

PRODUCT INFORMATION



SARS-CoV-2 Spike Glycoprotein Receptor Binding Domain (recombinant; aa 21-243, 319-541) (His-tagged)

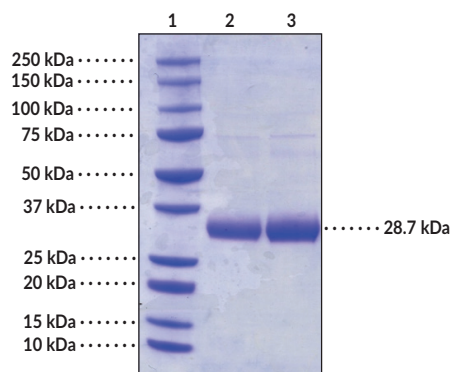
Item No. 32571

Overview and Properties

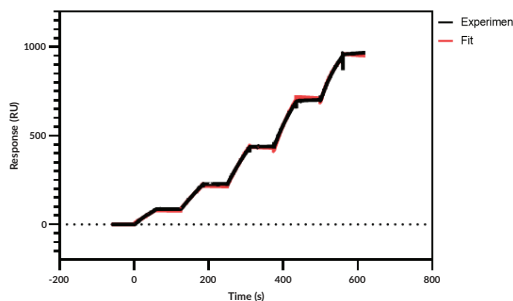
Synonyms:	SARS-CoV-2 Spike RBD, SARS-CoV-2 Spike Receptor Binding Domain, Severe Acute Respiratory Syndrome Coronavirus 2 Spike Glycoprotein Receptor Binding Domain, Spike S1 RBD
Source:	Active recombinant SARS-CoV-2 C-terminal His-tagged spike glycoprotein receptor binding domain expressed in HEK293 cells
Amino Acids:	21-243, 319-541 of P0DTC2
Uniprot No.:	P0DTC2
Molecular Weight:	28.7 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥90%
Supplied in:	PBS, pH 7.4, with 5% mannitol, 0.01% Tween 20, and 10% glycerol
Protein Concentration:	<i>batch specific</i> mg/ml
Bioactivity:	SARS-CoV-2 Surface Glycoprotein Receptor Binding Domain was captured on a protein G Chip S series tested for binding with gradient concentrations of ACE2 (12.5, 25, 50, 100, and 200 nM) in 10 mM HEPES, pH 7.4, with 150 mM sodium chloride, 3 mM ethylenediaminetetraacetic acid, and 0.05% surfactant P20 at 25 °C. The K_D value was calculated using the 1:1 (Langmuir) binding model.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: SARS-CoV-2 Spike Glycoprotein Receptor Binding Domain (2 µg)
Lane 3: SARS-CoV-2 Spike Glycoprotein Receptor Binding Domain (4 µg)



SARS-CoV-2 Spike Glycoprotein Receptor Binding Domain Specifically Binds ACE2. SARS-CoV-2 Spike Glycoprotein Receptor Binding Domain was captured on Protein G Chip S series and SPR analysis was used to determine ACE2 (human, recombinant; Item No. 30587) binding affinity on a Biacore T200, using single cycle kinetics with five concentrations of ACE2.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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Description

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped positive-stranded RNA virus, a member of the *Betacoronavirus* genus, and the causative agent of COVID-19.¹⁻⁵ The SARS-CoV-2 spike glycoprotein, also known as the surface glycoprotein, is located on the outer envelope of the virion.¹ It is composed of an S1 and S2 subunit divided by a furin S-cleavage site not found in other SARS-CoVs.^{6,7} The S1 subunit contains the receptor-binding domain (RBD), which binds to the carboxypeptidase angiotensin-converting enzyme 2 (ACE2), and the S1 and S2 subunits are cleaved by the protease TMPRSS2 to facilitate viral fusion with the host cell membrane.⁸⁻¹⁰ In this way, ACE2 acts as the functional receptor for SARS-CoV-2. Cayman's SARS-CoV-2 Spike Glycoprotein Receptor Binding Domain (recombinant; aa 21-243, 319-541) (His-tagged) protein can be used for ELISA, surface plasmon resonance (SPR), and Western blot (WB) applications.

References

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