

TABLE S1**Arsenic-hypersensitive heterozygous diploid YKOs**

ORF Name	Gene name	Biological Process	Essential ^a
<i>YDR212W</i>	<i>CCT1</i>	protein folding	Y
<i>YDL143W</i>	<i>CCT4</i>	protein folding	Y
<i>YJR064W</i>	<i>CCT5</i>	protein folding	Y
<i>YJL111W</i>	<i>CCT7</i>	protein folding	Y
<i>YJL009W</i>	<i>YJL009W^b</i>	Dubious ORF overlaps with <i>CCT8</i> , protein folding	Y
<i>YAL038W</i>	<i>CDC19</i>	Glycolysis	Y
<i>YLR293C</i>	<i>GSP1</i>	nuclear organization and biogenesis	Y
<i>YMR296C</i>	<i>LCB1</i>	sphingolipid biosynthesis	Y
<i>YGL092W</i>	<i>NUP145</i>	nuclear transportation	Y
<i>YDR228C</i>	<i>PCF11</i>	mRNA polyadenylation	Y
<i>YMR061W</i>	<i>RNA14</i>	mRNA polyadenylation	Y
<i>YLR208W</i>	<i>SEC13</i>	ER to Golgi vesicle-mediated transport	Y
<i>YHR172W</i>	<i>SPC97</i>	microtubule nucleation	Y
<i>YGL207W</i>	<i>SPT16</i>	chromatin remodeling & transcriptional regulation	Y
<i>YLR212C</i>	<i>TUB4</i>	microtubule nucleation	Y
<i>YNL220W</i>	<i>ADE12</i>	adenosine biosynthesis	N
<i>YDR264C</i>	<i>AKR1</i>	endocytosis	N
<i>YDR035W</i>	<i>ARO3</i>	aromatic amino acid family biosynthesis	N
<i>YPR199C</i>	<i>ARR1</i>	arsenite efflux	N
<i>YPR201W</i>	<i>ARR3</i>	arsenite efflux	N
<i>YLR433C</i>	<i>CNA1</i>	cell ion homeostasis & cell wall biogenesis	N
<i>YLL009C</i>	<i>COX17</i>	Intracellular copper ion transport	N
<i>YBR112C</i>	<i>CYC8</i>	chromatin remodeling & transcriptional regulation	N
<i>YMR091C</i>	<i>NPL6</i>	nuclear import & telomere maintenance	N
<i>YER007W</i>	<i>PAC2</i>	microtubule biogenesis	N
<i>YPL159C</i>	<i>PET20</i>	unknown	N
<i>YDR300C</i>	<i>PRO1</i>	proline biosynthesis	N
<i>YOR265W</i>	<i>RBL2</i>	microtubule biogenesis	N
<i>YBR095C</i>	<i>RXT2</i>	transcriptional regulation	N
<i>YDR334W</i>	<i>SWR1</i>	chromatin remodeling	N
<i>YML124C</i>	<i>TUB3</i>	microtubule biogenesis	N
<i>YCR084C</i>	<i>TUP1</i>	chromatin remodeling & transcriptional regulation	N
<i>YBL086C</i>	<i>YBL086C</i>	unknown	N

Note: ^a “Y” means that the gene is essential to yeast cell viability and “N” means that the gene is not essential. ^b “*YJL009W*” is a dubious ORF that overlaps with the ORF of *CCT8* required for protein folding.