

Recombinant Human Angiotensin-converting Enzyme 2 (ACE2)

Source

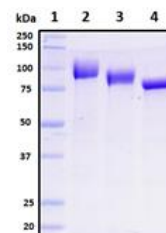
- **Species** Human
- **Accession Number** Q9BYF1
- **Expressed Region** Gln18-Ser740 (Extracellular domain)
- **Synonyms** ACE2, Angiotensin-converting enzyme 2, ACE-related carboxypeptidase, Metalloprotease MPROT15

Preparation

- **Expression System** Human embryonic kidney 293 (HEK293) cells
- **Tag** C-terminal his-tag
- **Purification** His-tag affinity purification by immobilized metal ion affinity chromatography (IMAC)
- **Purity** >95%
- **Purity determined** By SDS-PAGE under reducing conditions and visualized by Coomassie blue staining
- **Molecular Weight** Recombinant protein product has a calculated molecular mass of ~83 kDa. Due to the abundant glycosylation, it migrates as approximately ~90 kDa protein bands in SDS-PAGE under DTT, beta-mercaptoethanol reducing conditions. See deglycosylation analysis image below.

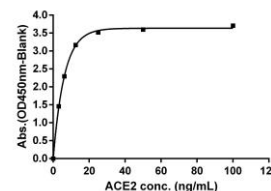
Protein Specifications

- **Format** Liquid
- **Formulation** Supplied as a 0.2 µm filtered solution in PBS (pH 7.4)
- **Concentration** Lot specific (see the label on the vial), determined by BCA protein assay.
- **SDS-PAGE Image** Deglycosylation analysis of purified recombinant proteins. Purified proteins were untreated (*Lane 2*) or treated with Protein Deglycosylation Kit under native (*Lane 3*) or reducing (*Lane 4*) conditions. Deglycosylation treatment resulted in a mobility shift of the protein to produce one major band at the expected size, thus indicating that the untreated recombinant protein (*Lane 2*) was glycosylated. **Lane 1:** Protein standard ladder (kDa); **Lane 2:** Untreated protein under reducing conditions; **Lane 3:** Treated protein with deglycosylation enzymes under native conditions; **Lane 4:** Treated protein with deglycosylation enzymes under reducing conditions.



Binding Function

The product S1 RBD (Cat. [230-30162](#)) was coated in 96 well plate and incubated with the serial diluted human ACE2 protein (Raybio, Cat. [230-30165](#)). The bound ACE2 was detected by anti-ACE2 antibody using ELISA. The calculated EC₅₀ is 4.23-9.26 ng/mL (*right*).



Shipping

The product is shipped with ice packs.

Storage/Stability

Upon arrival, the protein may be stored for 2 weeks at 4 °C. For long term storage, it is recommended to store at -20 °C or -80 °C in appropriate aliquots. Avoid repeated freeze-thaw cycles.

References

- N Dong, et al. Genomic and protein structure modelling analysis depicts the origin and infectivity of 2019-nCoV, a new coronavirus which caused a pneumonia outbreak in Wuhan, China. *bioRxiv* (2020).
- M Hoffmann, et al. SARS-CoV-2 Cell Entry Depends on ACE2 and TMPRSS2 and Is Blocked by a Clinically Proven Protease Inhibitor. *Cell*. 181, 1-10 (2020).
- W Li et al. Angiotensin-converting enzyme 2 is a functional receptor for the SARS coronavirus. *Nature*. 426, 450-454 (2003).

This product is furnished for **LABORATORY RESEARCH USE ONLY**.
Not for diagnostic or therapeutic use.