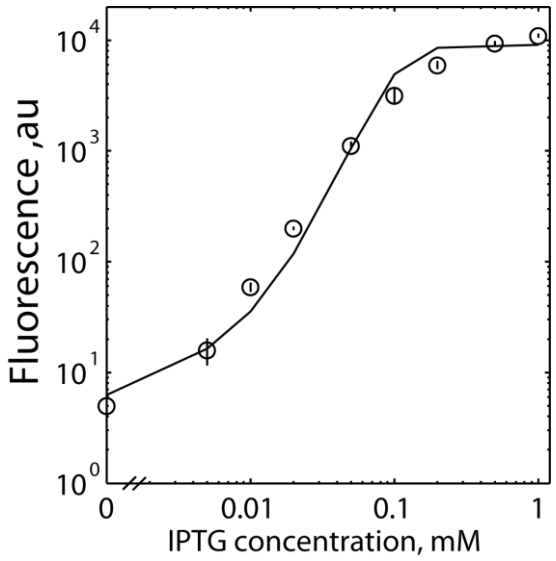

Supplementary Figure S7: Input-output transfer function of P_{lac01} promoter. A ColE1 based plasmid was constructed to express *mRF1* fluorescence reporter under control of P_{lac01} promoter, and transformed into the plasmid cured *E. coli* Echw2f. IPTG concentration was varied from 0mM to 1mM, and expression of *mRFP1* fluorescence reporter from P_{lac01} promoter was measured by flow cytometry during exponential phase in supplemented M9 media. A model of the P_{lac01} promoter's response to induction was constructed by fitting the experimental data to a hill equation model (Kuhlman et al, 2007), which is $r\ (au) = \frac{9100}{1+\frac{1450}{\left(1+\frac{[IPTG(mM)]}{0.0184}\right)^2}}$.