

Recombinant *Neisseria Gonorrhoeae* peptidoglycan-binding outer membrane protein RmpM Protein, His tagged

Cat. No. RmpM-40N **Lot. No.** (See product label)

SPECIFICATION

Product Overview	The recombinant <i>Neisseria Gonorrhoeae</i> RmpM outer membrane protein fused with His-tag at C-Terminus was expressed in <i>E. coli</i> , purified from inclusion bodies, and gently re-folded.
Species	<i>Neisseria gonorrhoeae</i>
Source	<i>E.coli</i>
ProteinLength	24-236aa
Description	<i>Neisseria gonorrhoeae</i> (<i>N. gonorrhoeae</i>) infects approximately 106 million people globally each year, leading to severe health complications such as infertility, ectopic pregnancy, and an increased risk of HIV transmission. Addressing gonorrhea is challenging due to the bacterium's frequent development of resistance to multiple antibiotics. While various surface antigens have been explored for vaccine development, creating vaccines targeting only a single antigen remains insufficient for fully preventing infections. Rmp (reduction modifiable protein), also known as PIII, is one of the major outer membrane proteins of <i>Neisseria gonorrhoeae</i>. It shares 95 % identity with the class 4 protein of <i>Neisseria meningitidis</i>. Rmp is associated with the bacterial membrane through non-covalent bonds to the peptidoglycan layer. It interacts with PorA/PorB porin complexes, stabilizing the bacterial membrane. This protein plays a significant role in the bacterium's ability to evade the human immune system, complicating vaccine development. Rmp is highly immunogenic, but

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antibodies against Rmp (anti-Rmp Abs) can block the bactericidal activity of other protective antibodies, thereby increasing the bacterial burden and prolonging infection duration. This blocking effect has been demonstrated in both in vitro and in vivo studies, where anti-Rmp Abs were shown to counteract the efficacy of bactericidal monoclonal antibodies and enhance susceptibility to infection. The presence of anti-Rmp Abs in individuals, particularly those with frequent gonococcal infections, suggests that Rmp may help the bacteria evade immune responses, making it a critical factor to consider in vaccine design.

Tag	C-His
Form	Liquid
Molecular Mass	25 kDa
Storage	Short Term Storage: -80 centigrade Long Term Storage: -80 centigrade
Concentration	1.53 mg/mL
Storage Buffer	DPBS buffer
References	1. Li, G., Xie, R., Zhu, X., Mao, Y., Liu, S., Jiao, H., Yan, H., Xiong, K., & Ji, M. (2014). Antibodies with Higher Bactericidal Activity Induced by a Neisseria gonorrhoeae Rmp Deletion Mutant Strain. PLoS ONE, 9(9), e90525. 2. Leuzzi, R., Nesta, B., Monaci, E., et al. (2013). Neisseria gonorrhoeae PIII has a role on NG1873 outer membrane localization and is involved in bacterial adhesion to human cervical and urethral epithelial cells. BMC Microbiology, 13(1), 251. 3. Jones, R. A., Jerse, A. E., & Tang, C. M. (2024). Gonococcal PorB: a multifaceted modulator of host immune responses. Trends in Microbiology, 32(4), 355-364.

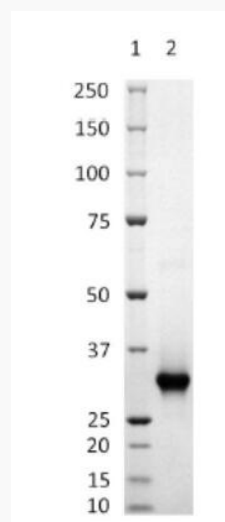
GENE INFORMATION

Official Symbol RmpM

Synonyms RmpM; peptidoglycan-binding outer membrane protein RmpM

Protein Refseq [WP_319078398](#)

SDS-PAGE Analysis



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