

NTDB	id	1361	HI	0985	AAC22646.1	MNDITYTLRLMQVPKLG...VGIDKILSNITLN....ELLNYDDVAFRQMGWGAIQIRRFW.KP	58
NTDB	id	114	BSU	16110	NP_389493.1	MDQAAVCLTICRINQLLSPSLLLKKWWKADPSMS.....LTSPVLQTVTRDQIKAAALKNEIEEQFYPKL	63
NTDB	id	626	LCA	RS04960	WP_011374694.1	MLTKNQQLLLKVHLAAGFGTISELRLAAWLSTSHNWAL.....SALEIAQI...ARLPERYWPTF	56
NTDB	id	1250	GC085	RS13065	WP_027219989.1	MNNLQPL.LAL.NRMKR...IGPRTVLKLQRWPDNLNMFQLSSVDLEAGLPSWLAQTIK.NF	58
NTDB	id	256807	CV098	RS05645	WP_012897825.1	MITNFDLRYRWKK.AGMTN...LGVNKLLKFHHRYDKKISLRQMGG...VAELKSIPIFFIEQYK..NQ	58
NTDB	id	599	KW2	RS05940	WP_021037268.1	MITNFDLFRWKK.AGMTN...LGVNKLLKFFRKYDRKISLRQMGG...VAQVKSIPNFIEQYK..NQ	58
NTDB	id	407	SMU	RS04605	WP_002262865.1	MDNFQLFKLKK.AGLTN...LNILNIIDIYEERTQKSLSLRDMAV...VSKNKKPLIFMEHYK..NL	57
NTDB	id	525	SMSK321	RS06295	WP_000705298.1	MKITNVEIYKLKK.SGLTN...QQILKVLEYGENVDQELLGDIAD..ISGCRNPAVFMEIFY.QI	59
NTDB	id	267	KZH43	RS05590	WP_000705306.1	MKITNVEIYKLKK.SGLTN...QQILKVLEYGENVDQELLGDIAD..ISGCRNPAVFMEIFY.QI	59
NTDB	id	226	SPD	RS05990	WP_000705306.1	MKITNVEIYKLKK.SGLTN...QQILKVLEYGENVDQELLGDIAD..ISGCRNPAVFMEIFY.QI	59
NTDB	id	192	SPR	RS05715	WP_000705306.1	MKITNVEIYKLKK.SGLTN...QQILKVLEYGENVDQELLGDIAD..ISGCRNPAVFMEIFY.QI	59
NTDB	id	157	SP	RS06205	WP_000705306.1	MKITNVEIYKLKK.SGLTN...QQILKVLEYGENVDQELLGDIAD..ISGCRNPAVFMEIFY.QI	59
NTDB	id	497	SM12261	RS05565	WP_000705318.1	MKITNVEIYKLKK.SGLTN...QQVLAVLEYGENVDQELLGDIAE..ISGCRNPAVFMEIFY.QI	59
consensus						* * * * *	

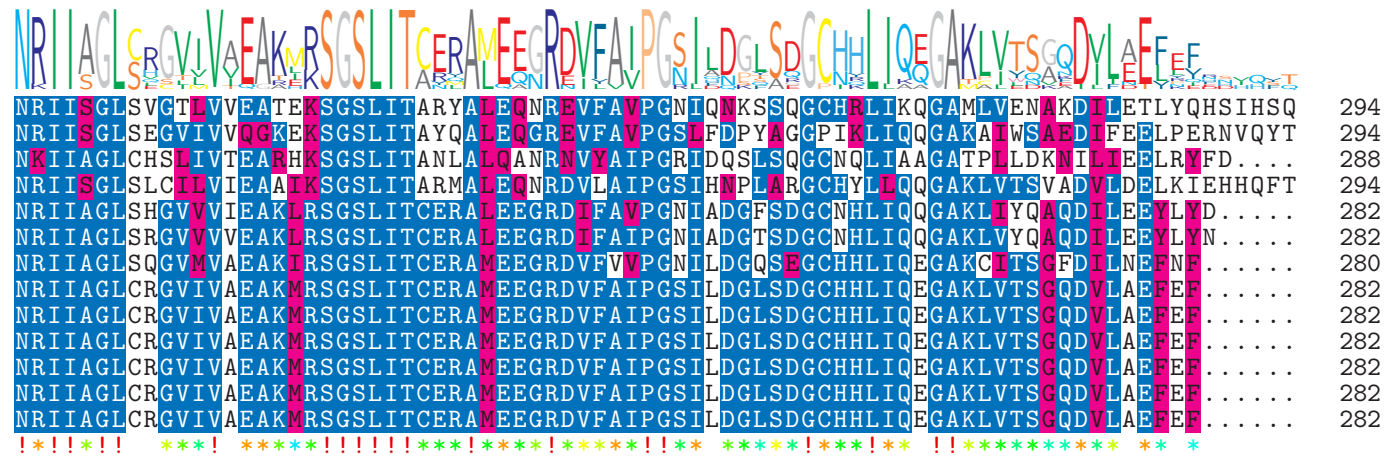
NTDB	id	1361	HI	0985	AAC22646.1	EAKFI	EPALV...	WSQKEGNHLVNYFSPFY	PFL	LKQ	TASF	PPLLFVKG	NLTALS	.QRQ	MAMVGS	RYC	TTY	GEYWA	K	HFAT	134																																																			
NTDB	id	114	BSU	16110	NP	389493.1	PR...	VLAAY	RE.....	QGINT	IP	TSSKQ	YF	WLKS	IYD	PPAV	LF	AKGDM	TLL	SKGR	KIGIVG	TRNPT	TAY	GKQV	V	NH	L	TK	135																																											
NTDB	id	626	LCA	RS04960	WP	011374694.1	QAS	FQSTTL	QRQC	DHEV	RTTYL	TILD	KDYP	QRLL	ET	YLP	LV	FLFY	R	GDL	RL	LLK	.QP	CLAV	VG	ARQA	THYS	KQ	S	LE	LLQ	135																																								
