A L G E E I A Q R S A E L N O R L A
Mycobacterium sp. KMS	M P S L N V D F D D A E M E Q I R A A A K Q D D L S L K K F V H A A V M E R A S M H K R R V A E A A R V V A E R S A E L N R R L A
Mycobacterium sp. MCS	M P S L N V D F D D A E M E Q I R A A A K Q D D L S L K K F V H A A V M E R A S M H K R R V A E A A R V V A E R S A E L N R R L A
Mycobacterium vanbaalenii PYR-1	M P S L N V S F T E E L A T V R A A A A N D E V S L R T F A H A A I L S A A S E H R R V A E A A R I V A E R S A E L N R R L A
Consensus	M P s L N v X F X d X E X X X X R A A A X X d X X S I X X F X h a A X X X r A s X h X r R v a e a a r X v A e R S A E L N r R L A

6.

Clostridium tetani E88 (2)	M Q V N I N N L V S I S E A N Q N F S R V A R M V D E N G A A I I L K N N A P R Y V L I D Y S K F Q Q D T - - - - I A D D A T V
Lactobacillus salivarius UCC118	M Q I N L E N L I P I T E A N Q N F S K V A R M V D S K G T A V I L K N N R P K Y V L V D Y N T L V Q E E Q T E A V V A D Q A S V
Streptococcus agalactiae CJB111	M Q I N I E N L V S I S E A N Q N F S K V A R M V D A N G T A V I L K N N T P K Y V L V D Y Q S L I K E E Q D T P V V V E Q T T L
Consensus	M Q i N i e N L v s i s E A N Q N F S k V A R M V D X n G t A v I L K N N X P k Y V L v D Y X X I X q e e q X X X v v a d q a t v

Clostridium tetani E88 (2)	E E A A N N I L N K H L K A F E E L A K
Lactobacillus salivarius UCC118	D E V A S S I L S R H L E A L K E L A K
Streptococcus agalactiae CJB111	D E V A T S V L S R H L D A F K E L A K
Consensus	d E v A X s i L s r H L X A f k E L A K

7.

Methanosarcina barkeri fusaro	M S T I A I D P D V K K S L K E F K I T E N E S Y N S I I K R L I V K V K E T A E Y K P M F P K E E N T E R R E S H V K D F D A W L D R K L I E D K E I L D A L G R K
Methanosarcina mazei Go1	M S T I A I D P D V K E S L K E L K L A P E E S Y N S V V K R L I G E V K K K E D Y S P M F P K E E K Q G H K E S H I N D F D A W L E K K L V E D K N I L D A L G R K
Consensus	M S T I A I D P D V K X S L K E X K X X X X E S Y N S X X K R L I X X V K X X X X Y X P M F P K E E X X X X X E S H X X D F D A W L X X K L X E D K X I L D A L G R K

8.

Campylobacter jejuni TGH 9011	M K T T E Y N T O Q K N N K E Y L A E R E A V K K N Y G K N G K R V R K T C Y K C G V S K T - - -
Campylobacter jejuni RM1221	M K T T E Y N T O Q K N N K E Y L A E R E A V K K T M A K M E K E L E K P A I N A V F O R L K N K
Consensus	M K T T E Y N T O Q K N N K E Y L A E R E A V K K K K K

9.

	10	20	30	40	50	60	70	80																																																																					
Sulfitobacter sp. EE-36	M	T	R	V	T	A	T	E	F	K	N	I	G	A	F	S	D	A	A	M	S	E	P	V	I	I	T	S	H	Q	R	D	R	L	V	L	L	S	A	D	E	Y	R	R	L	T	A	L	T	E	G	V	T	A	O	D	K	D	R	V	A	R	G	L	E	R	H	R	S	T	I	L	E	L	A	K	R
Sulfitobacter sp. NAS-14	M	T	R	V	T	A	T	E	F	K	N	I	G	A	F	S	D	A	A	M	S	E	P	V	I	I	T	S	H	Q	R	D	R	L	V	L	L	S	A	D	E	Y	R	R	L	T	A	L	T	E	G	V	T	A	O	D	K	D	R	V	A	R	G	L	E	R	H	R	S	T	I	L	E	L	A	K	R
Consensus	M	T	R	V	T	A	T	E	F	K	N	I	G	A	F	S	D	A	A	M	S	E	P	V	I	I	T	S	H	Q	R	D	R	L	V	L	L	S	A	D	E	Y	R	R	L	T	A	L	T	E	G	V	T	A	O	D	K	D	R	V	A	R	G	L	E	R	H	R	S	T	I	L	E	L	A	K	R

10.

