

Product Information

SARS-COV-2-Spike-RBD Epitope (450-469)

Linear Peptide from the SARS-COV-2 Spike Protein RBD

SAE2001

Product Description

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2; original World Health Organization designation of 2019-nCoV) is a novel coronavirus first reported in December 2019.^{1,2} The SARS-CoV2 Spike protein (also known as the S protein) is the most studied of the SARS-CoV2 proteins, since it contains the Receptor-Binding-Domain (RBD) for the ligand on the host cell membrane (the ACE2 protein). The S protein also has epitopes recognized by T and B cells, which induce the production of neutralizing antibodies.³ The Spike protein is a type I trimeric glycoprotein that is present on the virion membrane, giving it the appearance of a crown. The protein has two subunits:

- S1, or bulb, that contains the RBD⁴⁻¹¹
- S2, or stalk, responsible for the fusion of the virion with the host cell membrane^{7,8,10,12-15}

The main receptor for SARS-CoV and SARS-CoV-2 on the membrane of the target cells is Angiotensin 2 Converting Enzyme (ACE2), a metallopeptidase that is present on the membrane of many cells and tissues,¹⁶⁻¹⁷ such as:

- type-I and -II pneumocytes
- small intestine enterocytes
- kidney proximal tubules cells
- the endothelial cells of arteries and veins
- arterial smooth muscle

Peptides derived from the SARS-COV-2-Spike-RBD protein are important tools in COVID-19 research and can be used for scanning of samples that contain Anti-SARS-CoV Spike RBD antibodies.¹⁸

This SARS-COV-2-Spike-RBD Epitope (450-469) is a synthetic peptide that corresponds to the amino acid sequence, at positions 450-469, of the Spike RBD region (GeneID: QHD43416.1).

Peptides derived from the SARS-COV-2-Spike-RBD protein can be recognized by anti-SARS-CoV-2-Spike protein antibodies. The peptide may be used in various immunochemical techniques, such as immunoblotting and ELISA.

Reagent

This product is supplied as a lyophilized powder.

Purity: ≥ 95% (HPLC)

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the product at –20 °C. After initial thawing, it is recommended to store the peptide in working aliquots at –20 °C.

Recommended thawing solution: Water

References

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