



### Synonym

ACE-2, ACEH, ACE2

### Source

Human ACE2, Fc Tag(AC2-H5257) is expressed from human 293 cells (HEK293). It contains AA Gln 18 - Ser 740 (Accession # [Q9BYF1-1](#)).

Predicted N-terminus: Gln 18

### Molecular Characterization

ACE2(Gln 18 - Ser 740) Q9BYF1-1	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 110.0 kDa. The protein migrates as 125-150 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Endotoxin

Less than 1.0 EU per µg by the LAL method.

### Purity

>95% as determined by SDS-PAGE.

### Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, Arginine, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

### Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

### Storage

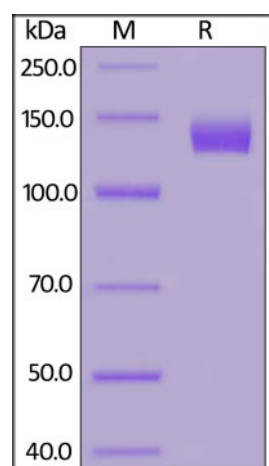
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

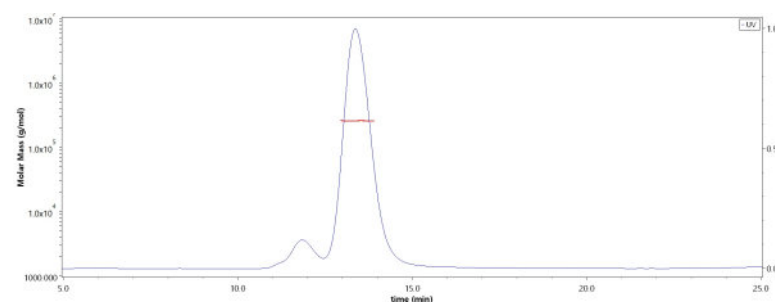
### SDS-PAGE



Human ACE2, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

### Bioactivity-ELISA

### SEC-MALS

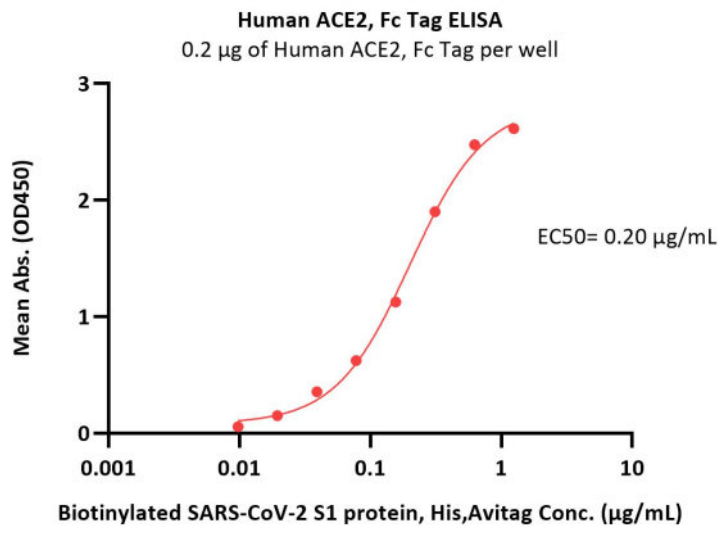


The purity of Human ACE2, Fc Tag (Cat. No. AC2-H5257) is more than 85% and the molecular weight of this protein is around 220-280 kDa verified by SEC-MALS.

[Report](#)