	10	20	30	40	50	60	70	80																																																																										
delta proteobacterium MLMS-1 (1)	M	G	K	V	L	Q	V	D	N	N	F	T	P	C	P	A	Q	G	G	D	E	L	P	N	G	I	F	E	F	N	I	T	K	I	L	E	E	I	Q	K	P	A	S	F	S	L	A	E	A	V	S	D	F	P	R	E	F	S	S	I	N	E	S	H	L	D	S	V	D	L	S	R	P	V	I	L	A	E	I	A	P	G
delta proteobacterium MLMS-1 (2)	M	G	K	V	L	Q	V	D	N	N	F	T	P	C	P	A	Q	G	G	D	E	L	P	N	G	I	F	E	F	N	I	T	K	I	L	E	E	I	Q	K	P	A	S	F	S	L	A	E	A	V	S	D	F	P	R	E	F	S	S	I	N	E	S	H	L	D	S	V	D	L	S	R	P	V	I	L	A	E	I	A	P	G
Consensus	M	G	K	V	L	Q	V	D	N	N	F	T	P	C	P	A	Q	G	G	D	E	L	P	N	G	I	F	E	F	N	I	T	K	I	L	E	E	I	Q	K	P	A	S	F	S	L	A	E	A	V	S	D	F	P	R	E	F	S	S	I	N	E	S	H	L	D	S	V	D	L	S	R	P	V	I	L	A	E	I	A	P	G

	90	100	110	120	130	140	150																																																										
delta proteobacterium MLMS-1 (1)	Q	Y	N	L	I	D	G	H	R	V	E	K	A	R	R	L	K	I	E	K	V	P	A	Y	R	L	D	V	E	R	H	I	K	F	L	T	S	K	R	A	Y	T	A	I	E	Y	W	N	S	K	L	T	P	G	R	K	P	R	R	K	R	G	M	A	S
delta proteobacterium MLMS-1 (2)	Q	Y	N	L	I	D	G	H	R	V	E	K	A	R	R	L	K	I	E	K	V	P	A	Y	R	L	D	V	E	R	H	I	K	F	L	T	S	K	R	A	Y	T	A	I	E	Y	W	N	S	K	L	T	P	G	R	K	P	R	R	K	R	G	M	A	S
Consensus	Q	Y	N	L	I	D	G	H	R	V	E	K	A	R	R	L	K	I	E	K	V	P	A	Y	R	L	D	V	E	R	H	I	K	F	L	T	S	K	R	A	Y	T	A	I	E	Y	W	N	S	K	L	T	P	G	R	K	P	R	R	K	R	G	M	A	S

11.

