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NTDB id 450 SPYM18 RS08475 WP 011018214.1
NTDB id 449 SPYM18 RS01395 WP 011018214.1
NTDB id 442 SPYM3 RS08515 WP 011106595.1
NTDB id 441 SPYM3 RS01385 WP 011106595.1
NTDB id 448 SpyM6JRS4 RS07800 WP 010921894.1
NTDB id 447 SpyM6JRS4 RS01370 WP 010921894.1
NTDB id 554 STRINF RS00370 WP 115283725.1
NTDB id 320 STU RS10340 WP 002949220.1
NTDB id 47 STER RS00925 WP 002949220.1
NTDB id 50 STRSA0001 RS07545 WP 002885610.1
NTDB id 468 HSISS4 RS00725 WP 021143466.1
NTDB id 457 SSUD9 RS00080 WP 002936602.1
NTDB id 461 GPW51 RS00080 WP 011921639.1
NTDB id 454 SSU RS00080 WP 011921639.1
NTDB id 44 SMU RS09085 WP 002263585.1
NTDB id 252 KZH43 RS09050 WP 000588897.1
NTDB id 251 KZH43 RS09050 WP 000588897.1
NTDB id 211 SPD RS09675 WP 000588897.1
NTDB id 210 SPD RS00065 WP 000588897.1
NTDB id 177 SPR RS09210 WP 000588897.1
NTDB id 176 SPR RS00065 WP 000588897.1
NTDB id 141 SP RS10155 WP 000588925.1
NTDB id 140 SP RS00070 WP 000588925.1
NTDB id 489 SM12261 RS01070 WP 000471940.1
NTDB id 488 SM12261 RS00065 WP 000471939.1
NTDB id 517 SMSK321 RS10700 WP 000471945.1
NTDB id 516 SMSK321 RS09125 WP 000471944.1
NTDB id 67289 SITYG RS09350 WP 096362333.1
NTDB id 424 SGO RS10430 WP 012130755.1
NTDB id 423 SGO RS08370 WP 012130755.1

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MSCCFFVVL	FILGIVKKRRL	KMSIETRAAF	EKVVKPI	IILKLKRHHYY	IQLWDRD	DWLQEGHI	IILLQLLERY	PELIEEEERL	80	
MSCCFFVVL	FILGIVKKRRL	KMSIETRAAF	EKVVKPI	IILKLKRHHYY	IQLWDRD	DWLQEGHI	IILLQLLERY	PELIEEEERL	80	
MSCCFFVVL	FILGIVKKRRL	KMSIETRAAF	EKVVKPI	IILKLKRHHYY	IQLWDRD	DWLQEGHI	IILLQLLERY	PELIEEEERL	80	
MSCCFFVVL	FILGIVKKRRL	KMSIETRAAF	EKVVKPI	IILKLKRHHYY	IQLWDRD	DWLQEGHI	IILLQLLERY	PELIEEEERL	80	
MSCCFFVVL	FILGIVKKRRL	KMSIETRAAF	EKVVKPI	IILKLKRHHYY	IQLWDRD	DWLQEGHI	IILLQLLERY	PELIEEEERL	80	
MSCCFFVVL	FILGIVKKRRL	KMSIETRAAF	EKVVKPI	IILKLKRHHYY	IQLWDRD	DWLQEGHI	IILLQLLERY	PELIEEEERL	80	
.....	MDFERY	FQTVKPI	IILKLRRH	FVKLWDYED	WIQEGRI	VFFQLLEE	HPDLLN	NEGKC	56	
.....	MEQEVF	VKA	EKVRPI	IVLKA	FRQYFI	QLWDQAD	MEQAM	MTLYQLL	KFPDLEKDDDKL	59
.....	MEQEVF	KAYE	KVRPI	IVLKA	FRQYFI	QLWDQAD	MEQAM	MTLYQLL	KFPDLEKDDDKL	59
.....	MEQEVF	VHAYE	VVRPI	IVLKA	SRQYFI	QLWDQAD	MEQAM	MTLYQLL	EKFPELKSDDDKL	59
.....	MEQEVF	VHAYE	VVRPI	IVLKA	SRQYFI	QLWDQAD	MEQAM	MTLYQLL	EKFPELKSDDDKL	59
.....	MEFEK	VYASV	KGIVN	KARKEFY	IKLWDRD	DWEQEGM	MTLFELLE	AQPWLVDEQVQL	56	
.....	MEFEK	VYASV	KGIVN	KARKEFY	IKLWDRD	DWEQEGM	MTLFELLE	AQPWLVDEQVQL	56	
.....	MEFEK	VYASV	KGIVN	KARKEFY	IKLWDRD	DWEQEGM	MTLFELLE	AQPWLVDEQVQL	56	
.....	MEEDF	EIVFN	KVKPI	IVWKLS	RYFYIK	MTREDW	QEGMLILH	QLLREHPELEDDTKL	58	
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.....	MFKEL	YKEV	QGT	VYKSRNE	YYLHLWELS	SDWDQEGM	LCHELIS	SREEGLVDDIPRL	55	
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.....	MDFKEL	YKVR	GIVL	KSRRE	YYVHLWELS	SDWDQEGM	VLVELV	SRHPYLVEEAHL	56	
.....	MKFED	VYKQ	VEGIV	KRCYK	DYYLHLWEYAD	WRQEGM	LVLYELL	KSHPNLLEDQPR	56	
.....	MKFED	VYKQ	VEGIV	KRCYK	DYYLHLWEYAD	WRQEGM	LVLYELL	KSHPNLLEDQPR	56	

