

## عنوان مقاله:

Investigation of DNA Integration into Reproductive Organs Following Intramuscular Injection of DNA in Mice

## محل انتشار:

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## خلاصه مقاله:

Background: DNA immunization with plasmid DNA encoding bacterial, viral, parasitic, and tumor antigens has been reported to trigger protective immunity. The use of plasmid DNA vaccinations against many diseases has produced promising results in animal and human clinical trials; however, safety concerns about the use of DNA vaccines exist, such as the possibility of integration into the host genome, and elicitation of adverse immune responses. Methods: In this study, we examined the potential integration and bio-distribution of pcDNA3.1+PA, a new vaccine candidate with GenBank accession # EF550208, encoding the PA63 gene, in reproductive organs of mice; ovaries and uterus in female, and testis in male. Animals of both sexes were injected intramuscularly with pcDNA3.1+PA. Host genome integration and tissue distribution were examined using PCR and RT-PCR two times monthly for six months. Results: RT-PCR confirmed that pcDNA3.1+PA was not integrated into the host genome and did not enter reproductive organs. Conclusions: This finding has important implications for the use of pcDNA3.1+PA plasmid as a vaccine and opens new perspectives in the DNA vaccine area.

## کلمات کلیدی:

DNA, Intramuscular injection, Integration, Mice, Reproductive organs

## لینک ثابت مقاله در پایگاه سیویلیکا:

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