www.innocyto.com

InnoCyto Inc.

15375 Barranca Pkwy, Suite I-103
Irvine, CA 92618
Email: info@innocyto.com
Phone: 1-949-418-7543

# Human ACE-2 Protein (C-Fc)

| | |
|---|---|
| **Catalog Number:** | 600101, 600102 |
| **Size:** | 25 ug, 100 ug |
| **Target Name:** | ACE2, ACE-2, Angiotensin I converting Enzyme 2, ACEH |
| **Regulatory Status:** | RUO |

## PRODUCT DETAILS

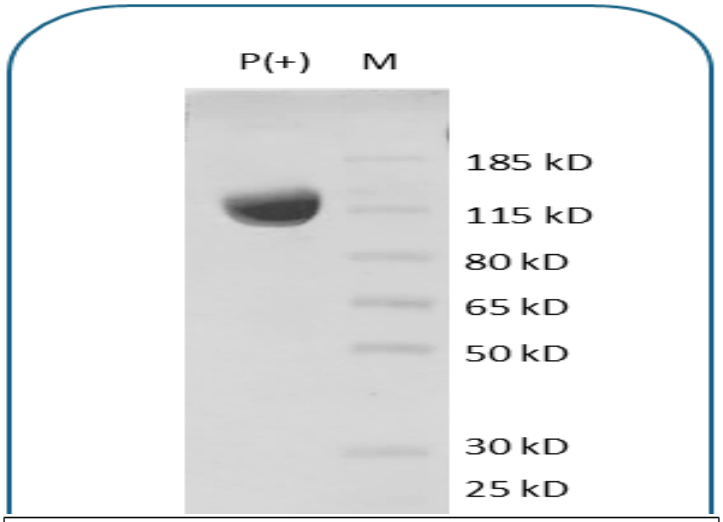
| | |
|---|---|
| **Application:** | ELISA |
| **Format:** | Liquid, Purified |
| **Expression Host:** | HEK293 |
| **Species:** | Human |
| **Accession Number:** | Q9BYF1 |
| **Sources:** | Human ACE2 protein (Gln18-Ser740) with C-terminus Fc tag is expressed in HEK293 cells. |
| **Molecular Weight:** | This protein has a predicted molecular weight of 110.5 kDa. Under DTT-reducing conditions, the protein migrates at approximately 130 kDa on SDS-PAGE. |
| **Affinity Tag:** | C-Fc |
| **Purity:** | >95% based on SDS-PAGE under reducing condition |
| **Formulation:** | 1xPBS buffer, pH7.4, 0.22 µm filtered |
| **Endotoxin level:** | Not tested |
| **Protein Concentration:** | 25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration. |
| **Storage and Handling:** | Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ –70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability. |

## BACKGROUND INFORMATION

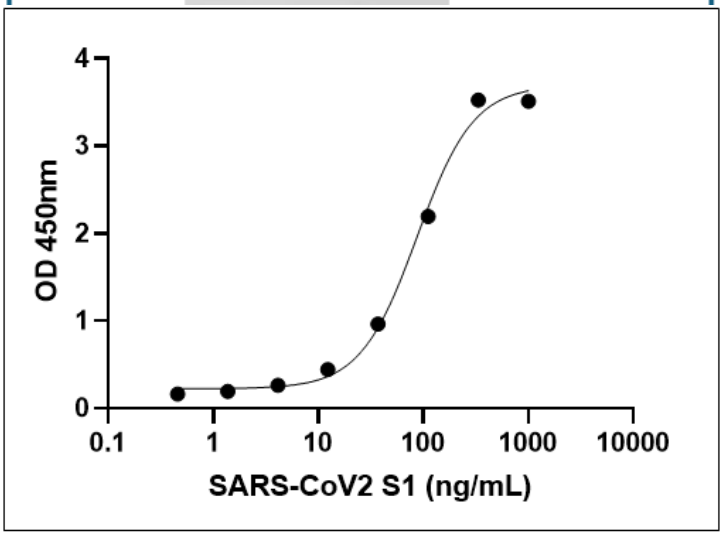
Angiotensin-converting enzyme 2 (ACE2) is a type I transmembrane zinc metalloprotease with about 60% homology to ACE, consisting of 805 amino acids including a signal peptide, catalytic domain, membrane anchor, and cytoplasmic tail. ACE2 regulates the renin-angiotensin system by converting angiotensin I to angiotensin 1-9 and angiotensin II to the vasodilator angiotensin 1-7, thus counteracting vasoconstriction and playing a key role in cardiovascular and renal function. ACE2 also serves as the functional receptor for human coronaviruses SARS-CoV, SARS-CoV-2, and HCoV-NL63, facilitating viral entry. Its expression is high in lung, heart, kidney, intestine, testis, and vascular cells. Beyond cardiovascular regulation, ACE2 is involved in respiratory disease pathogenesis, including acute respiratory distress syndrome, and has been linked to diabetes and hypertension. Additionally, its

homolog collectrin is implicated in amino acid transport and genetic disorders like Hartnup disease.

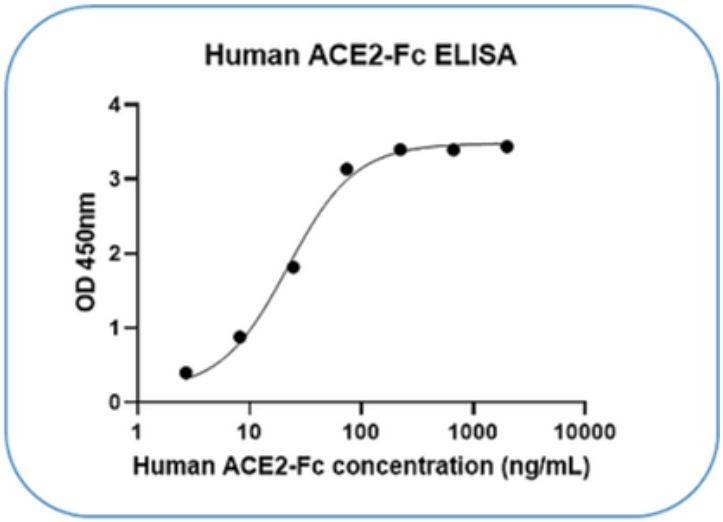
## PRODUCT DATA




Human ACE2 Protein with C-Fc tag on SDS-PAGE under reducing conditions. The gel was stained for 1 hour with BlinkBlue Protein Staining Buffer (Catalog 700102). The purity of this protein appears to be greater than 95%.




Recombinant Human ACE2-Fc protein (catalog 600101) is coated at 2 µg/mL (100ng/well). SARS-CoV2 Spike S1 protein (catalog 602901) can bind human ACE2-Fc in the dose dependent manner. The ED50 is about 30-150 ng/mL.




SARS-CoV-2 Spike RBD Protein (C-His) (Catalog #602301) is coated at 2 µg/mL (200 ng/well). Human ACE2 (C-Fc) demonstrates dose-dependent binding to the SARS-CoV-2 Spike RBD (C-His), as confirmed by quality testing. The $ED_{50}$ is approximately 10–50 ng/mL.

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