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NTDB id 450 SPYM18 RS08475 WP 011018214.1	YRYFKTKFSSYLKDLIRRRQESQKRQFHKLAYEEI	GEVAHAIPSRGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 449 SPYM18 RS01395 WP 011018214.1	YRYFKTKFSSYLKDLIRRRQESQKRQFHKLAYEEI	GEVAHAIPSRGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 442 SPYM3 RS08515 WP 011106595.1	YRYFKTKFSSYLKDLIRRRQESQKRQFHKLAYEEI	GEVAHAIPSRGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 441 SPYM3 RS01385 WP 011106595.1	YRYFKTKFSSYLKDLIRRRQESQKRQFHKLAYEEI	GEVAHAIPSRGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 448 SpyM6JRS4 RS07800 WP 010921894.1	YRYFKTKFSSYLKDLIRRRQESQKRQFHKLAYEEI	GEVAHAIPSRGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 447 SpyM6JRS4 RS01370 WP 010921894.1	YRYFKTKFSSYLKDLIRRRQESQKRQFHKLAYEEI	GEVAHAIPSRGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 554 STRINF RS00370 WP 115283725.1	YSYFKTKFSSNHVKDIIRHQESFKRKFNRMPYEEI	SDISHCVQPVFFHEVEDYVAYQD	SLACLRRTLGRDRLKLEKVI	IRG	136
NTDB id 320 STU RS10340 WP 002949220.1	RRYFKTKFRNRILNDEVRRQESVKKRQANRQCYVEI	SDIAFCIPNKELD.MVDRLAYDEQLNAFREQL	SSSEDSLKLDRLLGG	IRG	138
NTDB id 47 STER RS00925 WP 002949220.1	RRYFKTKFRNRILNDEVRRQESVKKRQANRQCYVEI	SDIAFCIPNKELD.MVDRLAYDEQLNAFREQL	SSSEDSLKLDRLLGG	IRG	138
NTDB id 50 STRSA0001 RS07545 WP 002885610.1	RRYFKTKFRNRILNDEVRRQESVKKRQANRQCYVEI	SDIAFCIPNKELD.AVDRLVYDEQLNAFRNQL	SSSEDATKLDRLLAG	IRG	138
NTDB id 468 HSISS4 RS00725 WP 021143466.1	RRYFKTKFRNRILNDEVRRQESVKKRQANRQCYVEI	SDIAFCIPNKELD.AVDRLVYDEQLNAFRNQL	SSSEDATKLDRLLAG	IRG	138
NTDB id 457 SSUD9 RS00080 WP 002936602.1	YCYFKVKFRNRIRKDRIRKQESQKRKFDRMPHEDI	YELSHAIQSPGLI.NDELLMLRGALRDYRKNLSN	QQLDKYEKLISG	IRG	135
NTDB id 461 GPW51 RS00080 WP 011921639.1	YCYFKVKFRNRIRKDRIRKQESQKRKFDRMPHEDI	YELSHAIQSPGLI.NDELLMLRGALRDYRKNLSN	QQLDKYEKLISG	IRG	135
NTDB id 454 SSU RS00080 WP 011921639.1	YCYFKVKFRNRIRKDRIRKQESQKRKFDRMPHEDI	YELSHAIQSPGLI.NDELLMLRGALRDYRKNLSN	QQLDKYEKLISG	IRG	135
NTDB id 44 SMU RS09085 WP 002263585.1	YIYFKTRFSNYIKDVLRQESQKRFRNRMSYEEV	GEIEHCLSSGCMQ.LDEYILFRISLLAYKQGL	STKQELFERLVAG	IRG	137
NTDB id 252 KZH43 RS09050 WP 000588897.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 251 KZH43 RS09050 WP 000588897.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 211 SPD RS09675 WP 000588897.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 210 SPD RS00065 WP 000588897.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 177 SPR RS09210 WP 000588897.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 176 SPR RS00065 WP 000588897.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 141 SP RS10155 WP 000588925.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 140 SP RS00070 WP 000588925.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 489 SM12261 RS01070 WP 000471940.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 488 SM12261 RS00065 WP 000471939.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 517 SMSK321 RS10700 WP 000471945.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 516 SMSK321 RS09125 WP 000471944.1	RKYFKTKFRNRILDYIRKQESQKRRYDKEPYEEV	GEISHRISEGLW.LDDYVAYQEV	IASLENQLNSQERMQFKAL	IRG	159
NTDB id 67289 SITYG RS09350 WP 096362333.1	YVYVYKTKFRNHIKDILRKQESQKRKLDQVYEEV	SEIGHKISLKGILY.LDELVLRLDQLKSYQKQL	SPAKQEQYERLLAD	IRG	135
NTDB id 424 SGO RS10430 WP 012130755.1	YRYFKTKFRNRILDYIRKQESQKRKLDQVYEEV	SEIGHKISLKGILY.LDELVLRLDQLKSYQKQL	SPAKQEQYERLLAD	IRG	135
