

A novel thermotolerant L-rhamnose isomerase variant for biocatalytic conversion of D-allulose to D-allose

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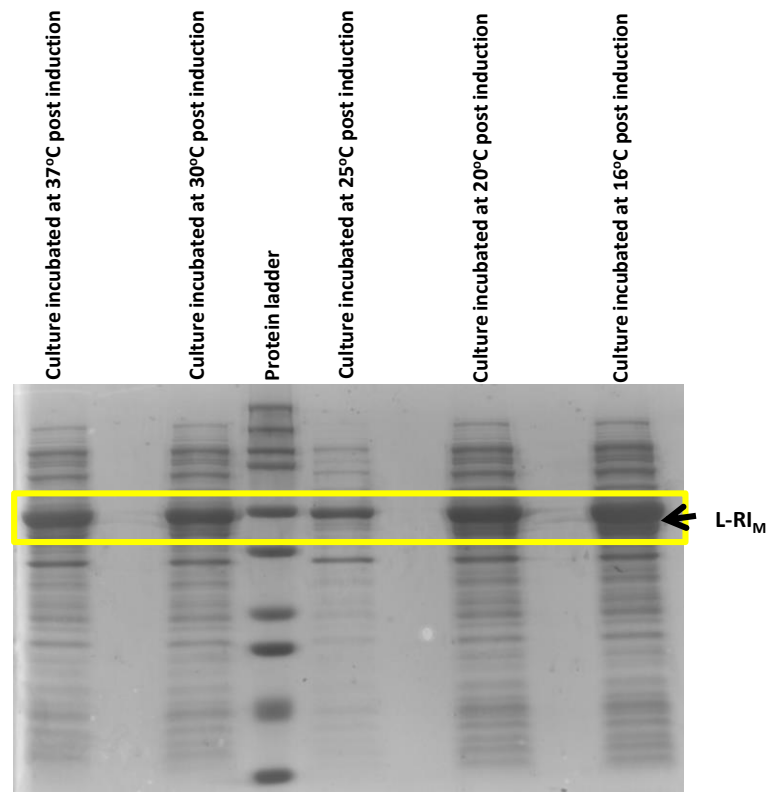


Fig. S1. Expression of L-RI_M at different temperatures (37°C, 30°C, 25°C, 20°C, and 16°C) after IPTG induction.

