

Microbial production of 2-hydroxyacid containing polyhydroxyalkanoates using metabolically engineered *Ralstonia eutropha*

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Microbial production of 2-hydroxyacid containing polyhydroxyalkanoates using metabolically engineered *Ralstonia eutropha* PHAs consisting of 2-hydroxyacids as monomer units have attracted much attention, but their production has not been efficient. Here, we report the metabolic engineering strategies for the development of recombinant *Ralstonia eutropha* strains to synthesize PHAs containing 2-hydroxyacids as monomers. This could be achieved by the construction of base *R. eutropha* strains that express engineered PHA synthase able to use 2-hydroxyacyl-CoAs (2HA-CoAs) as substrates and engineered propionyl-CoA transferase to synthesize 2HA-CoAs. [This work was supported by the Technology Development Program to Solve Climate Changes (Systems Metabolic Engineering for Biorefineries) from the Ministry of Science, ICT and Future Planning (MSIP) through the National Research Foundation (NRF) of Korea(NRF-2012-C1AAA001-2012M1A2A2026556)]