	10	20	30	40	50	60	70	80	90																																																																																	
Bacillus halodurans C-125 (1)	-	-	-	-	-	M	P	V	F	D	R	C	N	L	V	Y	V	D	F	N	F	Q	S	H	D	O	A	C	T	R	P	A	I	V	L	S	P	K	L	F	N	K	N	T	G	F	A	V	V	C	P	I	T	R	-	-	-	-	-	Q	O	K	G	Y	P	F	E	I	E	I	P	P	G	L	P	I	E	G	V	I	L	T	D	O	V	K	S	L	D	W
Escherichia coli K12	-	-	-	M	V	S	R	Y	V	P	D	M	G	D	L	I	W	V	D	F	D	F	T	K	G	S	E	Q	A	G	H	R	P	A	V	V	L	S	P	F	M	Y	N	N	K	T	G	M	C	L	C	V	P	C	T	T	-	-	-	-	Q	S	K	G	Y	P	F	E	V	L	S	-	G	O	E	R	D	G	V	A	L	A	D	O	V	K	S	I	A	W
Escherichia coli O157:H7	-	-	-	M	V	S	R	Y	V	P	D	M	G	D	L	I	W	V	D	F	D	F	T	K	G	S	E	Q	A	G	H	R	P	A	V	V	L	S	P	F	M	Y	N	N	K	T	G	M	C	L	C	V	P	C	T	T	-	-	-	-	Q	S	K	G	Y	P	F	E	V	L	S	-	G	O	E	R	D	G	V	A	L	A	D	O	V	K	S	I	A	W
Leptospira interrogans lai 56601	-	M	V	K	N	R	N	Y	T	P	E	K	G	D	I	V	W	L	N	F	T	P	O	A	G	H	E	Q	K	R	R	P	A	L	V	L	S	P	K	E	Y	N	S	K	T	G	L	A	I	F	C	P	I	T	S	-	-	-	-	K	I	K	G	Y	P	F	E	V	L	I	K	-	S	K	I	D	G	V	I	L	S	D	O	V	K	N	L	D	W	
Moorella thermoacetica ATCC 39073 (1)	M	V	N	E	M	E	T	Y	I	P	E	R	G	D	I	V	W	L	O	F	D	R	A	G	H	E	Q	A	G	R	R	P	A	L	V	I	S	P	O	L	Y	N	G	K	V	G	L	A	L	F	C	P	V	T	T	-	-	-	-	K	A	K	G	Y	P	F	E	V	E	I	P	A	G	L	K	I	T	G	V	I	L	A	D	O	V	K	S	L	D	W
Neisseria gonorrhoeae FA 1090	-	-	-	-	-	M	Y	I	P	E	R	G	D	I	F	H	L	A	F	D	P	A	A	G	T	E	M	K	G	H	Y	A	I	A	L	S	P	R	A	Y	N	R	A	T	C	L	V	Y	A	C	P	I	S	Q	G	R	A	A	A	A	R	S	G	M	I	S	T	L	L	G	T	G	T	A	T	O	G	N	V	H	C	H	R	M	K	A	L	D	W	
Consensus	-	-	-	X	X	X	X	Y	X	P	X	X	G	d	X	X	w	X	X	F	d	P	X	X	C	X	e	q	a	C	X	r	p	A	X	v	I	S	P	X	Y	N	X	k	t	C	X	X	X	c	P	X	I	X	-	-	-	-	X	X	k	G	y	p	f	e	v	X	X	X	G	X	X	X	G	v	X	I	X	d	q	v	K	s	I	d	W			

	100	110	120																										
Bacillus halodurans C-125 (1)	R	A	R	N	F	H	I	K	G	O	A	P	E	E	T	V	T	D	C	L	O	L	I	H	T	F	L	S	-
Escherichia coli K12	R	A	R	G	A	T	K	K	G	T	V	A	P	E	E	L	O	L	I	K	A	K	I	N	V	L	I	G	-
Escherichia coli O157:H7	R	A	R	G	A	T	K	K	G	T	V	A	P	E	E	L	O	L	I	K	A	K	I	N	V	L	I	G	-
Leptospira interrogans lai 56601	T	I	R	E	A	E	F	I	E	S	I	N	K	V	S	L	K	E	V	L	D	N	I	K	L	L	I	F	-
Moorella thermoacetica ATCC 39073 (1)	R	A	R	E	A	O	F	A	C	K	V	P	A	G	V	V	A	E	V	O	A	K	V	Q	V	L	I	S	-
Neisseria gonorrhoeae FA 1090	K	I	R	A	A	F	R	E	T	V	P	D	Y	V	I	E	D	V	L	A	R	I	G	A	V	L	F	D	-
Consensus	r	a	R	X	a	X	X	X	X	X	v	X	X	X	X	X	X	X	X	X	a	X	I	X	X	I	X	-	

12.

