Protective efficacy of a genetic subunit bacterin against edema disease of swine in mice


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ABSTRACT. The exotoxin SLT-IleB from the *Escherichia coli* Ee strain was expressed in *E. coli*, and the recombinant protein was purified, mixed with the Ee strain, then emulsified with oil-emulsion adjuvants to obtain a mixed subunit bacterin. Groups of Kunming mice were immunized at weeks 0 and 2, and challenged intraperitoneally with the Ee strain at week 4. Antibodies were detected by ELISA and an agglutination test. After the second immunization, the antibody level increased and the rate of immune protection against the Ee strain was 70 and 91.7% in the subunit bacterin and bacterin groups, respectively. Therefore, the mixed subunit bacterin provided good protection against the homologous Ee strain, which provides a basis for further research,
into high-efficacy vaccines against porcine edema disease.

**Key words:** Expressed exotoxin; Subunit bacterin; Mice; Protection efficacy