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Identification of Enzymes Degrading Resistant Starch From Human Colonic Bacterium *Ruminococcus bromii*

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*R*uminococcus bromii is considered as an important species in the human gut that degrades efficiently resistant starch (RS) that escape the digestion by host enzymes. When RS Type 3 has been used as a source of energy, *R. bromii* have been shown to express extracellular glycoside hydrolase (GH) enzymes. Among the extracellular GH enzymes, Amy 9 has high activity at 55°C at pH 5 in sodium acetate and high specificity towards α-1.4-glucosidic linkages, whereas Amy 10 and Amy 12 have high activity at 40°C at pH 5 in sodium acetate and strong activity to α-1.6-glucosidic linkage about short branched chain. Although each Amy10, Amy12 were not able to degrade RS type 3, the mixture of various extracellular enzymes with Amy 9 (Amy 9 + Amy 10 or Amy 9 + Amy 12) was higher than activity of single extracellular enzyme indicating the synergistic properties of these enzymes. Our study was conducted to understand the characterization of GH enzymes which are responsible for RS degradation and the synergistic relationship between extracellular GH proteins from *R. bromii*.

Biography

Dong-Sup Choi graduated at the age of 25 years from Han Kyong National University and now has been in the master's course from Kyung Hee University major in Food Microbiology and Biotechnology.

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