

Supplementary material

Enhanced xylose fermentation and ethanol production by engineered *Saccharomyces cerevisiae* strain

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Table S1 - The target genes used in the gene expression studies

Gene	Protein	Function*
<i>XKS1</i>	Xylulokinase	Converts D-xylulose and ATP to xylulose 5-phosphate and ADP
<i>RPE1</i>	D-ribulose-5-phosphate 3-epimerase	Converts D-ribulose 5-phosphate to D-xylulose 5-phosphate
<i>RKI1</i>	Ribose-5-phosphate ketol-isomerase	Catalyzes the interconversion of ribose 5-phosphate and ribulose 5-phosphate
<i>TAL1</i>	Transaldolase	Converts sedoheptulose 7-phosphate and glyceraldehyde 3-phosphate to erythrose 4-phosphate and fructose 6-phosphate
<i>TKL1</i>	Transketolase	Catalyzes conversion of xylulose-5-phosphate and ribose-5-phosphate to sedoheptulose-7-phosphate and glyceraldehyde-3-phosphate
<i>HXT1</i>	Hxt1p	Low-affinity glucose transporter
<i>HXT2</i>	Hxt2p	Intermediate/Low-affinity glucose transporter
<i>HXT7</i>	Hxt7p	High-affinity glucose transporter

*Ref: Cai et al. 2012