

For Research Use Only

Recombinant SARS-CoV-2 Spike RBD(L452R, T478K) protein (Myc Tag, His Tag)

Catalog Number: Eg0065



Basic Information

Species:
SARS-CoV-2

Purity:
>95 %, SDS-PAGE

Tag:
Myc Tag, His Tag

EC50:
30-130 ng/mL

Technical Specifications

Purity:
>95 %, SDS-PAGE

Endotoxin Level:
<0.1 EU/μg protein, LAL method

Source:
HEK293-derived SARS-CoV-2 Spike RBD protein Arg319-Phe541 (Accession# YP_009724390.1, L452R, T478K) with a Myc tag and a His tag at the C-terminus.

GeneID:
43740568

Accession:
YP_009724390.1

Predicted Molecular Mass:
27.7 kDa

SDS-PAGE:
35-45 kDa, reducing (R) conditions

Formulation:
Lyophilized from 0.22 μm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

Immobilized SARS-CoV-2 Spike RBD (Myc tag, His tag) at 2 μg/mL (100 μL/well) can bind Human ACE2 (hFc tag) with a linear range of 30-130 ng/mL.

Storage and Shipping

Storage:
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

Shipping:
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

Background

SARS-CoV-2 belongs to the beta-coronavirus genus in the family Coronaviridae, which includes four structural proteins: spike protein (S), membrane protein (M), pericapsid protein (E), and nucleocapsid protein (N). Among the four structural proteins of the SARS-CoV-2, the S and the N are the main immunogens. The S protein of SARS-CoV-2 is the molecular determinant of viral attachment, fusion, and entry into host cells. The S protein comprises an N-terminal S1 subunit responsible for binding the virus to the receptor and an S2 C-terminal subunit responsible for the fusion of the virus with the cell membrane. S1 is further divided into an N-terminal domain (NTD) and a receptor-binding domain (RBD). The RBD domain of S1 tightly binds to the peptidase domain of ACE2, playing key roles in determining host range, tropism, and infectivity. The coronavirus RBD is the main target of neutralizing antibodies and has been a focus of vaccine design and therapeutic efforts.

References

1. Lo Sasso B. et al. (2021). Diagnostics (Basel). 11:1135.
2. Zost SJ. et al. (2020). Nature. 584:443-449.
3. Li K. et al. (2020). Nat Commun. 11:6044.
4. Ahmad I. et al. (2021). Top Curr Chem (Cham). 379:40.
5. Jia L. et al. (2020). MedComm. 2:442-452.

Synonyms

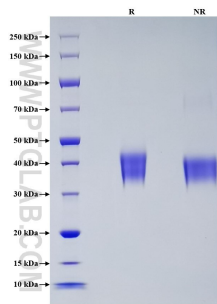
SARS-CoV-2 Spike RBD, COVID-19 RBD, RBD, Spike, spike protein

For technical support and original validation data for this product please contact

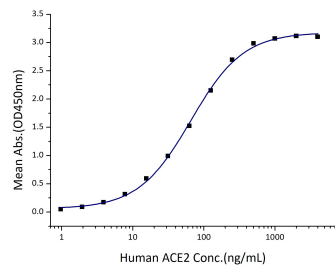
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Selected Validation Data



Purity of Recombinant SARS-CoV-2 Spike RBD was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.



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