NTDB	id	1250	GC085	RS13065	WP	027219989.1	DP	DF	IK	TDLN	..	WLSS	ENH	IL	TW	DS	PYP	ALL	KE	IAD	PP	FILY	AKG	EL	SALT	.QP	SLA	IVG	SRNA	SVT	G	NENARA	FSR	135																																						
NTDB	id	256807	CV098	RS05645	WP	012897825.1	DV	SK	LR	ADYK	..	IY.....	PS	S	I	LD	D	CYP	W	LD	S	EI	YD	AP	V	LL	FY	K	G	N	D	L	L	L	135																																					
NTDB	id	599	KW2	RS05940	WP	021037268.1	DV	KK	L	R	ADYK	..	KF.....	SS	F	S	I	L	D	D	CYP	W	LD	S	EI	YD	AP	V	LL	FY	K	G	N	D	L	L	135																																			
NTDB	id	407	SMU	RS04605	WP	002262865.1	DS	K	A	L	R	K	BFN	..	RE.....	PS	L	S	I	L	D	K	EY	P	L	E	K	N	I	Y	N	P	P	V	L	L	F	Y	Q	G	D	L	D	L	L	A	.R	P	K	L	A	F	V	G	S	R	L	A	G	S	S	G	I	K	S	V	Q	K	I	V	T	129
NTDB	id	525	SM	SK321	RS06295	WP	000705298.1	DD	A	H	L	E	K	BFK	..	KI.....	PS	F	S	I	L	D	D	CYP	W	LD	S	EI	YD	AP	V	LL	FY	K	G	N	D	L	L	L	.F	P	K	V	A	V	V	G	S	R	A	C	S	K	Q	G	A	K	S	V	E	K	V	I	Q	130						
NTDB	id	267	KZH43	RS05590	WP	000705306.1	DD	A	H	L	S	K	BFQ	..	KF.....	PS	F	S	I	L	D	D	CYP	W	LD	S	EI	YD	AP	V	LL	FY	K	G	N	D	L	L	L	.F	P	K	V	A	V	V	G	S	R	A	C	S	K	Q	G	A	K	S	V	E	K	V	I	Q	130							
NTDB	id	226	SPD	RS05990	WP	000705306.1	DD	A	H	L	S	K	BFQ	..	KF.....	PS	F	S	I	L	D	D	CYP	W	LD	S	EI	YD	AP	V	LL	FY	K	G	N	D	L	L	L	.F	P	K	V	A	V	V	G	S	R	A	C	S	K	Q	G	A	K	S	V	E	K	V	I	Q	130							
NTDB	id	192	SPR	RS05715	WP	000705306.1	DD	A	H	L	S	K	BFQ	..	KF.....	PS	F	S	I	L	D	D	CYP	W	LD	S	EI	YD	AP	V	LL	FY	K	G	N	D	L	L	L	.F	P	K	V	A	V	V	G	S	R	A	C	S	K	Q	G	A	K	S	V	E	K	V	I	Q	130							
NTDB	id	157	SP	RS06205	WP	000705306.1	DD	A	H	L	S	K	BFQ	..	KF.....	PS	F	S	I	L	D	D	CYP	W	LD	S	EI	YD	AP	V	LL	FY	K	G	N	D	L	L	L	.F	P	K	V	A	V	V	G	S	R	A	C	S	K	Q	G	A	K	S	V	E	K	V	I	Q	130							
NTDB	id	497	SM	12261	RS05565	WP	000705318.1	DD	A	H	L	E	K	BFQ	..	KF.....	PS	F	S	I	L	D	D	CYP	W	LD	S	EI	YD	AP	V	LL	FY	K	G	N	D	L	L	L	.F	P	K	V	A	V	V	G	S	R	A	C	S	K	Q	G	A	K	S	V	E	K	V	I	Q							

NTDB id	1361 HI 0985 AAC22646.1	E L S L A G F T I T S G L A L G I D G H C H Q A V V N I Q G Q T T I A V L G S G L E Q I Y P S K H Q R L S A Q I	I E N N G A L V S E F L P N Q A P I A A N F P P R	214
