For Research Use Only

Recombinant Human ACE2 protein (His Tag)

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Catalog Number: Eg0074

Basic Information

ED50:
44-176 ng/mL

Species:
Human

Purity:
>95 %, SDS-PAGE

GeneID:
59272

Accession:
Q9BYF1

Technical Specifications

Purity:
>95 %, SDS-PAGE

Endotoxin Level:
<1.0 EU/μg protein, LAL method

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

Predicted Molecular Mass:
84.4 kDa

SDS-PAGE:
85-105 kDa, reducing (R) conditions

Formulation:
Lyophilized from sterile PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

Immobilized Human ACE2 (His tag) at 2 μg/mL (100 μL/well) can bind SARS-CoV-2 Spike RBD (hFc tag, Myc tag, His tag) with a linear range of 44-176 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℃ to -80℃ as lyophilized proteins.
- 3 months, -20℃ to -80℃ 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.

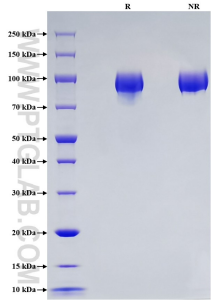
References

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.

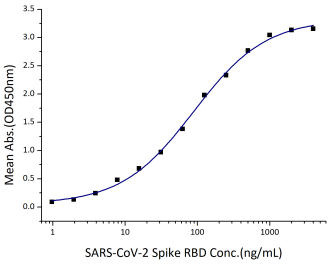
Synonyms

ACE2, ACE-2, ACEH

Selected Validation Data



Purity of Recombinant Human ACE2 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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For technical support and original validation data for this product please contact

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