

عنوان مقاله:

Cloning, nucleotide sequencing and bioinformatics study of NcGRA7, an immunogen from *Neospora caninum*

محل انتشار:

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خلاصه مقاله:

Neospora caninum is an obligate intracellular parasitic protozoa and considered as causal agent of Neosporosis which infect wide variety of hosts. NcGRA7 is an immunodominant antigen recognized by sera from bovines, naturally infected by *N. caninum*, which is used as a powerful target for recombinant or DNA vaccine preparation against neosporosis. There is no study about identifying the molecular structure of *Neospora caninum* in Iran, so as first step, current study tried to identify NcGRA7 gene in this parasite in Iran. After extraction of total RNA from *N. caninum* tachyzoites, cDNA was synthesized and NcGRA7 gene was amplified using cDNA as template. Then the PCR product was cloned into pTZ57R/T vector and transformed into *Escherichia coli* (DH5 α strain), and the resulted recombinant plasmid was submitted for sequencing, followed by bioinformatics analysis. The data obtained from sequencing of native NcGRA7 was recorded in GenBank. The deduced amino acid sequence of NcGRA7 in current study was compared with other *N. caninum* NcGRA7 sequences and showed some identities and differences. NcGRA7 gene of *N. caninum* was successfully cloned into the pTZ57R/T vector and recombination was confirmed by sequencing, colony PCR, and enzymatic digestion, making it ready expression of recombinant protein for further studies.

کلمات کلیدی:

Neospora caninum, NcGRA7, Cloning, Sequencing

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