

重组 SARS-CoV-2 棘突蛋白(S1 亚基)说明书

产品名称

通用名称: 重组 SARS-CoV-2 棘突蛋白(S1 亚基)

英文名称: Recombinant SARS-CoV-2 Spike Protein(S1 Subunit)

货号: TL-761

产品信息

同义词: 2019-nCoV coronavirus spike Protein; 2019-nCoV cov spike Protein; ncov RBD Protein, 2019-nCoV; 2019-nCoV ncov s1 Protein; 2019-nCoV NCP-CoV s1 Protein;

表达宿主: 人 HEK293 细胞

蛋白序列: DNA 序列编码重组 SARS-CoV-2(2019-nCoV) S1 蛋白表达带有 His 标签在 C 末端。

分子量: 重组 SARS-CoV-2(2019-nCoV) S1 蛋白包含 698 个氨基酸, 预测的理论分子量为 78.3kd。

纯度: >90%采用 SDS-PAGE 凝胶分析。

内毒素: ≤0.01EU/ug (凝胶法)

提纯方法: 层析纯化

组成: 1. 含有 6%甘露醇和 6%海藻糖的无菌 PBS (pH7.4) 的冻干粉。
2. 0.2 μM 无菌过滤的 PBS, pH 7.4 的液体。

稳定性和储存

- 1、冻干的样本可在 4℃ 保存 24 个月, 溶解后的液体可于 -20℃ 保存 6-12 个月, 并且避免反复冻融。
- 2、液体样本在 -20~-80℃ 保存 12 个月, 融化后需要进行分装保存于 -20℃ 保存 6-12 个月, 避免反复冻融。

作用机理

The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2; DPP4, dipeptidyl peptidase-4; APN, aminopeptidase N; CEACAM, carcinoembryonic antigen-related cell adhesion molecule. The spike is essential for both host specificity and viral infectivity. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. It's been reported that SARS-Cov-2 can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion; Defines the range of the hosts and specificity of the virus; Main component to bind with the neutralizing antibody; Key target for vaccine design; Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate.

参考文献

- 1、Jasper Fuk-Woo Chan. et al. (2020) Emerging Microbes & Infections, VOL. 9.