

# B-Cell Mitogen Produced by Slime-Forming, Encapsulated *Lactococcus lactis* ssp. *cremoris* Isolated from Ropy Sour Milk, Viili

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A substance, active as a B-cell mitogen, was isolated from the slime products produced by *Lactococcus lactis* ssp. *cremoris* KVS20. The mitogenic substance was prepared by anion-exchange chromatography and gel filtration chromatography and then purified by proteinase digestion and HPLC. Chemical analysis determined that the mitogenic substance was a phosphopolysaccharide and consisted of rhamnose, glucose, galactose, and phosphorus. The activity of the mitogenic substance was higher than that of the slime products. The optimal concentration for the activity was approximately 120 µg/ml. The mitogenic substance also had substantial mitogenic activity to spleen cells from C3H/HeJ mice, which are resistant to lipopolysaccharide. The findings indicated that a B-cell mitogen different from lipopolysaccharide is produced from *L. lactis* ssp. *cremoris* KVS20.

**Key Words:** *Lactococcus lactis* ssp. *cremoris* • slime product • phosphopolysaccharide • B-cell mitogen

Submitted on October 26, 1992

Accepted on January 8, 1993

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