

Table S1 *S. cerevisiae* strains used in this study.

Parental diploid	Strains	Number of strains	Origin
44y7	44y7-1, 44y7-3, 44y7-5, 44y7-6, 44y7-7, 44y7-8, 44y7-11, 44y7-12, 44y7-13, 44y7-14, 44y7-17, 44y7-18, 44y7-20, 44y7-21, 44y7-24, 44y7-25, 44y7-27, 44y7-28, 44y7-30, 44y7-31, 44y7-36, 44y7-40, 44y7-43, 44y7-50	24	Shanxi
LFN524	LFN524-1, LFN524-2, LFN524-18, LFN524-19, LFN524-20, LFN524-21, LFN524-22, LFN524-23, LFN524-24, LFN524-25, LFN524-26, LFN524-27, LFN524-28, LFN524-29, LFN524-30, LFN524-31, LFN524-32, LFN524-33, LFN524-35, LFN524-39, LFN524-41, LFN524-42, LFN524-43, LFN524-45, LFN524-48, LFN524-49, LFN524-50	27	Xingjiang
33y7	33y7-10, 33y7-32, 33y7-43	3	Xingjiang
31y3	31y3-2, 31y3-13, 31y3-15, 31y3-32, 31y3-33, 31y3-34, 31y3-37, 31y3-39, 31y3-40, 31y3-43, 31y3-44	11	Shannxi
112y4	112y4-25, 112y4-29, 112y4-32, 112y4-46, 112y14-3, 112y14-7, 112y14-9, 112y14-12, 112y14-25, 112y14-27, 112y14-45	11	Shannxi
31y10	31y10-9, 31y10-19, 31y10-20, 31y10-27, 31y10-28, 31y10-29, 31y10-30,	7	Shannxi
174y1	174y1-1, 174y1-2, 174y1-3, 174y1-5, 174y1-6,	5	Shannxi
NX9412	NX9412-1, NX9412-2, NX9412-3, NX9412-4, NX9412-5, NX9412-6, NX9412-7	7	Ningxia
LFE1504	LFE1504-6, LFE1504-7, LFE1504-8, LFE1504-9, LFE1504-10, LFE1504-11, LFE1504-12, LFE1504-13, LFE1504-14, LFE1504-15, LFE1504-16, LFE1504-17	12	Xingjiang
NX349	NX349-1, NX349-2, NX349-3, NX349-4, NX349-5, NX349-6, NX349-7, NX349-8, NX349-9, NX349-10, NX349-11	11	Ningxia