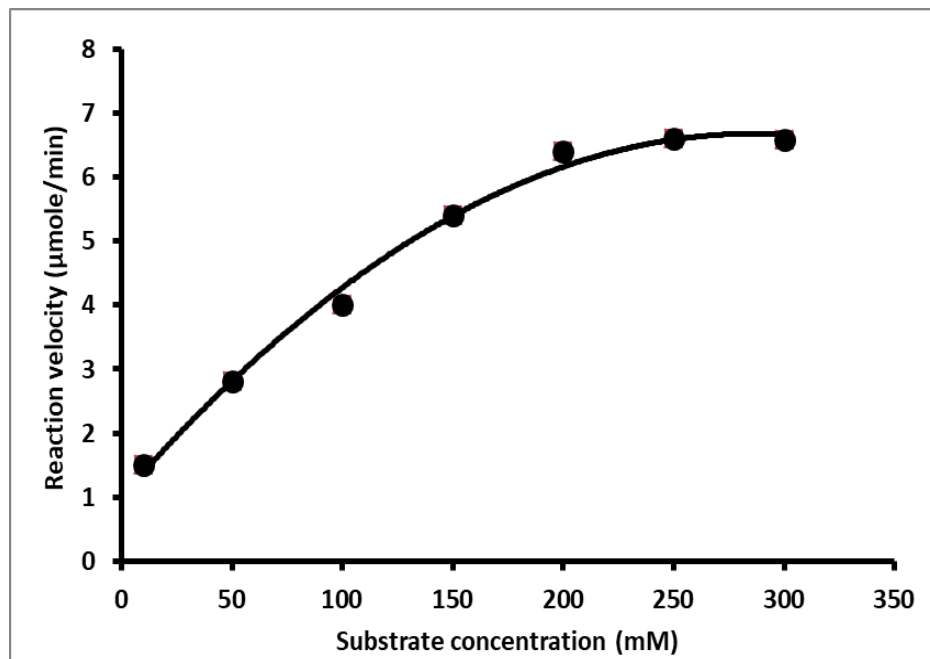
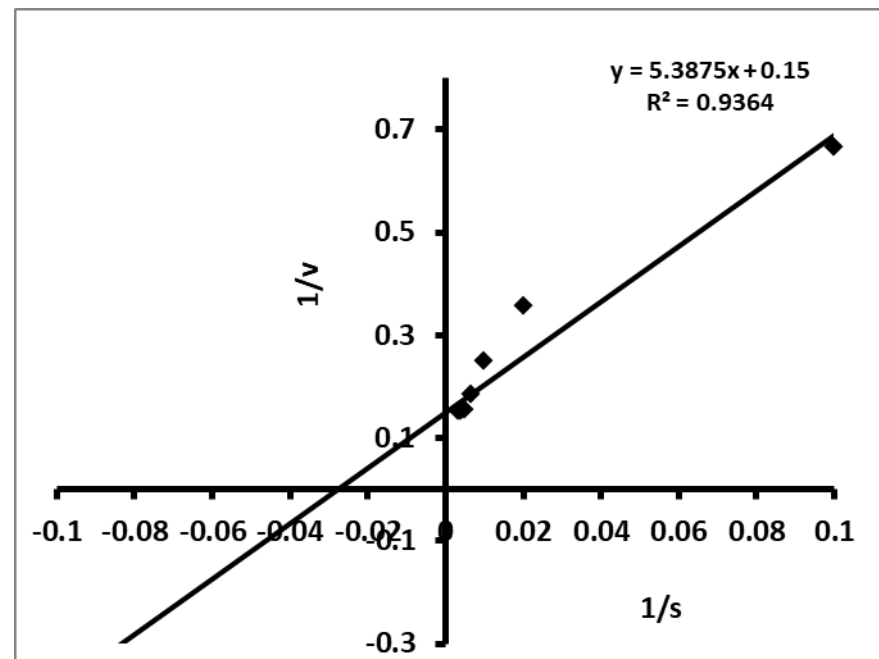
A**B**