NTDB id	114 BSU 16110 NP 389493.1	E I C R K G W V I V S G L A S G I D G M S H A A S I K A K G R T I G V I A G C F Q H I Y P R E N L Q L A D H	M A K H H I L L S E H P P E T K P Q K W H F P M R	214
NTDB id	626 LCA RS04960 WP 011374694.1	G L T . . A T T I T S G L A Q C A D A M A H E V A L Q R G L A P I G V I G T G I N C S Y P P Q N E H L Q Q V	V A E K G L L L S E Y A L G T P A R R Y Q F P A R	212
NTDB id	1250 GC085 RS13065 WP 027219989.1	E I S R H G V S I V S G L A L G I D A H A H L C L E G G K T I A V L G T G I D C I Y P R R H L K L A E Q	I T E N G L L L S E F P L K S P I A G H F P L R	214
NTDB id	256807 CV098 RS05645 WP 012897825.1	E L N . N F T I V S G L A K G I D T A S H L S A I K N K I P T I A V I G T G L D I F Y P L E N R K I Q E Y	L A K N Q L L L S E Y S V G E K P L K Y H F P E R	207
NTDB id	599 KW2 RS05940 WP 021037268.1	E L N . Q S F T I V S G L A K G I D T A S H L S A I K T K T P T I A V I G T G L D I F Y P L E N R K I Q E Y	L A K Y Q L V L S E Y S L G E K P L K Y H F P E R	207
NTDB id	407 SMU RS04605 WP 002262865.1	D L S . K Q F V I T S G L A R G I D T A A H L A S L K S G G A T I A V I G T G L D V H Y P K E N R R L Q D Y	I A K N H L L L S E Y E A Q S Q P L K Y H F P E R	206
NTDB id	525 SMSK321 RS06295 WP 000705298.1	G L E . N E L V I V S G L A K G I D T A A H M A A L Q N G G K T I A V I G T G L D V F Y P K A N K R L Q D Y	I S N D H L V L S E Y G P G E Q P L K F H F P A R	208
NTDB id	267 KZH43 RS05590 WP 000705306.1	G L E . N E L V I V S G L A K G I D T A A H M A A L Q N G G K T I A V I G T G L D V F Y P K A N K R L Q D Y	I G N D H L V L S E Y G P G E Q P L K F H F P A R	208
NTDB id	226 SPD RS05990 WP 000705306.1	G L E . N E L V I V S G L A K G I D T A A H M A A L Q N G G K T I A V I G T G L D V F Y P K A N K R L Q D Y	I G N D H L V L S E Y G P G E Q P L K F H F P A R	208
NTDB id	192 SPR RS05715 WP 000705306.1	G L E . N E L V I V S G L A K G I D T A A H M A A L Q N G G K T I A V I G T G L D V F Y P K A N K R L Q D Y	I G N D H L V L S E Y G P G E Q P L K F H F P A R	208
NTDB id	157 SP RS06205 WP 000705306.1	G L E . N E L V I V S G L A K G I D T A A H M A A L Q N G G K T I A V I G T G L D V F Y P K A N K R L Q D Y	I G N D H L V L S E Y G P G E Q P L K F H F P A R	208
