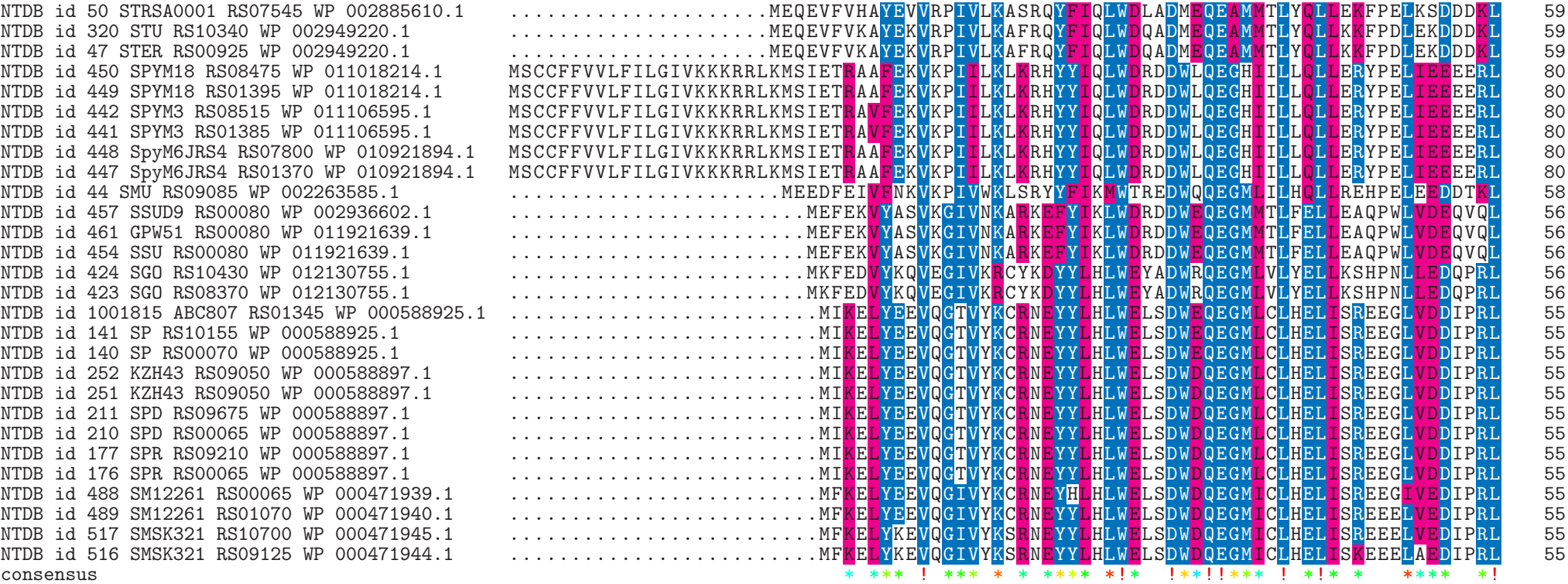


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NTDB id 50 STRSA0001 RS07545 WP 002885610.1	R	R	Y	F	K	T	K	F	R	N	R	I	N	D	E	V	R	R	Q	E	S	V	K	R	Q	A	N	R	Q	C	Y	I	E	I	S	D	I	A	F	C	I	P	N	K	E	L	D	A	V	D	R	L	V	Y	D	E	Q	L	N	A	F	R	N	Q	L	S	S	E	D	A	T	K	L	D	R	L	L	A	G	E	139
NTDB id 320 STU RS10340 WP 002949220.1	R	R	Y	F	K	T	K	F	R	N	R	I	N	D	E	V	R	R	Q	E	S	V	K	R	Q	A	N	R	Q	C	Y	E	I	S	D	I	A	F	C	I	P	N	K	E	L	D	M	V	D	R	L	A	Y	D	E	Q	L	N	A	F	R	E	Q	L	S	S	E	D	S	L	K	L	D	R	L	L	G	G	E	139	
NTDB id 47 STER RS00925 WP 002949220.1	R	R	Y	F	K	T	K	F	R	N	R	I	N	D	E	V	R	R	Q	E	S	V	K	R	Q	A	N	R	Q	C	Y	E	I	S	D	I	A	F	C	I	P	N	K	E	L	D	M	V	D	R	L	A	Y	D	E	Q	L	N	A	F	R	E	Q	L	S	S	E	D	S	L	K	L	D	R	L	L	G	G	E	139	
NTDB id 450 SPYM18 RS08475 WP 011018214.1	Y	R	Y	F	K	T	K	F	S	S	Y	L	K	D	L	L	R	R	Q	E	S	Q	K	R	Q	F	H	K	L	A	Y	E	E	I	G	E	V	A	H	A	I	P	S	R	G	L	W	L	D	D	Y	V	A	Y	Q	E	V	I	A	S	L	E	N	Q	L	N	S	Q	E	R	M	Q	F	K	A	L	I	R	G	E	160
NTDB id 449 SPYM18 RS01395 WP 011018214.1	Y	R	Y	F	K	T	K	F	S	S	Y	L	K	D	L	L	R	R	Q	E	S	Q	K	R	Q	F	H	K	L	A	Y	E	E	I	G	E	V	A	H	A	I	P	S	R	G	L	W	L	D	D	Y	V	A	Y	Q	E	V	I	A	S	L	E	N	Q	L	N	S	Q	E	R	M	Q	F	K	A	L	I	R	G	E	160
NTDB id 442 SPYM3 RS08515 WP 011106595.1	Y	R	Y	F	K	T	K	F	S	S	Y	L	K	D	L	L	R	R	Q	E	S	Q	K	R	Q	F	H	K	L	A	Y	E	E	I	G	E	V	A	H	A	I	P	S	R	G	L	W	L	D	D	Y	V	A	Y	Q	E	V	I	A	S	L	E	N	Q	L	N	S	Q	E	R	M	Q	F	Q	A	L	I	R	G	E	160
NTDB id 441 SPYM3 RS01385 WP 011106595.1	Y	R	Y	F	K	T	K	F	S	S	Y	L	K	D	L	L	R	R	Q	E	S	Q	K	R	Q	F	H	K	L	A	Y	E	E	I	G	E	V	A	H	A	I	P	S	R	G	L	W	L	D	D	Y	V	A	Y	Q	E	V	I	A	S	L	E	N	Q	L	N	S	Q	E	R	M	Q	F	Q	A	L	I	R	G	E	160
NTDB id 448 SpyM6JRS4 RS07800 WP 010921894.1	Y	R	Y	F	K	T	K	F	S	S	Y	L	K	D	L	L	R	R	Q	E	S	Q	K	R	Q	F	H	K	L	A	Y	E	E	I	G	E	V	A	H	A	I	P	S	R	G	L	W	L	D	D	Y	V	A	Y	Q	E	V	I	A	S	L	E	N	Q	L	N	S	Q	E	R	M	Q	F	Q	A	L	I	R	G	E	160
NTDB id 447 SpyM6JRS4 RS01370 WP 010921894.1	Y	R	Y	F	K	T	K	F	S	S	Y	L	K	D	L	L	R	R	Q	E	S	Q	K	R	Q	F	H	K	L	A	Y	E	E	I	G	E	V	A	H	A	I	P	S	R	G	L	W	L	D	D	Y	V	A	Y	Q	E	V	I	A	S	L	E	N	Q	L	N	S	Q	E	R	M	Q	F	Q	A	L	I	R	G	E	160
