

**Table 2:** Phylogenetic distribution among eukaryotes of core meiotic proteins and the identities of their prokaryotic homologs.

EUKARYOTES		Spo11	Mre11	Rad50	Rad1	Hop1	Hop2	Mnd1	Rad52	Dmc1	Rad51	Msh2	Msh6	Msh4	Msh5	Mlh1	Mlh2	Mlh3	Pms1	Mer3	Smc1	Smc2	Smc3	Smc4	Smc5	Rad18	Rad21	Rec8	Pds5	Scs3				
Excavata	<i>Trichomonas</i>	S	S	S(2)	S	S	S(2)	S	–	S	S(2)	S	S	S	S	S(3)	S(2)	S	S	S	P(2)	P	P(3)	P(2)	P(2)	S	S,P	–	S	S(2)				
	<i>Giardia</i>	S	S	S	P	S	P	S	S	S(2)	–	S	S	–	–	S	S	–	S	P	P	P	P	B	S	–	–	–	–	–				
	<i>Trypanosoma br/ cr</i>	P	P	P	P	P	P	P	–	P	P	P	P	P	P	P	–	B	P	P	P	P	P	P	–	–	P	–	P	P				
Chromalveolata	<i>Plasmodium fal/ yoe</i>	P(2)	P	P	P	P	P	P	–	P	P	P(2)	P	–	–	P	–	–	P	–	P	P	P	P	P	P	P	–	–	–	–			
	<i>Cryptosporidium p/ h</i>	P	P	P	P	P	P	P	–	P	P	P	P	–	–	P	–	–	P	–	P	P	P	P	B	P	P	–	–	–	–			
	<i>Tetrahymena</i>	P	P	P	P	P	P	P	–	P	P	P	P(4)	B	–	P	–	–	P	–	–	P	B	–	–	–	–	–	–	–	–			
Amoe.	<i>Dictyostelium</i>	P	P	B	P			P	P		P	B	P	B	P	P			P		P	P	P	P		P			P	P				
	<i>Phytophthora ram/ soj</i>	P	P	P				P	P	P	P	P	P			P			P		P	P	P	P		P			P	P				
ANIMALS	<i>Homo</i>	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P(2)	P	P	P	P	P	P	P	P	P	P			
	<i>Mus/Rattus</i>	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P(2)	P	P	P	P	P	P	P	P	P	P		
	<i>Gallus</i>		P	P	P	P		B	P	P	P	P	B	B	B	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
	<i>Xenopus</i>	P	P	P	P	P	P	P	B		P	P	B			B	P	P		P	P	P	P	P	P	P	P	P	B	P	P			
	<i>Tetraodon/Fugu/Danio</i>	P	P	P	P	P	P	P	P	P	P	P	P	B	P	P	P	P	P	P	P	P(2)	P	P	P	P	P	P	P	P	P	P		
	<i>Drosophila mel/ pse</i>	P	P	P	P	–	–	–	–	–	P	P	P	–	–	P	–	–	P	–	–	P	P	P	P	P	P	P	P	P	P	P		
	<i>Anopheles</i>	P	P	P	P								P	P	P	P					P	P	P	P	P	P	P			P	P			
	<i>Caenorhabditis el/ br</i>	P	P	P	P	P	–	–	–	–	P	P	P	P	P	P	–	–	P	–	–	P	P	P	P(2)	P	P(2)	P(2)	P(3)	P	P			
	FUNGI	<i>Saccharomyces</i>	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
		<i>Candida glabrata</i>	P	P	P	P	P	P	P	P	P	P	B	P	P	P	P	P	P	P	P	P	B	B	P	B	B	P	P	P	P	P		
<i>Kluyveromyces</i>		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	B	P	P	P	B	P	P	P	P	P			
<i>Candida albicans</i>		P	P	P	B	P	P	P	P	P	P	B	P	P	P	P	–	P	B	P	P	B	B	B(2)	B	B	B	P	P	P	P			
<i>Schizosaccharomyces</i>		P	P	P	P	P	P	P	P(2)	P	P	P	P	–	–	P	–	–	P	–	–	P	P	P	P	P	P	P	P	P	P			
<i>Neurospora</i>		P	P	P	P	–	–	–	P	–	P	P	P	–	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
<i>Gibberella</i>		P	P	P	P	–	–	–	P	–	P	P	P	P	P	P	P	P	P	P	–	P	B	B	P	P	B	P	P	P	P			
<i>Magnaporthe</i>		P	P		P				P		P	P	P	P	P	B	P	B	P	P	P	P	B	B	P	B	B	P	P	P	P			
<i>Aspergillus ni/ fu/ or</i>		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
<i>Ustilago</i>			P	P	P				P		P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P			
<i>Cryptococcus</i>	P	P	P	P	P	P	P	P	P	B	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P				
<i>Encephalitozoon</i>	P	P	P	P	P	P	P	P	–	P	P	P	–	–	P	–	–	P	–	–	P	P	P	P	P	P	P	P	P	P				
Archaeplastid.	<i>Cyanidioschyzon</i>	P	P	P	P			P	P	P	P	P	P	P	P	P	P	P	P	P	B	B	B	B		P	P	P	P	P				
	<i>Arabidopsis</i>	P	P	P	P	P	P	P	–	P	P	P	P(2)	P	P	P	–	P	P	P	P	P(2)	P	P	P	P(3)	P(3)	P	P(2)	P				
	<i>Oryza/ Zea</i>	P	P(2)	P	B	P	P	P	–	P	P(2)	P	P(2)	B	P	P	–	P	P	P	P	P	P(2)	P	P	P	P(3)	P	P(2)	P				
	<i>Chlamydomonas</i>		P	P	P			B	P		P		P	P	P	P					P		P	P	B	P(2)	P		P					
<b>Homologs in:</b>																																		
ARCHAEA		Top6A	SbcD	SbcC	Ercc4					RadA		MutS			MutL			Ski2	Smc															
BACTERIA									RecA																									

Malik S.-B., Pightling A.W., Stefaniak L.M., Schurko A.M., and J.M. Logsdon Jr. (2008) An expanded inventory of conserved meiotic genes provides evidence for sex in *Trichomonas vaginalis*. *PLoS ONE* 3(8): e2879. doi:10.1371/journal.pone.0002879.