Fig. S2. A. Michaelis-Menten Kinetic plot. **B.** Lineweaver-Burk plot

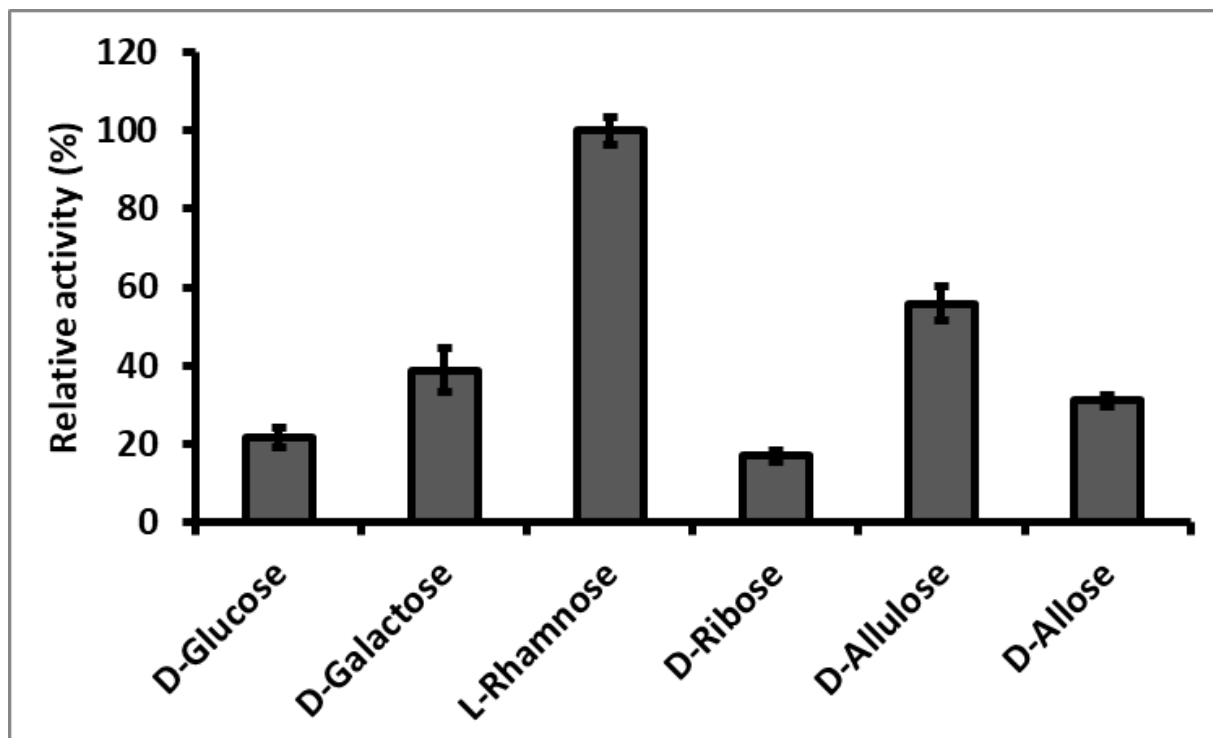


Fig. S3. Specificity of L-RI_M towards different substrates.

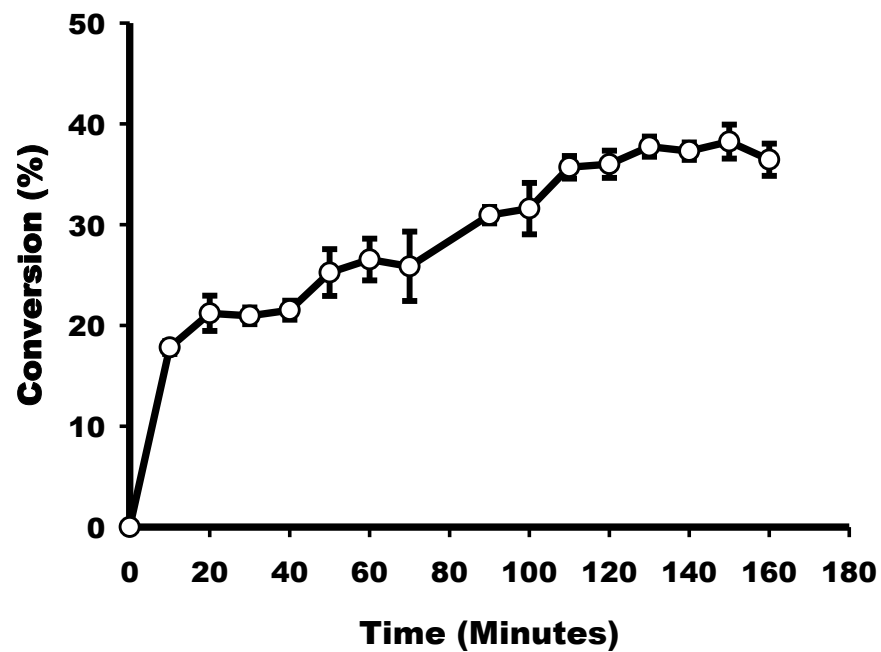


Fig. S4. Time point reaction of D-allulose (10 mM) to D-allose conversion catalyzed by L-Rl_M at optimum pH and temperature conditions.