NTDB id 44 SMU RS09085 WP 002263585.1	Y	I	Y	F	K	T	R	F	S	N	I	T	K	D	V	L	R	Q	E	S	Q	K	R	R	F	N	R	M	S	Y	E	E	V	G	E	I	E	H	C	L	S	S	G	G	M	Q	L	D	E	Y	I	L	F	R	D	S	L	L	A	Y	K	Q	G	L	S	T	E	K	Q	E	L	F	E	R	L	V	A	G	E	138	
NTDB id 457 SSUD9 RS00080 WP 002936602.1	Y	C	Y	F	K	V	K	F	R	N	R	I	K	D	R	I	R	K	Q	E	S	Q	K	R	K	F	D	R	M	P	H	E	D	I	H	E	L	S	H	A	I	Q	S	P	G	L	I	N	D	E	L	L	M	L	R	G	A	L	R	D	Y	R	K	N	L	S	N	D	Q	L	D	K	Y	E	K	L	I	S	G	Q	136
NTDB id 461 GPW51 RS00080 WP 011921639.1	Y	C	Y	F	K	V	K	F	R	N	R	I	K	D	R	I	R	K	Q	E	S	Q	K	R	K	F	D	R	M	P	H	E	D	I	H	E	L	S	H	A	I	Q	S	P	G	L	I	N	D	E	L	L	M	L	R	G	A	L	R	D	Y	R	K	N	L	S	N	D	Q	L	D	K	Y	E	K	L	I	S	G	Q	136
NTDB id 454 SSU RS00080 WP 011921639.1	Y	C	Y	F	K	V	K	F	R	N	R	I	K	D	R	I	R	K	Q	E	S	Q	K	R	K	F	D	R	M	P	H	E	D	I	H	E	L	S	H	A	I	Q	S	P	G	L	I	N	D	E	L	L	M	L	R	G	A	L	R	D	Y	R	K	N	L	S	N	D	Q	L	D	K	Y	E	K	L	I	S	G	Q	136
NTDB id 424 SGO RS10430 WP 012130755.1	Y	R	Y	F	K	T	K	F	R	N	R	I	H	D	L	I	R	R	Q	E	S	Q	K	R	K	L	D	R	Q	P	Y	E	E	V	S	E	I	G	H	R	L	M	K	E	L	Y	L	D	E	L	V	A	F	R	S	A	M	S	E	Y	R	S	R	L	S	P	E	E	A	K	Y	E	R	L	M	A	D	E	136		
NTDB id 423 SGO RS08370 WP 012130755.1	Y	R	Y	F	K	T	K	F	R	N	R	I	H	D	L	I	R	R	Q	E	S	Q	K	R	K	L	D	R	Q	P	Y	E	E	V	S	E	I	G	H	R	L	M	K	E	L	Y	L	D	E	L	V	A	F	R	S	A	M	S	E	Y	R	S	R	L	S	P	E	E	A	K	Y	E	R	L	M	A	D	E	136		
NTDB id 1001815 ABC807 RS01345 WP 000588925.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 141 SP RS10155 WP 000588925.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 140 SP RS00070 WP 000588925.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 252 KZH43 RS09050 WP 000588897.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 251 KZH43 RS09050 WP 000588897.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 211 SPD RS09675 WP 000588897.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 210 SPD RS00065 WP 000588897.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 177 SPR RS09210 WP 000588897.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 176 SPR RS00065 WP 000588897.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	E	K	Q	E	E	L	E	R	V	L	S	N	E	135	
