SARS-CoV-2 S Protein RBD (194a.a, HEK293, C-His)

Cat. No.:	HY-P7431A
Synonyms:	2019-nCov RBD Protein; 2019-nCoV Spike RBD Protein; S protein RBD; 2019-nCoV S protein RBD
Species:	Virus
Source:	HEK293
Accession:	QHD43416.1 (N331-V524)
Gene ID:	43740568
Molecular Weight:	Approximately 31.9 kDa

PROPERTIES

AA Sequence	N I T N L C P F G E V F N A T R F A S V Y A W N R K R I S N C V A D Y S V L Y N S A S F S T F K C Y G V S P T K L N D L C F T N V Y A D S F V I R G D E V R Q I A P G Q T G K I A D Y N Y K L P D D F T G C V I A W N S N N L D S K V G G N Y N Y L Y R L F R K S N L K P F E R D I S T E I Y Q A G S T P C N G V E G F N C Y F P L Q S Y G F Q P T N G V G Y Q P Y R V V V L S F E L L H A P A T V H H H H H H
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Mouse SARS-CoV-2 S1, at 2 μg/mL (100 μL/well) can bind Biotinylated ACE2 protein. The ED_{50} for this effect is 40.46 ng/mL, corresponding to a specific activity is 2.47×10^5 Unit/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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-2 S1 Protein plays a crucial role in the early stages of viral infection. Spike protein S1 facilitates the attachment of the virion to the cell membrane by interacting with host receptors, thereby initiating the infection process. This initial binding event is pivotal for the subsequent entry of the virus into the host cell. Concurrently, Spike protein S2', serving as a viral fusion peptide, comes into play after S2 cleavage during virus endocytosis. The unmasking of S2' is a key

step in the viral fusion process, enabling the merging of the viral membrane with the endosomal membrane and facilitating the release of the viral genetic material into the host cell cytoplasm. The concerted action of these S1 and S2' functionalities underscores the significance of the SARS-CoV-2 S1 Protein in mediating viral entry and fusion, crucial steps in the viral life cycle.

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