

Metabolic engineering of *Escherichia coli* for the production of poly (3-hydroxybutyrate-co-3-hydroxyvalerate)

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Among PHA copolymers, [P(3HB-co-3HV)] is one of the important copolymer. So far, adding of second auxiliary carbon source was needed for the production of P(3HB-co-3HV). However, due to the toxicity of auxiliary carbon source, maintaining the balance between cell growth and polymer production was hard. Thus, we developed the *E. coli* can stably synthesize 3HB-CoA and 3HV-CoA in controlled ratio from glucose, and can efficiently synthesize P(3HB-co-3HV) without feeding auxiliary carbon source. [This work was supported by the Technology Development Program to Solve Climate Changes from National Research Foundation of Korea Development of systems metabolic engineering platform technologies for biorefineries; (NRF-2012-C1AAA001-2012M1A2A2026556).]