

```

NTDB id 1177 A1552VC RS01165 WP 000422572.1
NTDB id 1203 PSJM300 01605 AFN76401.1
NTDB id 1019 ACIAD RS04205 WP 004922051.1
NTDB id 1307 DR RS10055 WP 010888596.1
NTDB id 1086 NMV RS00245 WP 002218487.1
NTDB id 1116 NGFG RS10615 WP 003690200.1
NTDB id 1185 GTF74 RS11940 WP 000350195.1
NTDB id 1176 A1552VC RS01160 WP 000350195.1
NTDB id 1283 ACE17W RS02630 WP 010947729.1
NTDB id 1259 GCO85 RS10305 WP 010947729.1
NTDB id 1020 ACIAD RS04210 WP 011182164.1
NTDB id 1081 FDQ49 RS05335 WP 006581387.1
NTDB id 1060 ABD1 RS04380 WP 000355489.1
NTDB id 1040 HON27 RS13360 WP 000355489.1
NTDB id 421129 GZH78 RS28040 WP 007953348.1
NTDB id 1194 PAKAF RS01995 WP 003084552.1
NTDB id 1202 PSJM300 01600 AFN76400.1

```

	M	D	I	T	E	L	A	F	S	V	K	N	G	A	S	D	L	H	S	A	G	V	P	P	M	I	R	V	D	G	E	V	R	R	I	N	L	P	A	L	E	H	K	D	V	H	R	L	V	Y	D	I	M	N	D	K	Q	R	R	D	Y	E	E	K	L	E	T	D	F	S	F	E	V	P			
...	M	E	L	N	Q	Y	L	D	G	M	I	T	H	K	A	S	D	L	I	T	I	V	G	A	P	I	L	Y	R	V	D	G	E	L	R	A	Q	G	E	A	L	.	S	V	A	D	V	T	A	L	.	H	A	M	M	D	A	R	Q	A	E	F	K	Q	T	R	E	A	N	F	A	V	V	R	D	73	
...	M	E	F	E	K	L	L	R	L	M	V	E	K	G	S	D	L	F	I	T	A	G	V	P	P	S	M	K	V	N	G	K	I	L	P	V	N	K	T	P	M	S	P	E	M	T	R	E	T	V	H	G	V	M	N	E	Q	Q	R	R	E	F	T	E	N	H	E	C	N	F	A	I	S	A	R	76	
...	M	D	F	N	D	L	L	N	L	M	A	K	H	K	A	S	D	L	F	I	T	A	G	V	E	P	S	L	K	I	N	G	E	I	T	P	V	S	K	T	L	D	G	M	I	A	Q	L	I	D	S	I	T	T	Q	K	Q	R	Q	E	F	I	E	T	H	E	C	N	F	A	I	L	N	R	76		
MTSGIDIT	D	I	T	D	I	L	R	L	A	D	K	G	A	S	D	I	I	L	A	G	L	P	P	Q	F	K	L	S	G	D	Y	A	Q	G	F	E	P	S	A	D	T	R	K	L	M	S	M	N	N	R	Q	R	I	F	E	E	K	L	E	V	D	F	S	F	E	L	P	80									
...	M	Q	I	T	D	L	L	A	F	G	A	K	N	K	A	S	D	L	H	L	S	G	I	S	P	M	I	R	V	H	G	D	M	R	R	I	N	L	P	E	M	S	A	E	E	V	G	N	M	V	T	S	V	M	N	D	H	Q	R	K	I	Y	Q	N	L	E	V	D	F	S	F	E	L	P	76		
...	M	Q	I	T	D	L	L	A	F	G	A	K	N	K	A	S	D	L	H	L	S	G	I	S	P	M	I	R	V	H	G	D	M	R	R	I	N	L	P	E	M	S	A	E	E	V	G	N	M	V	T	S	V	M	N	D	H	Q	R	K	I	Y	Q	N	L	E	V	D	F	S	F	E	L	P	76		
...	M	D	I	A	E	L	L	E	F	S	V	K	H	N	A	S	D	L	H	L	S	A	G	V	P	P	M	V	R	I	D	G	E	V	R	K	L	G	V	P	A	F	T	H	S	D	V	H	R	L	I	F	E	I	M	N	D	A	Q	R	S	E	Y	E	E	K	L	E	V	D	F	S	F	E	L	P	76
...	M	D	I	A	E	L	L	E	F	S	V	K	H	N	A	S	D	L	H	L	S	A	G	V	P	P	M	V	R	I	D	G	E	V	R	K	L	G	V	P	A	F	T	H	S	D	V	H	R	L	I	F	E	I	M	N	D	A	Q	R	S	E	Y	E	E	K	L	E	V	D	F	S	F	E	L	P	76
...	M	D	I	A	E	L	L	A	F	S	V	K	N	K	S	S	D	L	H	I	S	A	G	M	P	P	M	I	R	V	D	G	L	R	K	I	N	L	P	P	L	E	H	K	D	V	I	K	I	I	Y	D	I	M	N	D	R	Q	R	K	E	Y	E	E	F	F	E	T	D	F	S	F	E	I	A	76	
...	M	D	I	A	E	L	L	A	F	S	V	K	N	K	S	S	D	L	H	I	S	A	G	M	P	P	M	I	R	V	D	G	L																																												

```
NTDB id 1177 A1552VC RS01165 WP 000422572.1
NTDB id 1203 PSJM300 01605 AFN76401.1
NTDB id 1019 ACIAD RS04205 WP 004922051.1
NTDB id 1307 DR RS10055 WP 010888596.1
NTDB id 1086 NMV RS00245 WP 002218487.1
NTDB id 1116 NGFG RS10615 WP 003690200.1
NTDB id 1185 GTF74 RS11940 WP 000350195.1
NTDB id 1176 A1552VC RS01160 WP 000350195.1
NTDB id 1283 ACE17W RS02630 WP 010947729.1
NTDB id 1259 GCO85 RS10305 WP 010947729.1
NTDB id 1020 ACIAD RS04210 WP 011182164.1
NTDB id 1081 FDQ49 RS05335 WP 006581387.1
NTDB id 1060 ABD1 RS04380 WP 000355489.1
NTDB id 1040 HON27 RS13360 WP 000355489.1
NTDB id 421129 GZH78 RS28040 WP 007953348.1
NTDB id 1194 PAKAF RS01995 WP 003084552.1
NTDB id 1202 PSJM300 01600 AFN76400.1
```

