

SARS-CoV S Protein (HEK293, His-Myc)

Cat. No.:	HY-P72045
Synonyms:	S glycoprotein; E2; Peplomer protein; Spike protein S1; Spike protein S2;
Species:	Virus
Source:	HEK293
Accession:	P59594 (R306-F527)
Gene ID:	1489668
Molecular Weight:	Approximately 37 kDa

PROPERTIES

AA Sequence	<pre> R V V P S G D V V R F P N I T N L C P F G E V F N A T K F P S V Y A W E R K K I S N C V A D Y S V L Y N S T F F S T F K C Y G V S A T K L N D L C F S N V Y A D S F V V K G D D V R Q I A P G Q T G V I A D Y N Y K L P D D F M G C V L A W N T R N I D A T S T G N Y N Y K Y R Y L R H G K L R P F E R D I S N V P F S P D G K P C T P P A L N C Y W P L N D Y G F Y T T T G I G Y Q P Y R V V V L S F E L L N A P A T V C G P K L S T D L I K N Q C V N F </pre>
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV S-RBD at 2 µg/mL can bind Paguma larvata ACE2, the EC50 is 33.37-79.47 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The SARS-CoV S protein is implicated in down-regulating host tetherin (BST2) through lysosomal degradation, thus counteracting its antiviral activity. In the context of infection, the S protein attaches the virion to the cell membrane by interacting with host receptors, initiating the viral entry process. The binding to human ACE2 and CLEC4M/DC-SIGNR receptors, coupled with the subsequent internalization of the virus into the endosomes of the host cell, induces
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conformational changes in the S glycoprotein. Additionally, proteolysis by cathepsin CTSL may unmask the fusion peptide of S2, activating membrane fusion within endosomes. These orchestrated events underscore the pivotal role of the SARS-CoV S protein in mediating viral entry and evading host antiviral defenses, shedding light on its significance in the pathogenesis of SARS-CoV infections. Further exploration is crucial to unveil the intricate molecular mechanisms underlying these processes and to identify potential targets for therapeutic interventions.

Caution: Product has not been fully validated for medical applications. For research use only.

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