

Table S12. *P. confluens* homologs to heterokaryon incompatibility genes from *N. crassa* and *P. anserina*. For *N. crassa* and *P. anserina* proteins shaded in gray, no clear *P. confluens* ortholog can be identified.

A. *N. crassa* het genes

Gene	Ref.	Characteristics	homologs in <i>P. confluens</i>	e-value BastP
<i>mat A1</i> (NCU01958)	[1]	mating-type gene (alpha domain)	No hit, but mating-type protein PCON_07491 homologous to MATA1	-
<i>mat a1</i>	[2]	mating-type gene (HMG box)	PCON_08389	1e-15
<i>het-c</i> (NCU03493)	[3]	allelic <i>het</i> gene, signal peptide, transmembrane domain, glycine rich	PCON_05333	e-171
<i>pin-c1</i> (NCU03494)	[4]	non-allelic <i>het</i> gene, TOL/HET-6/HET-E domain, interaction with <i>het-c</i>	PCON_01604 PCON_09721 PCON_02361 PCON_02350	4e-040 1e-026 1e-025 4e-021
<i>het-6</i> (NCU03533)	[5]	allelic <i>het</i> gene, TOL/HET-6/HET-E domain	PCON_05306 PCON_02361 PCON_09721 PCON_02350	2e-007 1e-006 8e-005 7e-004
<i>un-24</i> (NCU03539)	[5]	allelic <i>het</i> gene, ribonucleoside-diphosphate reductase large chain	PCON_07770	0.0
<i>tol</i> (NCU04453)	[6]	Suppressor of incompatibility TOL/HET-6/HET-E domain	PCON_01604 PCON_02024 PCON_09721 PCON_02361 PCON_02350 PCON_12913 PCON_03497	3e-041 3e-022 1e-019 4e-019 3e-017 6e-015 2e-007
<i>vib-1</i> (NCU03725)	[7]	Suppressor of incompatibility, nuclear localization domain	PCON_08807 (reciprocal best hit is NCU09915)	5e-011

B. *P. anserina* het genes

Gene	Ref.	Characteristics	homologs in <i>P. confluens</i>	e-value BastP
<i>het-c2</i> AAA20542.1	[8]	non-allelic <i>het</i> gene against <i>het-d</i> and <i>het-e</i> , glycolipid transfer protein	PCON_10723	3e-056
<i>het-d</i> CAL30216.1	[9]	non-allelic <i>het</i> gene against <i>het-c</i> , WD repeat domain, TOL/HET-6/HET-E domain, GTP-binding	PCON_11390 PCON_04786 PCON_11858 PCON_12888	1e-049 3e-039 1e-034 4e-033

			PCON_10803 PCON_09822 PCON_01716 PCON_10843 PCON_14293 PCON_03032 PCON_14268 PCON_13460 PCON_02131 PCON_08266 PCON_07564 PCON_05306 PCON_03101	7e-031 2e-027 5e-025 7e-025 2e-015 1e-014 4e-011 1e-010 2e-010 4e-008 2e-006 9e-004 0.068
<i>het-e</i> AAL37300	[9]	non-allelic <i>het</i> gene against <i>het-c</i> , WD repeat doamin, TOL/HET- 6/HET-E domain, GTP-binding	PCON_11390 PCON_04786 PCON_12888 (only 138 aa) PCON_10803 (only 154 aa) PCON_11858 PCON_09822 (only 217 aa) PCON_01716 PCON_10843 PCON_14293 PCON_03032 PCON_05422 (only 173 aa) PCON_14268 PCON_13460 PCON_02131 PCON_08266 PCON_03101 (only 246 aa) PCON_07564 (only 181aa) PCON_03584 (only 168 aa) PCON_04154 (only 267 aa) PCON_04718 (only 226 aa)	5e-052 1e-038 3e-038 1e-037 7e-037 2e-029 2e-029 4e-027 8e-026 3e-019 2e-015 2e-009 6e-009 1e-008 2e-008 6e-007 3e-005 1e-004 2e-004 2e-004
<i>het-r</i> ACM48730.1	[10]	non-allelic <i>het</i> gene against <i>het-v</i> , WD repeat doamin, TOL/HET- 6/HET-E domain, GTP-binding	PCON_05683 (ribos. assem.) PCON_10921 (rco-1) PCON_04786 PCON_11858 PCON_12888 (only 143 aa) PCON_10803 (only 154 aa) PCON_09822 (only 217 aa) PCON_01716 PCON_10843 PCON_03032 PCON_14293 PCON_05422 (only 173 aa) PCON_08266	1e-061 7e-060 7e-039 1e-033 2e-031 9e-031 1e-026 1e-025 3e-022 1e-020 2e-016 4e-015 2e-011

			PCON_14268	3e-011
			PCON_02131	1e-008
			PCON_13460	6e-007
			PCON_04718 (only 226 aa)	8e-006
			PCON_07564 (only 181aa)	1e-005
			PCON_03101 (only 246 aa)	3e-004
			PCON_04154 (only 267 aa)	0.004
<i>het-s</i> Q03689	[11]	allelic <i>het</i> gene, prion analogue	PCON_05235	7e-007

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