

For Research Use Only

Recombinant Human ACE2 protein (hFc Tag)



Catalog Number: Eg0124

Basic Information

Species:
Human

Purity:
>90 %, SDS-PAGE

Tag:
hFc Tag

EC50:
36-146 ng/mL

Technical Specifications

Purity:
>90 %, SDS-PAGE

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

Source:
HEK293-derived Human ACE2 protein Gln18-Ser740 (Accession# Q9BYF1) with a human IgG1 Fc tag at the N-terminus.

GeneID:
59272

Accession:
Q9BYF1

Predicted Molecular Mass:
109.6 kDa

SDS-PAGE:
110-140 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 36-146 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

Angiotensin-converting enzyme 2 (ACE2), a critical regulator of the renin-angiotensin system (RAS), belongs to the peptidase M2 family. It plays an important role in cardiovascular homeostasis by regulating vascular tone, fluid, and electrolyte balance. ACE2 functions as a carboxymonopeptidase hydrolyzing the cleavage of a single C-terminal residue from Angiotensin-II (Ang-II), the key peptide hormone of RAS, to form Angiotensin-(1-7) (Ang-(1-7)), which binds to the G-protein-coupled Mas receptor and activates signaling pathways that counteract the pathways activated by Ang-II. ACE2 is expressed in a variety of tissues, including the kidneys, testes, heart, and intestines, and is particularly enriched in lung epithelium. Recent studies have shown that increased ACE2 expression is likely to help prevent secondary fibrosis changes following COVID-19 pneumonia.

References

1. Li Q, et al. (2020). Clin Sci (Lond). 134:2581-2595.
2. Li Y, et al. (2020). Biochem Biophys Res Commun. 526:947-952.
3. Hikmet F, et al. (2020). Mol Syst Biol. 16:e9610.
4. Chaudhry F, et al. (2020). Open Heart. 7:e001424.

Synonyms

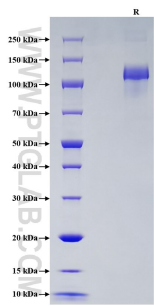
ACE2, ACE related carboxypeptidase, ACEH, ACE-related carboxypeptidase, Angiotensin converting enzyme 2

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

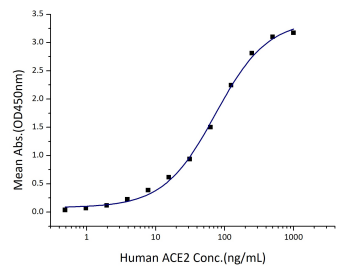
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Selected Validation Data



Purity of Recombinant Human ACE2 was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) conditions and stained using Coomassie blue.



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