

Publication**A cloned DNA fragment from bacteriophage P1 enhances IS2 insertion****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 998221**Author(s)** Sengstag, C; Arber, W**Author(s) at UniBasel** [Sengstag, Christian](#) ;**Year** 1987**Title** A cloned DNA fragment from bacteriophage P1 enhances IS2 insertion**Journal** Molecular and general genetics**Volume** 206**Number** 2**Pages / Article-Number** 344-51

A 1.75 kb DNA segment of the bacteriophage P1 genome is known to serve as a preferred target for IS2 insertions. The presence of this fragment in a plasmid expressing the galK gene dramatically increases the proportion of IS2 insertions among spontaneous galK- mutants. Subfragments from two different parts of the 1.75 kb segment independently stimulate IS2 insertion, while another subfragment does not. In the plasmids studied IS2 elements not only insert into the cloned P1 fragment but also into parts of the galK gene with similar probability and mostly in one orientation. Many insertion sites are unique but several specific sites within the preferred target are repeatedly used for IS2 integration. The experimental data are compatible with a proposed cooperative mechanism, according to which more than one attracting sequence on the same plasmid might significantly enhance the probability of a particular target region to attract IS2.

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