

عنوان مقاله:

Identification and validation of Outer membrane protein (OMP) P6 3D structure and its topology in Haemophilus influenzae

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خلاصه مقاله:

Haemophilus influenzae is a common human respiratory tract pathogen, causing disease in both children and adults. The bacterium is an important cause of otitis media, the most common reason for children to receive antibiotic therapy. Outer membrane protein P6 is a member of the class of outer membrane proteins known as peptidoglycan-associated lipoproteins. First discovered in the mid-1980s, P6 is a promising vaccine antigen that has been the subject of extensive study. P6 has several features suggesting that the protein may be an effective vaccine antigen. The gene that encodes P6 is present and the protein is expressed in all strains of H. influenzae examined thus far. The nucleotide sequence homology among strains is 97%, and the amino acid sequence homology among strains is 100%, indicating that the protein is highly conserved among strains. P6 has epitopes on the bacterial surface, an important characteristic for potentially protective antibodies to bind P6 on the intact bacterial cell. P6 induces protective immune responses in a variety of animal model systems, including the infant rat model of invasive infection, a rat pulmonary clearance model, otitis media models in the chinchilla and mouse, and nasopharyngeal colonization models. Evidence suggests that P6 outer membrane protein is a useful antigen for inclusion in an effective vaccine, hence the identification of its structure is very important.

کلمات کلیدی:

P6 outer membrane protein, Haemophilus influenzae, 3D structure

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