[illegible]

```
NTDB id 1177 A1552VC RS01165 WP 000422572.1
NTDB id 1203 PSJM300 01605 AFN76401.1
NTDB id 1019 ACIAD RS04205 WP 004922051.1
NTDB id 1307 DR RS10055 WP 010888596.1
NTDB id 1086 NMV RS00245 WP 002218487.1
NTDB id 1116 NFGF RS10615 WP 003690200.1
NTDB id 1185 GTF74 RS11940 WP 000350195.1
NTDB id 1176 A1552VC RS01160 WP 000350195.1
NTDB id 1283 ACE17W RS02630 WP 010947729.1
NTDB id 1259 GCO85 RS10305 WP 010947729.1
NTDB id 1020 ACIAD RS04210 WP 011182164.1
NTDB id 1081 FDQ49 RS05335 WP 006581387.1
NTDB id 1060 ABD1 RS04380 WP 000355489.1
NTDB id 1040 HON27 RS13360 WP 000355489.1
NTDB id 421129 GZH78 RS28040 WP 007953348.1
NTDB id 1194 PAKAF RS01995 WP 003084552.1
NTDB id 1202 PSJM300 01600 AFN76400.1
```

LT	ED	PI	EF	VH	EH	KRC	IV	TQ	RE	VGL	D	T	S	E	V	E	V	A	L	K	N	S	L	R	Q	A	P	D	M	I	L	I	G	E	I	R	S	R	E	T	M	E	Y	A	M	T	F	A	E	T	G	H	L	C	M	A	T	L	H	A	N	N	A	N	Q									
IS	IED	PI	E	F	I	H	Q	H	Q	N	C	I	V	T	Q	R	E	V	G	I	D	T	S	F	E	V	A	L	K	N	T	L	R	Q	A	P	D	V	I	L	I	G	E	V	R	T	R	E	T	M	D	H	A	V	A	F	A	E	T	G	H	L	C	L	A	T	L	H	A	N	N	A	N	Q
IT	IED	PI	E	F	I	E	H	A	G	C	I	T	T	Q	R	E	V	G	I	D	T	S	F	E	I	A	L	K	N	T	L	R	Q	A	P	D	V	I	L	I	G	E	I	R	S	R	E	V	M	D	Y	A	L	F	A	E	T	G	H	L	V	F	A	T	L	H	A	N	N	A	N	Q		
LT	IED	PI	E	F	M	H	P	N	K	A	S	I	N	Q	R	E	V	G	S	D	T	S	F	D	A	L	R	A	L	R	Q	A	P	D	V	I	L	V	G	E	M	R	D	P	E	T	I	K	A	V	A	T	A	E	T	G	H	L	V	M	G	T	L	H	T	N	S	A	P					
LT	IED	PI	E	F	V	H	Q	S	K	K	L	N	Q	R	E	L	H	Q	H	T	L	S	F	A	N	A	L	R	S	A	L	R	E	D	P	V	I	L	V	G	E	M	R	D	P	E	T	I	G	L	A	L	T	A	A	E	T	G	H	L	V	F	G	T	L	H	T	G	A	A	K			
