

Supplementary Table 2: Periodic genes with characterized functions

Biological function	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Unclassified
Chromosome cohesion and segregation	<i>klp5 klp6</i> <i>sad1 dis1</i> <i>psc3 pds5</i>	<u><i>rad21</i></u> <i>ams2 cut2</i> <i>klp8 psm3</i>			<i>sim4</i> (1, 4)
Regulation of mitosis/cytokinesis	<u><i>sid2 plo1 mob1</i></u> <i>ark1 etd1</i>	<u><i>fin1</i></u>			
Cytoskeleton/contractile medial ring	<u><i>cdc15</i></u> <i>myo3 imp2 rho4</i> <i>mde6</i>	<i>cdc4</i>		<i>myo52</i>	<i>fim1</i> (3, 4)
Cell cycle control/checkpoints	<u><i>slp1 rum1</i></u> <u><i>spo12 apc15</i></u> <i>cdc25 csk1 crk1</i> <i>cdr1 cdc13</i>	<u><i>mik1 ste9</i></u> <u><i>cig2 ulp1</i></u>	<i>cam1 pas1</i> <i>rad25</i>	<i>ibp1 cig1</i> <i>cdc2 cds1</i> <i>dim1 pim1</i>	
Cell separation	<i>mac1</i> <i>spn2 spn7</i>	<u><i>eng1 mid2</i></u> <i>par2 pob1</i>		<i>pof6</i>	
Intracellular transport/ionic homeostasis	<i>ssol bet1</i>		<i>sod2</i>	<i>rer1 sst1</i>	
DNA metabolism/repair	<i>cdc20</i> <i>msh6 mus81</i> <i>top1</i>	<u><i>ssb1 rph1 rhp51</i></u> <i>cdm1 poll</i> <i>esol</i>	<i>sap1</i>	<i>top2</i>	<i>cnd2</i> (1, 3)
Transcriptional regulation	<i>ace2 fkh2</i> <i>pmc2</i>	<i>rep2</i> <i>cdc10</i>	<i>php5</i>	<i>rrn3 pcr1</i> <i>rdp1 thi1</i>	
S-phase regulation	<i>spp2 cid13</i>	<u><i>dfp1 mre1 cdc18</i></u> <u><i>cdc22 cdt1 cdt2</i></u>		<i>spd1</i>	<i>hsk1</i> (1, 2)
Cell wall synthesis/cell growth/metabolism	<i>chs2</i> <i>aph1 rps602</i>	<i>exg1 rgf3</i> <i>bgs4</i>	<i>csx2 cyp4</i>	<i>psu1 arg5</i> <i>gmh2 dak1</i> <i>gpd2 mae1</i> <i>bgl2 gps2</i>	<i>pro1</i> (3, 4)
Histones		<i>cnpl</i>	<u><i>pht1 hht1</i></u> <u><i>hta1 htb1</i></u> <i>hht2 hht3</i> <i>hhf1 hhf2</i> <i>hhf3 hta2</i>		
Stress response				<i>rds1</i> <i>csx1 git3</i> <i>nrp1 pka1</i> <i>ssp1 trx1</i> <i>uvi15 vip1</i>	<i>isp6</i> (1, 3, 4) <i>hri1</i> (1, 2)
Sexual differentiation	<i>ste7</i> <i>ndk1</i>			<i>pac2</i>	<i>mfm2</i> (1, 2) <i>spk1</i> (1, 2) <i>byr2</i> (1, 2) <i>mei2</i> (1, 2)

140 periodically expressed genes with characterized functions in *S. pombe* are grouped by biological function and cluster. Genes in **bold** belong to the ‘high amplitude’ group, and genes that were known to be periodically expressed are underlined (Supplementary Table 1 online). The clusters closest to unclassified genes are shown in parentheses. Note that the assignment to biological functions is somewhat arbitrary as genes can have several functions.

For references see *S. pombe* GeneDB (<http://www.genedb.org/genedb/pombe/index.jsp>).

The approximate proportions of genes with characterized functions are 50% (cluster 1), 40% (clusters 2 and 3), and 20% (cluster 4).