	10	20	30	40	50	60	70	80			
Archaeoglobus fulgidus DSM 4304 (1)	-MKAVIDTNVIV	YDTFEDSVFHQ	EAQMLLDR--	IDVWV	IPTIV	IHEYVW	VLKSLKVDVK	-EIKYKVEEY	LNHYKTKMVSENK		
Pyrobaculum aerophilum IM2	-MKVLVDTNVLI	YETFEDEFERH	AEATDIVY--	-TNEVY	IPTIV	LHEYI	WLLLRHFSIS	YAQAQAAKLEQL	LSEKNIHVICENL		
Pyrococcus abyssi GE5 (1)	-MHAVIDTDILY	YDTFEDLEFHE	EEARALLDS--	LKSWYV	PTIV	LOEYI	WFFKRNNSLL	-DAKSMLEMY	VRDPRFKGLGESH		
Pyrococcus abyssi GE5 (2)	--MTVIDTNVFI	YAILRDSSEFNS	RARNLLAS--	LERWIV	PSIV	LYELY	WFFREEGYGRD	-EITNVISS	LNSPRTRVIGDNG		
Pyrococcus furiosus DSM 3638	-MHAVIDTNVLI	YDTFSDSEFKH	ESRSLNS--	LDRWV	IPSIV	LOEYV	WFFRSQGFSSR	-EAKIMLSEY	ISDPRFRGLVEDH		
Pyrococcus horikoshii OT3	-----MHIV	LIYDTFIDSEFH	KKARSLLDS--	LDRWY	IPTIV	LOEYV	WFFRSQGFSSR	-DAKIMLSEY	IR-----		
Sulfolobus acidocaldarius DSM 639	-MKILVDTNVLI	YDLVENSKFHKE	AEDILDR--	AETWV	IPSVV	VHELW	VFLRANLER--	---MDYVSAY	VESPKAEIVCEDF		
Sulfolobus tokodaii 7 (2)	-----MYS	TTFEDSERHKE	AMKILT--	ENEVVI	POIVV	YIYI	WVLRARLTNN	---VDLVKQK	LEELKDFEIAKEDL		
Sulfolobus tokodaii 7 (3)	MEKAI	IDTNV	IYDYVEDSEY	HKKAEEL	LDS--	LNKWI	IPAIV	IHELW	VFLKDMKLEDK--	INDVFAY	VRNEKAEVICDSV
Thermococcus kodakarensis KOD1 (1)	-MHAVIDTNVLL	YDTFEDLPFHH	KARRLLDS--	LDRWYV	PIV	LOEYV	WFFRKNLPVK	-LARSMLEMY	LDDPRFNRLNDNG		
Thermococcus kodakarensis KOD1 (2)	-MEAVIDTNVFL	YAAVEEMPRH	REAFELLS	SPSLEK	WIV	PTIV	IYEVV	WNFRKLGFSSE	-EARELVEQ	IVEDERTKLVDDR-	
Thermococcus kodakarensis KOD1 (3)	--MTVIDTNVFI	YATLRDSEFN	AEARLLAG--	LERWIV	PSIV	LYELY	WFFREEGYKSE	-EINNVISS	LNSPRTRVICDTG		
Consensus	-mXXv	idtnvXi	Ydtfedsefh	XeaXXIIXS-	-IXXW	XiPXiVi	XEYvWffr	XXXXXXXX	XXXXXXXXXy	XXXXXXXXXXXXXX	

	90	100	110	120	130	140				
Archaeoglobus fulgidus DSM 4304 (1)	QIVLSA	LERIVGGGLS	LSRYNDEL	ILAVAGREK	ISLATF	DERLRRROARARGVEVIP	----			
Pyrobaculum aerophilum IM2	SDLAAG	IRMAAEDGAK	PSNINDYI	ILASALNRGLA	LATYDRE	LRRAGARRAVTVLPATL	----			
Pyrococcus abyssi GE5 (1)	EVIHA	LKILEENEL	SLSHFND	AILLYQA	FSRKYP	LATFDEKLRK	LATKHGIRVLP	EII--		
Pyrococcus abyssi GE5 (2)	RYTKRA	LELTKNP	-----RR	FNDMI	ILATAEQ	KRLATYDKRL	KKEAERLGIETMP	----		
Pyrococcus furiosus DSM 3638	NVILRA	IDILERENL	SLSRFND	MILLVHA	IE-KGT	LATFDQKLRK	LARKLSVEILP	----		
Pyrococcus horikoshii OT3	-----	-----	-----	SKL	TFSK	GKTS	LCHSLMI	----		
Sulfolobus acidocaldarius DSM 639	DVLKN	AMEIILREK	ISLSRYND	PVILSHA	ILRKL	PLSTFDRRL	SNLAKRYG	IDIVK	----	
Sulfolobus tokodaii 7 (2)	EDMIKGI	EMLKKNK	PIRMLND	YIILAIA	KRLNIG	LATYDIELV	KAGVRNSVN	IYSQHSS		
Sulfolobus tokodaii 7 (3)	NNIVDS	LEILIREK	LPLADYK	DMIILSHA	IREKLP	LVTFDK	LLSKII	AKKYGV	SVVS	----
Thermococcus kodakarensis KOD1 (1)	ESIVY	ALELIEKNS	LSRSFN	DAIILY	HALQRSY	PLATFD	KKFRKLAV	KNGVEVLP	PAKV-	
Thermococcus kodakarensis KOD1 (2)	RYLIKAF	E TLQSL	S L - -	THYND	SVLLT	IATEVGA	LATYDKKRR	KRAK	LG I KLLPEVVE	
Thermococcus kodakarensis KOD1 (3)	KYTKRA	LELTRNP	-----K	RFDN	MVIL	ATAEDFKR	LATYDKRL	KKEA	KL E I K TLP	----
Consensus	XXXXXax	EXXXXXXXXXXXXX	ndXXIIX	aXXXXXXXX	laTfdXXI	XkXa	XXXg	XXXXp	----	

