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Properties of agarase from a noble marine bacterium SL-5

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Agarase is agar-degrading enzyme and essential in the production of functional agaroligosaccharide. To secure novel agarase, we isolated a agar-degrading bacterium SL-5 from seashore of Homigot at Kyung-Buk province. Most similar genus was *Thalassomonas* genus by 16S rRNA gene sequencing with 96% identity. Agarase production was independent of agar presence and showed growth-related pattern. Agarase producing and growth rate was faster at 27℃ than at 37℃. The optimum condition of agarase was pH 7.0 (20 mM sodium phosphate buffer) and 40℃. It could applicable to the production of agarooligosaccharide as enzyme activity was remained over 80% at 60℃.

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Evaluation of the efficiency of four plasmid extraction methods

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To evaluate the efficiency of plasmid extraction method, four different methods (Quagen commercial kit, Promega commercial kit, Sambrook's alkaline lysis method, our modified alkaline method) were compared for plasmid DNA yields, and time- and cost-performance. Modified alkaline lysis method was less time-consuming, good for cost performance and more safe, because it needs no column and phenol for plasmid purification. Modified alkaline lysis method also offers pure enough plasmid for DNA manipulation and sequencing.