

عنوان مقاله:

TAX and HBZ: hFc γ 1 proteins as targets for passive immunotherapy

محل انتشار:

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خلاصه مقاله:

Objective(s): Human T leukemia virus type one (HTLV-1) causes two life-threatening diseases in around five percent of infected subjects, a T cell malignancy and a neurodegenerative disease. TAX and HBZ are the main virulence agents implicated in the manifestation of HTLV-1-associated diseases. Therefore, this study aims to produce these HTLV-1 factors as recombinant Fc fusion proteins to study the structures, their immunogenic properties as vaccines, and their capability to produce specific neutralization antibodies. **Materials and Methods:** TAX and HBZ sequences were chosen from the NCBI-nucleotide database, then designed as human Fc chimers and cloned into *Pichia pastoris*. Produced proteins were purified by HiTrap affinity chromatography and subcutaneously injected into rabbits. Rabbit Abs were purified by batch chromatography, and their neutralization activities for the HTLV-1-infected MT-2 cell line were assessed. Furthermore, the protective abilities of recombinant proteins were evaluated in Tax or HBZ immunized rabbits by MT-2 cell line inoculation and measurement of HTLV-1-proviral load. **Results:** Specific Abs against Tax and HBZ can eliminate 2 million MT-2 cells in 1/1000 dilution in vitro. In challenging assays, the immunization of the animals using Tax or HBZ had no protective activity as HTLV-1 PVL was still positive. **Conclusion:** The result suggests that recombinant TAX and HBZ: hFc γ 1 proteins can produce a proper humoral immune response. Therefore, they could be considered a passive immunotherapy source for HTLV-1-associated diseases, while total TAX and HBZ proteins are

کلمات کلیدی:

ATLL, HBZ, HTLV, Immunization passive, Pichia pastoris, Recombinant proteins, Tax

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