

Table S1. Genes involved in sexual reproduction

	Phenotypes of deletion mutants	Genes	Proteins
Genes involved in sexual reproduction	No perithecium formation	<i>GIP1</i>	Non-pheromone G protein-coupled receptor
		<i>GPA1</i>	Heterotrimeric G proteins
		<i>FgFLBA</i>	Regulators of G protein signaling
		<i>MGV1</i>	MAPK
		<i>GPMK1</i>	
		<i>HOG1</i>	
		<i>FgSTE12</i>	Transcription factors
		<i>FgMCM1</i>	
		<i>RAS2</i>	GTPase
		<i>PKR</i>	cAMP-PKA
		<i>FGK3</i>	Glycogen synthase kinase
		<i>FgVELB</i>	Velvet protein complex
		<i>FgEPS1</i>	Protein disulfide isomerase
		<i>FgAP1σ</i>	AP1 complex
		<i>FgDBR1</i>	RNA lariat debranching enzyme
		<i>Fgporin</i>	Mitochondrial porin
		<i>FgERV14</i>	Endoplasmic reticulum (ER) cargo receptor
		<i>FgBEM1</i>	Phox homology domain-containing proteins
		<i>SGH1</i>	Serine/arginine (SR)-like protein
		<i>FgExosc1</i>	Components of the RNA exosome complex
	Reduced production of perithecia	<i>MES1</i>	Implicated in cell-surface organization
		<i>FgSFL1</i>	Transcription factors
		<i>FgCAPA</i> and <i>FgCAPB</i>	Actin capping proteins
		<i>GzSNF1</i>	Sucrose nonfermenting 1 protein kinase
	Delayed development of perithecia	<i>FgMET3</i> and <i>FgMET14</i>	Synthesis of cysteine and methionine
		<i>FgATF1</i>	Transcription factors
	Defective in ascospore formation	<i>GIA1</i>	Non-pheromone G protein-coupled receptor
		<i>FgSWI6</i>	Transcription factor
		<i>FGP1</i>	
		<i>FgATF1</i>	
		<i>CPK1</i>	Catalytic subunit of PKA
		<i>FgExoscA</i>	Components of the RNA exosome complex

Defective in ascospore release	<i>FgDBF2</i> (<i>Fg08635</i>)	
	<i>FgSWE1</i> (<i>Fg10228</i>)	Protein kinase
	<i>Fg08468</i> , <i>Fg07344</i> , <i>Fg06878</i> and <i>Fg10095</i>	
	<i>FgKIN1</i>	
	<i>FgCSN12</i>	Subunit of cop9 signalosome
	<i>FgBUD14</i>	Homology to yeast bud14
	<i>GzSNF1</i>	Sucrose nonfermenting 1 protein kinase
	<i>ZIF1</i>	B-zip transcription factor
	<i>FgLEU1</i>	Isopropylmalate isomerase
	<i>Fg01506</i> , <i>Fg13318</i> , <i>Fg08906</i> , <i>Fg01842</i> , <i>Fg06957</i> , <i>Fg10095</i>	Protein kinase
	<i>CCH1</i>	Calcium ion channel gene
	<i>FgSRP1</i>	SR (serine/arginine-rich) protein
	<i>FgATF1</i>	Stress-related transcription factor
	<i>FgSP1</i>	Transporter
	<i>GEA1</i>	
	<i>ROA</i>	