

Recombinant Proteins

SARS-CoV-2 Recombinant Spike Protein, aa319-541 (Yeast-expressed)

SARS-CoV-2 recombinant spike protein, amino acids Arg319-Phe541, His tag



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Catalog # 100-0596
100-0597

100 µg
1000 µg

Product Description

SARS-CoV-2 Recombinant Spike Protein, aa319-541 is expressed in *Pichia pastoris* and is one of four structural proteins encoded by the SARS-CoV-2 genome. The Spike Protein plays a key role in attachment to host cells allowing invasion through clathrin-mediated endocytosis. The Spike Protein can be cleaved by host cell proteases after aa685 to yield the N-terminal S1 subunit, and C-terminal S2 region. The S1 subunit is responsible for interacting with the host cell receptor (angiotensin-converting enzyme II) through a receptor-binding domain that is highly conserved with SARS-CoV. The S1 subunit has two conformations: a 'down' conformation in which the receptor is inaccessible, and an 'up' conformation in which the receptor is accessible. These conformational changes are key for monoclonal antibody drugs and vaccine development. At the amino terminus of the polypeptide chain, SARS-CoV-2 Recombinant Spike Protein contains a polyhistidine tag and a SUMOstar site.

Product Information

Alternative Names: S protein, Spike glycoprotein

Accession Number: P0DTC2

Amino Acid Sequence: EAEAYVHHHHHHGSLQDSEVNQEAKPEVKPEVKPETHINLKVSDGSSEIFFKIKKTTPLRRLMEAFKRGKEM
DSLTFLYDGIQADQTPEDLDMEDNDIIEAHREQIGGEFRVQPTESIVRFPNITNLCPFGEVFNATRFASVYAWNR
KRISNCVADYSVLVNSASFSTFKCYGVSPKLNLDLFCFTNVYADSFVIRGDEVRQIAPGQTGKIADYNYKLPDDFTG
CUIAWNSNNLDSKVGGNVNYLYRFLFRKSNLKPFRDISTEIYQAGSTPCNGVEGFNCYFPLQSYGFQPTNGVGY
QPVRVWLSFELLHAPATVCGPKKSTNLVKNKCVNF

Predicted Molecular Mass: 38.1 kDa

Species: Novel human coronavirus (SARS-CoV-2/2019-nCoV)

Formulation: Lyophilized from a solution containing Tris-HCl, NaCl, and trehalose, pH 8.0.

Source: *Pichia pastoris*

Specifications

Activity: The EC50 is ≤ 37 ng/mL as determined by functional ELISA using Human Recombinant ACE2 Protein (Catalog #100-0598).

Purity (SDS-PAGE): $\geq 90\%$

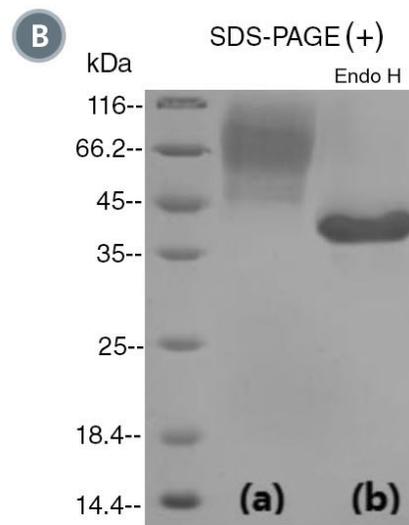
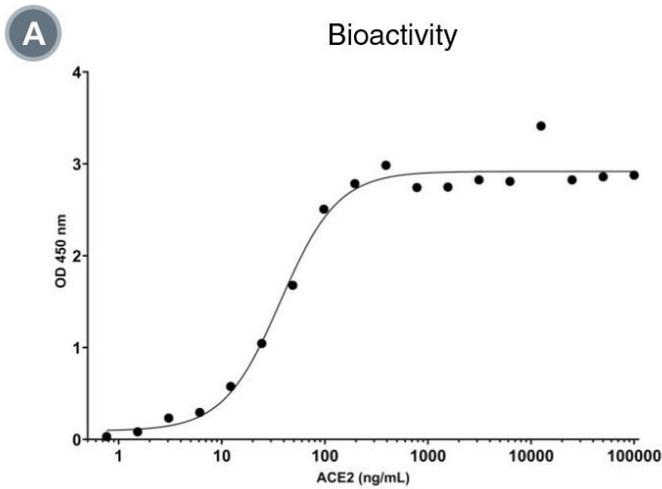
Preparation and Storage

Storage: Store at -20°C to -80°C .

Stability: Stable until expiry date (EXP) on label.

Preparation: Centrifuge before opening. Reconstitute the product in sterile water to a concentration of 0.1 - 1.0 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Sterilize by 0.2 µm filtration. Store at $2 - 8^{\circ}\text{C}$ for up to 1 week.

Data



(A) Binding activity tested by functional ELISA using Human Recombinant ACE2 Protein and immobilized SARS-CoV-2 Recombinant Spike Protein at 0.5 µg/well. Human Recombinant ACE2 Protein can bind SARS-CoV-2 Recombinant Spike Protein with an EC₅₀ of 37 ng/mL.

(B) SARS-CoV-2 Recombinant Spike Protein was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. SARS-CoV-2 Recombinant Spike Protein has a predicted molecular mass of 38.1 kDa but is known to be glycosylated. The observed band sizes are a) ~68 kDa (before Endoglycosidase [Endo] H treatment) and b) 38 kDa (after Endo H treatment).

Related Products

For a complete list of recombinant proteins, as well as related products available from STEMCELL Technologies, visit www.stemcell.com or contact us at techsupport@stemcell.com.

References

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