

عنوان مقاله:

Cloning of conserved regions of nontypeable *Haemophilus influenzae* hmw\ core binding domain

محل انتشار:

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خلاصه مقاله:

Colonization of nontypeable *Haemophilus influenzae* (NTHi) in nasopharynx causes respiratory tract disease. In ۸۰% of clinical isolates, HMW proteins are the major adhesions and induce protective antibodies in the hosts. Therefore, it can be used as a vaccine candidate. The aim of this study is designing and cloning of the conserved regions of NTHi hmw\ core binding domain. In this study, the standard strain of NTHi (PTCC\۷۶۶) was used and cultured on chocolate agar. Genomic DNA was extracted by commercial kit. Then, specific primers were designed for highly conserved regions and PCR product was purified. PCR product was inserted into the PTG\۹-T plasmid and the recombinant plasmids were transferred to *Escherichia coli* (Top\۱۰). For screening the recombinant cells from others, they were cultured on LB agar which had ampicillin and tetracycline antibiotics. Recombinant cells were purified by a specific kit. The presence of conserved regions of NTHi hmw\ core binding domain was confirmed by colony-PCR, double digest and sequencing. In this study, having analyzed the result of sequencing by Mega۶ software, we understood that the sequencing result was same as our target area (Conserved regions of hmw\ core binding domain), indicating that the cloning process have been performed successfully. It is concluded that, due to the presence of high similarity among some regions of hmw\ core binding domain among NTHi PTCC\۷۶۶ and other NTHi strains, core binding domain can be an appropriate candidate for subunit vaccines in case of inducing immune system response.

کلمات کلیدی:

Nontypeable *Haemophilus influenzae*, core binding domain of HMW\, cloning, recombinant plasmid, colony-PCR, double digest, sequencing

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