LT	IED	PI	E	F	V	H	Q	S	K	K	L	N	Q	R	E	L	H	Q	H	T	L	S	F	A	N	A	L	R	S	A	L	R	E	D	P	V	I	L	V	G	E	M	R	D	P	E	T	I	G	L	A	L	T	A	A	E	T	G	H	L	V	F	G	T	L	H	T	G	A	A	K			
LT	IED	PI	E	F	V	H	S	N	N	K	C	L	N	Q	R	E	V	H	R	D	T	H	S	F	K	N	A	L	R	S	A	L	R	E	D	P	V	I	L	V	G	E	L	R	D	Q	E	T	I	S	L	A	L	T	A	A	E	T	G	H	L	V	F	G	T	L	H	T	S	S	A	A	K	
LT	IED	PI	E	F	V	H	S	N	N	K	C	L	N	Q	R	E	V	H	R	D	T	H	S	F	K	N	A	L	R	S	A	L	R	E	D	P	V	I	L	V	G	E	L	R	D	Q	E	T	I	S	L	A	L	T	A	A	E	T	G	H	L	V	F	G	T	L	H	T	S	S	A	A	K	
LT	V	ED	PI	E	F	V	H	Q	S	K	K	L	V	N	Q	R	E	V	H	K	D	T	L	S	F	N	A	L	R	S	A	L	R	E	D	P	I	I	L	V	G	E	L	R	D	L	E	T	I	R	L	A	M	T	A	A	E	T	G	H	L	V	F	G	T	L	H	T	N	S	A	T	K	
LT	V	ED	PI	E	F	V	H	Q	S	K	K	L	V	N	Q	R	E	V	H	K	D	T	L	S	F	N	A	L	R	S	A	L	R	E	D	P	I	I	L	V	G	E	L	R	D	L	E	T	I	R	L	A	M	T	A	A	E	T	G	H	L	V	F	G	T	L	H	T	N	S	A	T	K	
LT	V	ED	PI	E	F	V	H	E	P	K	K	C	L	N	Q	R	E	V	H	R	D	T	L	G	F	N	E	A	L	R	S	A	L	R	E	D	P	I	I	L	V	G	E	M	R	D	L	E	T	I	R	L	A	L	T	A	A	E	T	G	H	L	V											

```
NTDB id 1177 A1552VC RS01165 WP 000422572.1
NTDB id 1203 PSJM300 01605 AFN76401.1
NTDB id 1019 ACIAD RS04205 WP 004922051.1
NTDB id 1307 DR RS10055 WP 010888596.1
NTDB id 1086 NMV RS00245 WP 002218487.1
NTDB id 1116 NGFG RS10615 WP 003690200.1
NTDB id 1185 GTF74 RS11940 WP 000350195.1
NTDB id 1176 A1552VC RS01160 WP 000350195.1
NTDB id 1283 ACE17W RS02630 WP 010947729.1
NTDB id 1259 GCO85 RS10305 WP 010947729.1
NTDB id 1020 ACIAD RS04210 WP 011182164.1
NTDB id 1081 FDQ49 RS05335 WP 006581387.1
NTDB id 1060 ABD1 RS04380 WP 000355489.1
NTDB id 1040 HON27 RS13360 WP 000355489.1
NTDB id 421129 GZH78 RS28040 WP 007953348.1
NTDB id 1194 PAKAF RS01995 WP 003084552.1
NTDB id 1202 PSJM300 01600 AFN76400.1
```