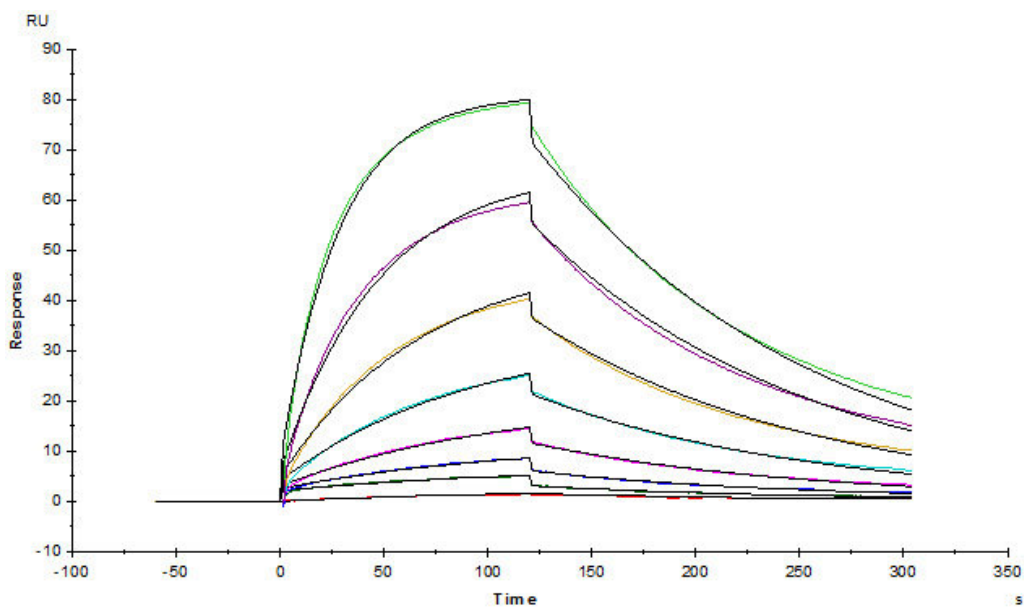
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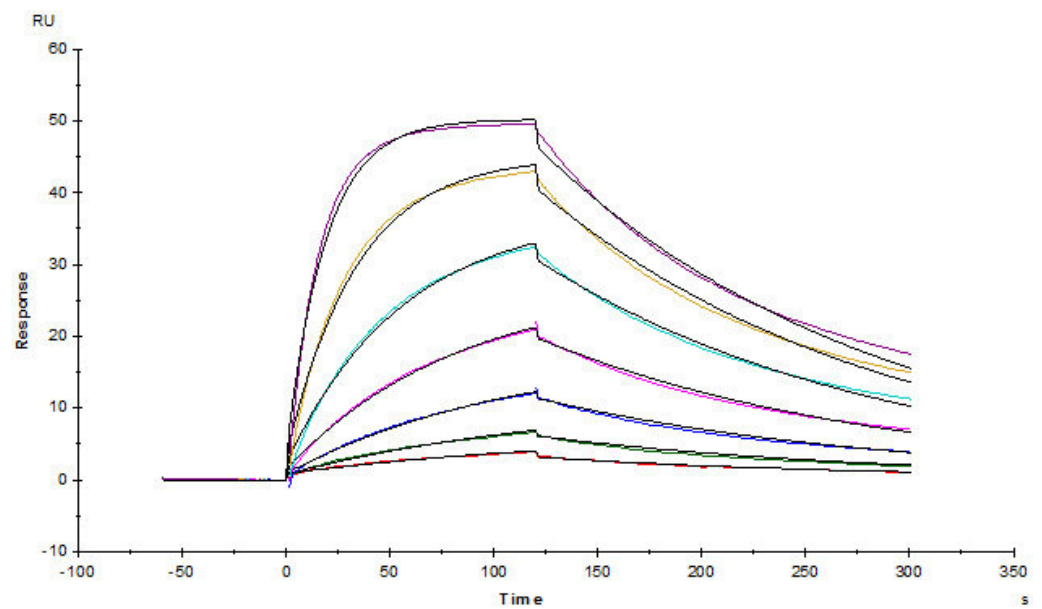


Immobilized Human ACE2, Fc Tag (Cat. No. AC2-H5257) at 2 µg/mL (100 µL/well) can bind Biotinylated SARS-CoV-2 S1 protein, His,Avitag (Cat. No. S1N-C82E8) with a linear range of 0.01-0.313 µg/mL (QC tested).

**Bioactivity-SPR**

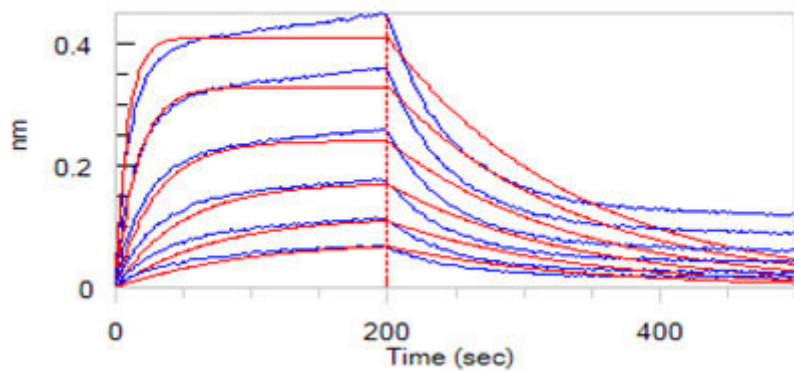


Human ACE2, Fc Tag (Cat. No. AC2-H5257) captured on CM5 chip via Anti-human IgG Fc antibodies surface can bind SARS-CoV-2 S1 protein, His Tag with an affinity constant of 67.6 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

