



Figure S1. The functional roles of 6 *MAL* genes and Mal proteins in *S. cerevisiae* AK46 and MCD4 on maltose metabolism. Mal11 and Mal13, maltose permease; Mal12 and Mal32, α -glucosidase; Mal13 and Mal33, *MAL* gene activator. Thick arrows show the enhancement of gene transcription or function of Mal proteins. Broken lines indicate the release from catabolite repression.