

عنوان مقاله:

Oral immunization with Lactobacillus casei vectored vaccines surface-expressed Clostridium perfringens toxoids

محل انتشار:

بیستمین کنگره بین المللی میکروب شناسی ایران (سال: 1398)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Mojtaba Alimolaei - *Department of Research and Technology, Kerman branch, Razi Vaccine and Serum Research Institute, Agricultural Research, Education and Extension Organization (AREEO), Kerman, Iran*

Mehdi Golchin - *Department of Pathobiology, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran*

خلاصه مقاله:

Introduction and Objectives: Clostridium perfringens is a bacterium commonly found in the intestines of humans and animals and causes food poisoning. In some conditions resident bacteria may grow rapidly and produce large amounts of toxins that damage the intestines, facilitating the absorption of toxins to the bloodstream and make toxemia. Vaccines and antitoxins can protect against these toxins. As a step toward developing recombinant oral vaccines, we have explored the feasibility of surface expression of alpha, beta, and epsilon toxoid genes from C. perfringens by Lactobacillus casei. **Materials and Methods:** Genetically engineered toxoid genes of α , β and ϵ toxins were synthesized, cloned in pT1NX expression vector and electroporated into L. casei ATCC 393. Expression of recombinant toxoids on the surface of L. casei was evaluated by immunoblotting, ELISA, and confirmed by immunofluorescence microscopy. The safety and efficacy of these recombinant vaccines were evaluated in response to challenge with different Minimum Lethal Dose (MLD) of toxins. **Results:** The results indicated toxoids were expressed well and general and mucosal immune responses elicited by these vector vaccines were higher than those control groups. **Conclusions:** In conclusion, these constructed vaccines are good candidates for stimulation of both mucosal and humoral immunity against C. perfringens lethal toxins. Expression of C. perfringens antigens by L. casei makes it possible to study these recombinant strains as oral vaccines to prevent Clostridial infections.

کلمات کلیدی:

Clostridium perfringens, Lactobacillus casei, Toxoid, Oral Immunization

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/987118>