NTDB id	497 SM12261 RS05565 WP 000705318.1	G L E . N E L V I V S G L A K G I D T A A H M A A L Q N G G K T I A V I G T G L D V F Y P K A N K R L Q D Y	I G N D H L V L S E Y G P G E Q P L K F H F P A R	208
consensus		* * * * *	* * * * *	

```

NTDB id 1361 HI 0985 AAC22646.1
NTDB id 114 BSU 16110 NP 389493.1
NTDB id 626 LCA RS04960 WP 011374694.1
NTDB id 1250 GC085 RS13065 WP 027219989.1
NTDB id 256807 CV098 RS05645 WP 012897825.1
NTDB id 599 KW2 RS05940 WP 021037268.1
NTDB id 407 SMU RS04605 WP 002262865.1
NTDB id 525 SMSK321 RS06295 WP 000705298.1
NTDB id 267 KZH43 RS05590 WP 000705306.1
NTDB id 226 SPD RS05990 WP 000705306.1
NTDB id 192 SPR RS05715 WP 000705306.1
NTDB id 157 SP RS06205 WP 000705306.1
NTDB id 497 SM12261 RS05565 WP 000705318.1
consensus

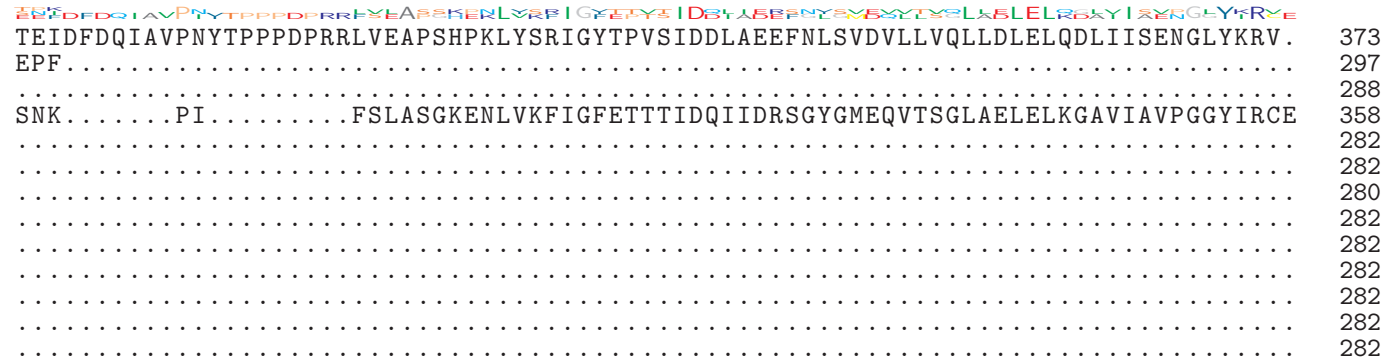
```



```

NTDB id 1361 HI 0985 AAC22646.1
NTDB id 114 BSU 16110 NP 389493.1
NTDB id 626 LCA RS04960 WP 011374694.1
NTDB id 1250 GC085 RS13065 WP 027219989.1
NTDB id 256807 CV098 RS05645 WP 012897825.1
NTDB id 599 KW2 RS05940 WP 021037268.1
NTDB id 407 SMU RS04605 WP 002262865.1
NTDB id 525 SMSK321 RS06295 WP 000705298.1
NTDB id 267 KZH43 RS05590 WP 000705306.1
NTDB id 226 SPD RS05990 WP 000705306.1
NTDB id 192 SPR RS05715 WP 000705306.1
NTDB id 157 SP RS06205 WP 000705306.1
NTDB id 497 SM12261 RS05565 WP 000705318.1
consensus

```



NTDB	id	1361	HI	0985	AAC22646.1	...	373
NTDB	id	114	BSU	16110	NP_389493.1	...	297
NTDB	id	626	LCA	RS04960	WP_011374694.1	...	288
NTDB	id	1250	GC085	RS13065	WP_027219989.1	YER	361
NTDB	id	256807	CV098	RS05645	WP_012897825.1	...	282
NTDB	id	599	KW2	RS05940	WP_021037268.1	...	282
NTDB	id	407	SMU	RS04605	WP_002262865.1	...	280
NTDB	id	525	SMSK321	RS06295	WP_000705298.1	...	282
NTDB	id	267	KZH43	RS05590	WP_000705306.1	...	282
NTDB	id	226	SPD	RS05990	WP_000705306.1	...	282
NTDB	id	192	SPR	RS05715	WP_000705306.1	...	282
NTDB	id	157	SP	RS06205	WP_000705306.1	...	282
NTDB	id	497	SM12261	RS05565	WP_000705318.1	...	282
consensus							

 non conserved
 similar
 $\geq 50\%$ conserved