

Downregulation of the phosphobutyrylase gene in *Clostridium beijerinckii* NCIMB 8052

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Clostridium beijerinckii NCIMB 8052 is a model organism of acetone-butanol-ethanol fermentation, among which butanol is considered as a next-generation biofuel. Since this bacterium produces acetic and butyric acids during its early fermentation phase and they are used in acetone production, it is desirable to reduce acid formation. In the present study, we designed various types of antisense RNA for in vivo downregulation of *C. beijerinckii* phosphotransbutyrylase (*ptb*) gene and examined the knock-down efficiencies. [This work was supported by the Advanced Biomass R&D Center (ABC-2011-0028386) and Intelligent Synthetic Biology Center (2011-0031963) of Korea through the Global Frontier Research Program of the Ministry of Education, Science and Technology (MEST). Further supports by BioFuelChem and EEWS program of KAIST (N01110012) are appreciated.]