

Product Information

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

Linear peptide from the SARS-COV-2 Spike protein RBD

Product Number **SAE2001**

Product Description

SARS-COV-2-Spike-RBD epitope (450-469) is a synthetic peptide corresponding to the amino acid sequence of Spike RBD region (GeneID: QHD43416.1) in positions 450-469.

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 including Immunoblotting and Elisa.

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) or (2019-nCoV) is a novel coronavirus that had spread on December 2019 in Hubei province of China and infected millions of people worldwide.¹ The Spike protein (also known as S protein) is the most studied of the coronaviruses proteins, since it contains the Receptor-Binding-Domain (RBD) for the ligand on the host cell membrane (the ACE2 protein), and also has epitopes recognized by T and B cells, which induce the production of neutralizing antibodies.² This is a type I trimeric glycoprotein that is presented on the virion membrane, giving it the appearance of a crown. The protein has two subunits: S1, or bulb, that contains the RBD³⁻¹⁰; and S2, or stalk, responsible for the fusion of the virion with the host cell membrane.^{11, 6, 7, 9, 12-14}

The main receptor for SARS-CoV and SARS-CoV-2 on the membrane of the target cells is the Angiotensin 2 Converting Enzyme (ACE2), a metallopeptidase present on the membrane of many cells, including type-I and -II pneumocytes, small intestine enterocytes, kidney proximal tubules cells, the endothelial cells of arteries and veins, and the arterial smooth muscle, among other tissues.¹⁵⁻¹⁶

Peptides derived from the SARS-COV-2-Spike-RBD protein are important tools in the COVID-19 research field and can be used for scanning of samples containing Anti-SARS-CoV Spike RBD antibodies.¹⁷

Reagent

Supplied as a lyophilized powder.
Purity: ≥95% (HPLC)

Precautions and Disclaimer

For Research Use Only. Not for use in diagnostic procedures. Unless otherwise stated in our catalog or

other company documentation accompanying the product(s), our products are intended for research use only and are not to be used for any other purpose, which includes but is not limited to, unauthorized commercial uses, *in vitro* diagnostic uses, *ex vivo* or *in vivo* therapeutic uses or any type of consumption or application to humans or animals.

Data presented is the available current product information and provided as-is. This product has not been tested or verified in any additional applications, sample types, including any clinical use. Experimental conditions must be empirically derived by the user. Our Antibody Guarantee only covers tested applications stated herein and conditions presented in our product information and is not extended to publications.

Storage/Stability

Store the product at -20 °C. After initial thawing, it is recommended to store the protein in working aliquots at -20 °C. Recommended thawing solution: Water.

References

1. García, Luis F., *Frontiers in immunology*, **11**: 1441 (2020).
2. Walls AC, et al., *Cell*. **181**:281–92.e6 (2020).
3. Shang J., et al., *Nature*. **581**:221–4 (2020).
4. Tai W., et al. *Cell Mol Immunol*. **17**:621–30 (2020).
5. Chen Y., et al., *Biochem Biophys Res Commun*. **525**:135–40 (2020).
6. Hoffmann M., et al. *Cell*. **181**:270–81.e8 (2020).
7. Lan J., et al. *Nature*. **581**:215–20 (2020).
8. Liu Z., et al. *J Med Virol*. **92**:595–601 (2020).
9. Luan J., et al., *Biochem Biophys Res Commun*. **526**:165–9 (2020).
10. Yan R., et al., *Science*. **367**:1444 (2020).
11. Fung T.S., et al., *Annu Rev Microbiol*. **73**:529–57 (2019).
12. Wrapp D., et al., *Science*. **367**:1260 (2020).
13. Ou X., et al., *Nat Commun*. **11**:1620 (2020).
14. Shang J., et al., *PLoS Pathog*. **16**:e1008392 (2020).
15. Hamming I., et al., *J Pathol*. **203**:631–7 (2004).
16. Zou X., et al., *Front Med*. **14**:185–92 (2020).
17. Zhang, B.Z., et al., *Cell research*. **30**:8 702-704 (2020).

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