

## Proteomic and physiological analysis of *Mannheimia succiniciproducens* and its strain improvement

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An efficient succinic acid producer, *Mannheimia succiniciproducens* MBEL55E, was isolated from bovine rumen of Korean cow. Recently, a genetically engineered succinic acid overproducing mutant, *M. succiniciproducens* LPK7, was also developed based on full genome sequence. In this study, 2-DE and LC-MS/MS were used to analyze proteome of the mutant cells at the exponential and stationary phases. These results were compared with those of the wild type strain (MBEL55E) to elucidate the global physiological and metabolic changes responsible for succinic acid overproduction. Several features, which correspond to the trend of metabolite production and growth profiles, and indispensable characteristics for further strain improvements will be described in detail.

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