NTDB id 488 SM12261 RS00065 WP 000471939.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	G	M	W	L	D	E	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	D	K	Q	E	E	L	E	R	V	L	R	H	E	135
NTDB id 489 SM12261 RS01070 WP 000471940.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	H	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	P	Y	E	E	V	G	E	I	S	H	R	I	S	E	G	G	M	W	L	D	E	Y	Y	L	F	H	E	T	L	R	D	Y	R	N	K	Q	S	K	D	K	Q	E	E	L	E	R	V	L	R	H	E	135
NTDB id 517 SMSK321 RS10700 WP 000471945.1	R	K	Y	F	K	T	K	F	R	N	R	I	L	D	Y	I	R	K	Q	E	S	Q	K	R	R	Y	D	K	E	A	Y	E	E	V	G	E	I	S	H	R	I	G	E	G	L	W	L	D	D	Y	Y	L	F	H	E	T	L	R	D	Y	R	S	K	Q	S	K	D	K	Q	E	E	L	E	R	V	L	R	H	E	135	
NTDB id 516 SMSK321 RS09125 WP 000471944.1	R	K	Y																																																																														

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NTDB id 50 STRSA0001 RS07545 WP 002885610.1	C	F	R	G	R	K	K	M	I	R	E	L	K	F	W	M	V	D	F	D	P	Y	N	E	D	D	165
NTDB id 320 STU RS10340 WP 002949220.1	C	F	R	G	R	K	K	M	I	R	E	L	R	F	W	M	V	D	F	D	P	C	N	E	E	D	165
NTDB id 47 STER RS00925 WP 002949220.1	C	F	R	G	R	K	K	M	I	R	E	L	R	F	W	M	V	D	F	D	P	C	N	E	E	D	165
NTDB id 450 SPYM18 RS08475 WP 011018214.1	R	F	K	G	R	R	A	L	L	R	K	I	S	P	Y	F	K	E	F	A	Q	Q	L	.	.	.	183
NTDB id 449 SPYM18 RS01395 WP 011018214.1	R	F	K	G	R	R	A	L	L	R	K	I	S	P	Y	F	K	E	F	A	Q	Q	L	.	.	.	183
NTDB id 442 SPYM3 RS08515 WP 011106595.1	R	F	K	G	R	R	A	L	L	R	K	I	S	P	Y	F	K	E	F	A	Q	Q	L	.	.	.	183
NTDB id 441 SPYM3 RS01385 WP 011106595.1	R	F	K	G	R	R	A	L	L	R	K	I	S	P	Y	F	K	E	F	A	Q	Q	L	.	.	.	183
NTDB id 448 SpyM6JRS4 RS07800 WP 010921894.1	R	F	K	G	R	R	A	L	L	R	K	I	S	P	Y	F	K	E	F	A	Q	Q	L	.	.	.	183