NTDB id 423 SGO RS08370 WP 012130755.1	YRYFKTKFRNRILDYIRKQESQKRKLDQVYEEV	SEIGHKISLKGILY.LDELVLRLDQLKSYQKQL	SPAKQEQYERLLAD	IRG	135
consensus	*!*!*!*!*!*!*!* ! *!*!*!*!*!*!*!* *	*!*!*!*!*!*!*!* *	*!*!*!*!*!*!*!* *	*!*!*!*!*!*!*!* *	

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NTDB id 450 SPYM18 RS08475 WP 011018214.1	ERF K GRRA L LR K ISPY F KE F AQQL...	183
NTDB id 449 SPYM18 RS01395 WP 011018214.1	ERF K GRRA L LR K ISPY F KE F AQQL...	183
NTDB id 442 SPYM3 RS08515 WP 011106595.1	ERF K GRRA L LR K ISPY F KE F AQQL...	183
NTDB id 441 SPYM3 RS01385 WP 011106595.1	ERF K GRRA L LR K ISPY F KE F AQQL...	183
NTDB id 448 SpyM6JRS4 RS07800 WP 010921894.1	ERF K GRRA L LR K ISPY F KE F AQQL...	183
NTDB id 447 SpyM6JRS4 RS01370 WP 010921894.1	ERF K GRRA L LR K ISPY F KE F AQQL...	183
NTDB id 554 STRINF RS00370 WP 115283725.1	ER F E G K K A F L K S I E L F S D FRP.....	158
NTDB id 320 STU RS10340 WP 002949220.1	EC F R G R K K M I R E L R F W M V D FDPCNEED	165
NTDB id 47 STER RS00925 WP 002949220.1	EC F R G R K K M I R E L R F W M V D FDPCNEED	165
NTDB id 50 STRSA0001 RS07545 WP 002885610.1	EC F R G R K K M I R E L K F W M V D FDPNEDD	165
NTDB id 468 HSISS4 RS00725 WP 021143466.1	EC F R G R K K M I R E L K F W M V D FDPNEDD	165
NTDB id 457 SSUD9 RS00080 WP 002936602.1	Q C F N G R R E M I R D L Q I H L K D F R.....	156
NTDB id 461 GPW51 RS00080 WP 011921639.1	Q C F N G R R E M I R D L Q I H L K D F R.....	156
NTDB id 454 SSU RS00080 WP 011921639.1	Q C F N G R R E M I R D L Q I H L K D F R.....	156
NTDB id 44 SMU RS09085 WP 002263585.1	E H F L G R Q S M L K D L R K K L S D F K E K	160
NTDB id 252 KZH43 RS09050 WP 000588897.1	ER F R G R Q R V L R D L R I V F KE F T I R T H..	159
NTDB id 251 KZH43 RS09050 WP 000588897.1	ER F R G R Q R V L R D L R I V F KE F T I R T H..	159
NTDB id 211 SPD RS09675 WP 000588897.1	ER F R G R Q R V L R D L R I V F KE F T I R T H..	159
NTDB id 210 SPD RS00065 WP 000588897.1	ER F R G R Q R V L R D L R I V F KE F T I R T H..	159
NTDB id 177 SPR RS09210 WP 000588897.1	ER F R G R Q R V L R D L R I V F KE F T I R T H..	159
NTDB id 176 SPR RS00065 WP 000588897.1	ER F R G R Q R V L R D L R I V F KE F T I R T H..	159
NTDB id 141 SP RS10155 WP 000588925.1	ER F R G R Q R V L R D L R I V F KE F T I R T H..	159
NTDB id 140 SP RS00070 WP 000588925.1	ER F R G R Q R V L R D L R I V F KE F T I R T H..	159
NTDB id 489 SM12261 RS01070 WP 000471940.1	ER F R G R Q R V L R D L R I V F KE F D I R T H..	159
NTDB id 488 SM12261 RS00065 WP 000471939.1	ER F R G R Q R V L R D L R I V F KE F D I R T H..	159
NTDB id 517 SMSK321 RS10700 WP 000471945.1	ER F R G R Q R V L R D L R I V F KE F D I R T Q..	159
NTDB id 516 SMSK321 RS09125 WP 000471944.1	ER F R G R Q R V L R D L R I V F KE F D I R T R..	159
NTDB id 67289 SITYG RS09350 WP 096362333.1	ER F K G R Q A M L R E L R T Y L K D Y E M.....	157
NTDB id 424 SGO RS10430 WP 012130755.1	ER F K G R K A M L K D L S Y H L R D F N P R L D ..	160
NTDB id 423 SGO RS08370 WP 012130755.1	ER F K G R K A M L K D L S Y H L R D F N P R L D ..	160
consensus	***!*** ***** *****	

- ☒ non conserved
- ☒ similar
- ☒ ≥ 50% conserved