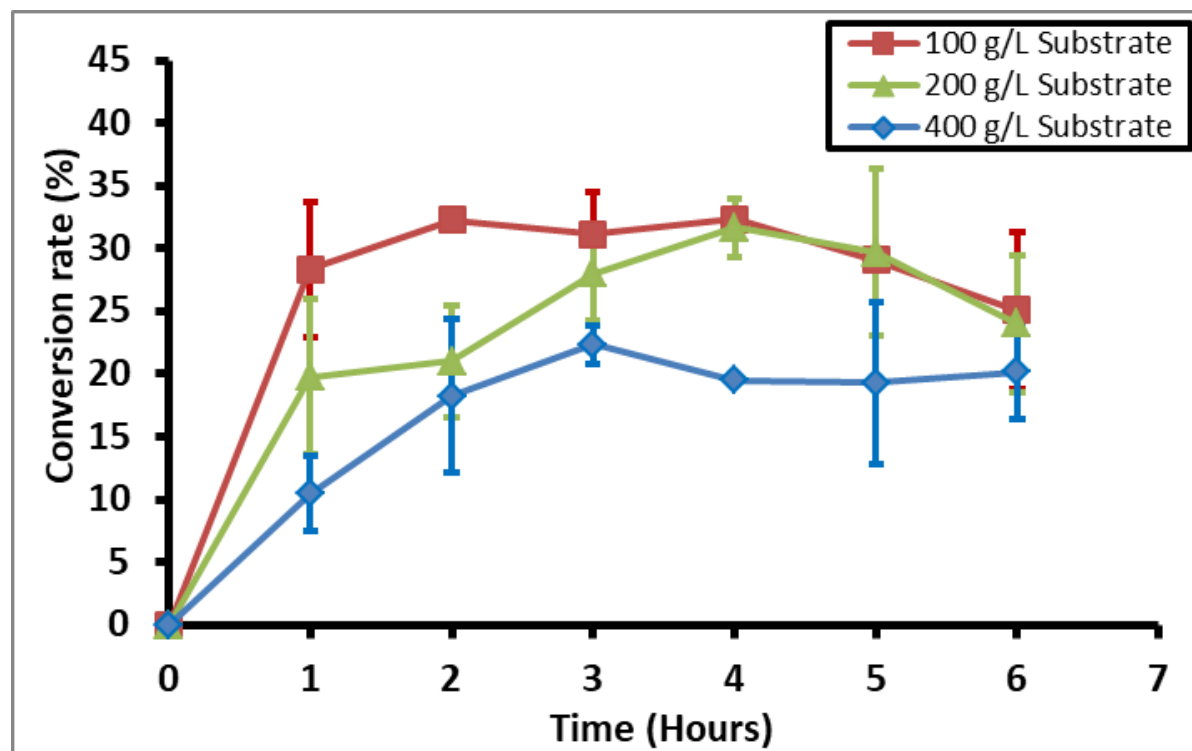


Fig. S5. Bioconversion of D-allulose into D-allose by L-RI_M with different concentrations of substrate.

Polar acidic amino acids



Polar basic amino acids



Hydrophobic amino acids

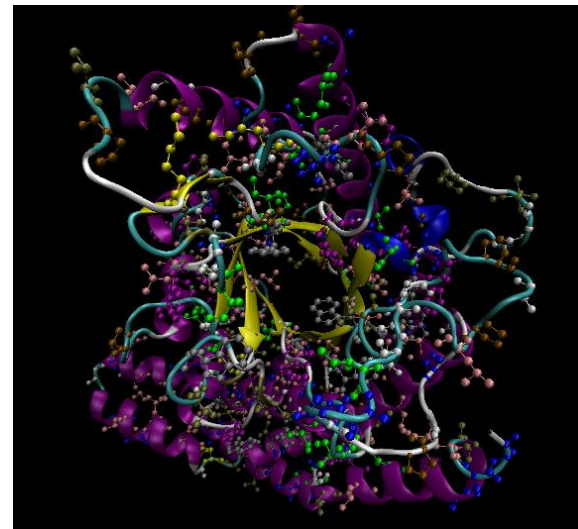


Fig. S6. Distribution of polar and non-polar amino acid residues in L-Rl_M