LYSIS INHIBITION EFFECT T4 BACTERIOPHAGE BURST SIZE

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ABSTRACT

At least six T4 genes are required for lysis inhibition phenotype which is basically a very complex mechanism. Lysis inhibition is induced by super infection and in a superinfected cell, the concentration of endolysin exceeds the final concentration in a nonsuperinfected cell. In a lysing culture superinfection induces lysis inhibition immediately (Hadas *et al*., 1997).

The present study firstly explains the basic biology of lysis inhibition and also describes lysis of T4-infected cells at high culture densities. Secondly we presented that when the lysis inhibition is initiated there is sudden increase in the size of plaque which is caused by adsorption of T4 bacteriophage (secondary adsorption). It is a novel mechanism through which the lytic nature of T4 phage particle has evolved and our study provides logical arguments to conclude that lysis inhibition increase the burst size.

KEYWORDS: Molecular Cloning, Laboratory Manual, Lysis Inhibition, Bacteriophage