NTDB id 447 SpyM6JRS4 RS01370 WP 010921894.1	R	F	K	G	R	R	A	L	L	R	K	I	S	P	Y	F	K	E	F	A	Q	Q	L	.	.	.	183
NTDB id 44 SMU RS09085 WP 002263585.1	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 457 SSUD9 RS00080 WP 002936602.1	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	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	C	F	N	G	R	R	E	M	I	R	D	L	Q	I	H	L	K	D	F	R	.	.	.	.	.	.	156
NTDB id 424 SGO RS10430 WP 012130755.1	R	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	R	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 1001815 ABC807 RS01345 WP 000588925.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 141 SP RS10155 WP 000588925.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 140 SP RS00070 WP 000588925.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 252 KZH43 RS09050 WP 000588897.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 251 KZH43 RS09050 WP 000588897.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 211 SPD RS09675 WP 000588897.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 210 SPD RS00065 WP 000588897.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 177 SPR RS09210 WP 000588897.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 176 SPR RS00065 WP 000588897.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	T	I	R	T	H	.	.	159
NTDB id 488 SM12261 RS00065 WP 000471939.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	D	I	R	T	H	.	.	159
NTDB id 489 SM12261 RS01070 WP 000471940.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	D	I	R	T	H	.	.	159
NTDB id 517 SMSK321 RS10700 WP 000471945.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	D	I	R	T	Q	.	.	159
NTDB id 516 SMSK321 RS09125 WP 000471944.1	R	F	R	G	R	Q	R	V	L	R	D	L	R	I	V	F	K	E	F	D	I	R	T	R	.	.	159
consensus	*	!	*	!	!	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	!			

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