13.

Photorhabdus luminescens laumondii TTO1	M I R V P S Q Y A R S L D L R C C W S V F E H S A V S C R Q I S S S V E M K R M V G V K S C G F I D I S V O V L N E V A H V C V R K L K M S W E E I A E F L D I V
Rhodobacter sphaeroides 2.4.1	-----MSAEFADTNVILYLLDN - GPKADCAEEILGHRPRISVQVLNEITLVNCRKAGLSWEEAGAFLEGV
Xanthomonas axonopodis citri 306 (2)	-----MFLDSNVVLYLLEDVAVKADGAEALLQRPRVISVQVLNEVTHVVCVRK LKM GWDVVGQFLALV
Consensus	-----XXXXFXdsnVXlyllsXXXXkadXaeXXIXXrpXISVQVLNEvXhVcVRKl kmsWeEXgXFLXXV

Photorhabdus luminescens laumondii TTO1	R S F C K I V P L T V E V H D R A R L I A E R Y R L S F Y D S C I V A A A V I A G C R T L Y S E D M N H G Q M L E D S L V I K N P F S Y V
Rhodobacter sphaeroides 2.4.1	R A L C P V E S L T I Q T H D V G R A L A E R Y G F S I Y D S I I V A S A L V A G C T T L W S E D M Q D G L L V E G Q L R I V N P F A - -
Xanthomonas axonopodis citri 306 (2)	R S F C K I V P L T V D V H D R A R Q L A E R H Q L S F Y D A C I V A A A A I E G C Q T L Y S E D M H H G L I I E E S L S I R N P F N V -
Consensus	R s f c k i v p L T v X v H D r a R X I A E R y X I S f Y D s c I V A a A X i a G C X T L y S E D M X h G I X X E X s L X I X N P F X X -

14.

Sulfolobus tokodaii 7 (4)	-----VDTSFLLP LVG I K V K G I K D S L L E G K A I Y Y P N L L L T E L L A V I F K E A K K L K L N K V P E A M K G L I Y V L S N V N - L I S I E E L E
Sulfolobus tokodaii 7 (5)	MKRSKIVMRIL I DTSFILPALG DVG - - E E I N I I K E F Y N H E V Y F T E L S L L E A M W V I K R L I K Q G I E V D F N V V K T G L K S I N K T Y R L V K I P
Consensus	XXXXXXXXXXXXX DTSFXLPXXGI X VXXXXXXXXXXXXKXXVXXXXXXXXXTELXXXXXXXXXKXXXXXXXXEXXXXXXXXX LXXXNXXXXXXXXX

Sulfolobus tokodaii 7 (4)	I E T I Y E I L N - K G W N D I F D A I L Y T A Y K S T K I P L I T M D K S F Y N F L K E N G M D V K G I I L L
Sulfolobus tokodaii 7 (5)	I S A Y I K A L N D K R H N D L I D L I L Y T A K A Y N L R L S L D L K L K E I D K E N - I V I Q S L N E S
Consensus	I X X X X X X L N X K X X N D X X D X I L Y X X X K X X X X X L X X X D X X X X X X X K E N X X X X X X X X X X