[illegible]

Sequence	Score
TFDQALYQLVDDKISEQDALHSADSANDLRLMLKTKRGDDY... GSGSLQNVKI..... DME.....	368
TFDQALYNLYVQGETIYEDALLHADSSNDLRLMIKLGSETDGEHLTSVS. QGLTL..... EMSDDDPGRSFR.....	381
TFDQALFDLYDHQHISYADALKHADSPNNLRLQIKLSEEANKPLDNRERMSEMER..... KMTFDGQRRNLK.....	383
TMDAYLAGLFRHLLITYDKLERAIIDPKFARLANDASAGL... GGASMPAAPPVPAYNSASSSSSTGRGGDFGRGAAA	395
TMDQSLQSLVRQGLIAPEVARRRRAQNSSESMSF.....	347
TMDQSLQSLVRQGLIAPEAARRRAQNSSESMSF.....	347
TMEQNAKQLIARGVVDAQEVQSKIELDLKAF.....	345
TMEQNAKQLIARGVVDAQEVQSKIELDLKAF.....	345
TLDQHLTELVNKNIISKHTAHEAALNKSLF.....	344
TLDQHLTELVNKNIISKHTAHEAALNKSLF.....	344
TLDQSLKQLLAKGLIINLPATARAVAKSPESF.....	344
TLDQSLKGLVSRGVISPQTARTAAKQPESFL.....	345
TLDQSLKGLVARGVISPQTARTAAKQPESFL.....	345
TLDQSLKGLVARGVISPQTARTAAKQPESFL.....	345
TLDMCLKDLVTKGLISREHAREKARTPDNF.....	344
TLDMCLKGLVAKGLISRENAREKAKIPENF.....	344
TLDSCCLKGLLAKGLISRDSAKEKAKQPENF.....	344

NTDB	id	1177	A1552VC	RS01165	WP	000422572.1	.....	368
NTDB	id	1203	PSJM300	01605	AFN76401.1	.....	381	
NTDB	id	1019	ACIAD	RS04205	WP	004922051.1	.....	383
NTDB	id	1307	DR	RS10055	WP	010888596.1	PATPAAPAAGRSEPGRAGGFGR	418
NTDB	id	1086	NMV	RS00245	WP	002218487.1	.....	347
NTDB	id	1116	NGFG	RS10615	WP	003690200.1	.....	347
NTDB	id	1185	GTF74	RS11940	WP	000350195.1	.....	345
NTDB	id	1176	A1552VC	RS01160	WP	000350195.1	.....	345
NTDB	id	1283	ACE17W	RS02630	WP	010947729.1	.....	344
NTDB	id	1259	GCO85	RS10305	WP	010947729.1	.....	344
NTDB	id	1020	ACIAD	RS04210	WP	011182164.1	.....	344
NTDB	id	1081	FDQ49	RS05335	WP	006581387.1	.....	345
NTDB	id	1060	ABD1	RS04380	WP	000355489.1	.....	345
NTDB	id	1040	HON27	RS13360	WP	000355489.1	.....	345
NTDB	id	421129	GZH78	RS28040	WP	007953348.1	.....	344
NTDB	id	1194	PAKAF	RS01995	WP	003084552.1	.....	344
NTDB	id	1202	PSJM300	01600	AFN76400.1	.....	344	
consensus								

-  non conserved
-  similar
-  $\geq 50\%$ conserved