

Recombinant Proteins

Human Recombinant ACE2 Protein, aa18-740 (HEK293-expressed)

Human recombinant ACE2, amino acids Gln18-Ser740, Fc tag



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Catalog # 100-0598
100-0599

100 µg
500 µg

Product Description

Human Recombinant Angiotensin-Converting Enzyme 2 (ACE2) Protein, aa18-740, is expressed in HEK293 cells. ACE2 activity results in vasodilation by degrading vasoconstrictor angiotensin II to produce vasodilator angiotensin. Decreased expression of this enzyme is associated with cardiovascular disease and possibly also glomerular injury in diabetic nephropathy. ACE2 contains a peptidase domain at the N-terminus and a single transmembrane helix. ACE2 is also the primary human receptor for the surface spike glycoprotein of SARS-CoV-2 and SARS-CoV. This receptor is expressed in human lung and small intestine epithelia as well as the heart, kidney, and testes. The peptidase domain of ACE2 binds to the protein-binding domain of the S1 protein subunit of the spike protein; this binding results in a cleavage site becoming exposed. Cleavage, or 'protein priming', is done by TMPRSS2, a cellular serine protease, and by cathepsins. This cleavage activates the S2 subunit of the spike protein, allowing the fusion of the viral membrane to the host cell membrane. At the carboxy terminus, Human Recombinant ACE2 Protein contains a TEV site and a human IgG1 Fc tag.

Product Information

Alternative Names: Angiotensin-converting enzyme-related carboxypeptidase, angiotensin-converting enzyme homolog

Accession Number: Q9BYF1

Amino Acid Sequence: DAAQPARRAVRRTQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMNAGDKWSAFLKEQS TLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSSEDKSKRLNTILNTMSTIYSTGKVCNPDNPQECLLLPLNEIM ANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLI EDVEHTFEEIKPLYEHLHAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMV DQAWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILMCTKVTMDDFL TAHHEMGGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSGILLSPDFQEDNETEINFLLKQALT IVGTLPTFTYMLEKWRWMMVFKGEIPKDQWMKWWEMKREIVGVPEVPHDETYCDPASLFHVSNDYSFIRYYTRT LYQFQFQEALCQAAKHEGPLHKCDISNSTEAGQKLFNMLRLGKSEPWTALENVVGAKNMNRPLLNYFEPLF TWLKDQNKNSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNENMYLFRSSVAYAMRQYFLKVKKNQMILF GEEDVRVANLKPRIFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDNSLEFLGIQPTLGPNNQPPVSGR GSENLVYFQGGGGGSPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFN WYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYF TLRPDRKEELGGGLLSTGTASAEVKLVNQGGESVGLQIENKIVTTDPSSTSLKSTTADLVNHTFDDDTLTQDSVV LPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFS CSVMHEALHNHYTQKSLSLSPGK

Predicted Molecular Mass: 112.5 kDa

Species: Human

Formulation: Lyophilized from a 0.2 µm-filtered solution containing phosphate-buffered saline and trehalose, pH 7.4.

Source: HEK293 cells

Specifications

Activity: The EC50 is ≤ 76 ng/mL as determined by functional ELISA using SARS-CoV-2 Recombinant Spike Protein (Catalog #100-0594).

Purity (SDS-PAGE): ≥ 85%

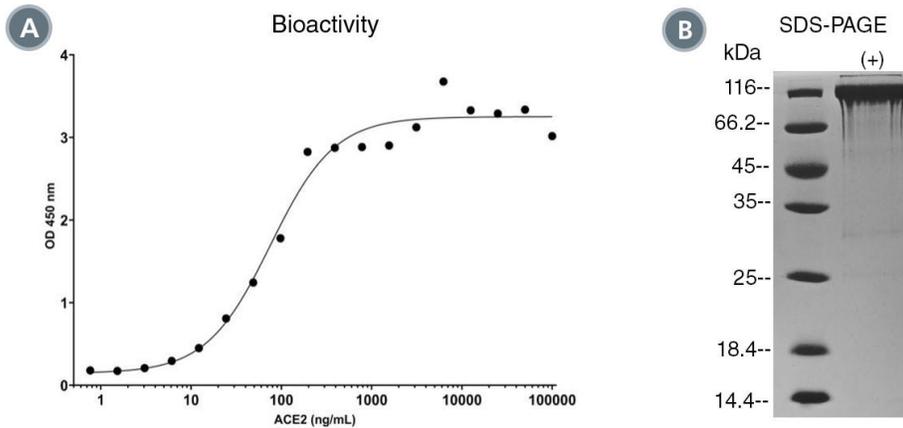
Preparation and Storage

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. Store at 2 - 8°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 0.2 µg/well. Human Recombinant ACE2 protein can bind SARS-CoV-2 Recombinant Spike Protein with an EC₅₀ of 76 ng/mL.

(B) Human Recombinant ACE2 Protein was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Human Recombinant ACE2 Protein has a predicted molecular mass of 112.5 kDa and an observed band size of ~116 kDa.

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.

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