

Isolation and Characterization of the *Lactobacillus plantarum*  
Bacteriophage SC 921 from Kimchi

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*Lactobacillus plantarum* is responsible for the development of acidity and characteristic flavor of Kimchi, which is a traditional Korean fermented food. Once this strain establish main flora in the fermentation process, it give rise to excess acid production to reduce the quality of Kimchi during the storage. As a primary step to increase keeping quality using virulent *Lactobacillus plantarum* bacteriophage, it was isolated and characterized from Kimchi. Electron micrographs revealed that bacteriophage SC 921 has an isometric head without tail. Bacteriophage SC 921 was nearly eliminated after 5 min at 60°C. It was stable at pH 4~10 but inactivated below pH 3 or above pH 11. As a result of host range determination, it infected the species of *Lactobacillus plantarum* specifically. One-step growth kinetics of bacteriophage SC 921 showed that the latent time was 100 min, the rise period was 120 min, and the burst size was 13(±2) bacteriophage per infected cell. The structural capsid proteins consist of two major and ten minor proteins. The genome was a double-stranded linear molecule of approximately 66.5 kilobase pairs(kbp) with cohesive ends.