

Transcriptomics analysis of *Escherichia coli* W mutant tolerant to high concentration of 3-hydroxypropionic acid

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3-Hydroxypropionic acid (3-HP) is an important platform chemical which can be produced from glycerol by recombinant *Escherichia coli*. One of the challenges for commercialization of 3-HP production is its toxic effect at high concentration. Recently, a novel transcriptional regulator (designated as 3HPT) was found to be related with 3-HP tolerance in *E. coli*. However, the mechanism of its regulation is still unknown. To address this issue, transcriptome analysis of several *E. coli* W mutants which is highly tolerant to 3-HP was conducted. Interestingly, there was more than hundreds of genes are regulated by 3HPT. Among them, many genes are related with acid tolerance mechanisms, some genes have not been well studied. Functional analysis and further experiments to elucidate the mechanism are in progress.