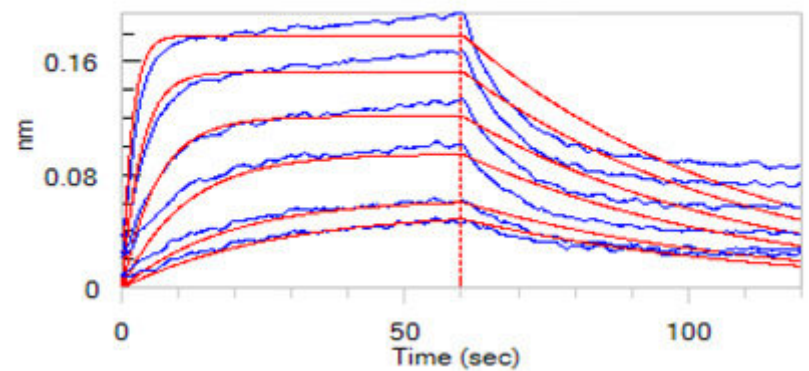


Human ACE2, Fc Tag (Cat. No. AC2-H5257) captured on CM5 chip via Anti-human IgG Fc antibodies surface can bind SARS-CoV-2 S protein RBD, His Tag (Cat. No. SPD-C52H3) with an affinity constant of 16 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

**Bioactivity-BLI**



Loaded Human ACE2, Fc Tag (Cat. No. AC2-H5257) on Protein A Biosensor, can bind SARS-CoV-2 S1 protein, His Tag with an affinity constant of 33.5 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



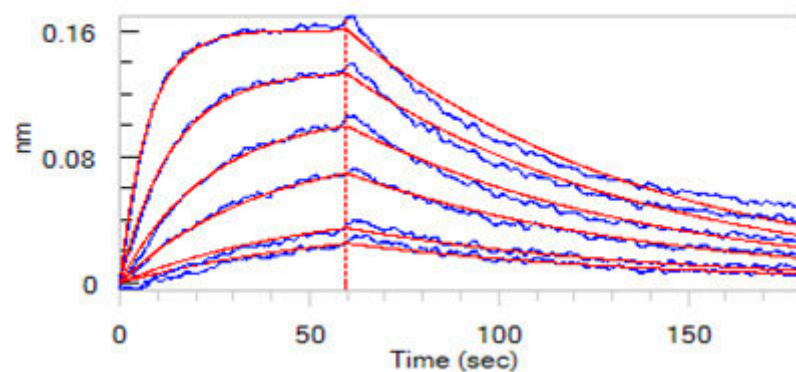
Loaded Human ACE2, Fc Tag (Cat. No. AC2-H5257) on Protein A Biosensor, can bind SARS S protein RBD, His Tag (Cat. No. SPD-S52H6) with an affinity

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constant of 17.3 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human ACE2, Fc Tag (Cat. No. AC2-H5257) on Protein A Biosensor, can bind SARS-CoV-2 S protein RBD, His Tag (Cat. No. SPD-C52H3) with an affinity constant of 26.0 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

## Background

Angiotensin-converting enzyme 2 (ACE2) is also known as ACEH (ACE homolog), is an integral membrane protein with considerable homologous to ACE, which belongs to the peptidase M2 family. ACE2 is an exopeptidase that catalyses the conversion of angiotensin I to the nonapeptide angiotensin, or the conversion of angiotensin II to angiotensin 1-7. ACE2 may be an important regulator of heart function. In case of human coronaviruses SARS and HCoV-NL63 infections, ACE-2 serve as functional receptor for the spike glycoprotein of both coronaviruses. ACE2 is activated by chloride and fluoride, but not bromide and Inhibited by MLN-4760, cFP\_Leu, and EDTA, but not by the ACE inhibitors lisinopril, captopril and enalaprilat. ACE2 is active from pH 6 to 9, and the optimum pH is 6.5 in the presence of 1 M NaCl.

## Clinical and Translational Updates

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