

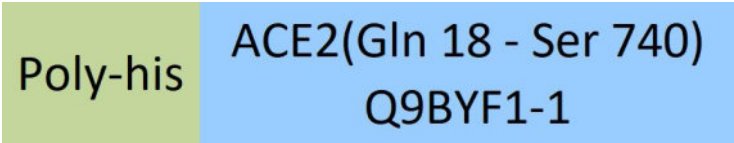
Synonym

ACE-2,ACEH,ACE2

Source

Human ACE2, His Tag (AC2-H52H8) is expressed from human 293 cells (HEK293). It contains AA Gln 18 - Ser 740 (Accession # [Q9BYF1-1](#)).
Predicted N-terminus: His

Molecular Characterization



This protein carries a polyhistidine tag at the N-terminus.
The protein has a calculated MW of 85.5 kDa. The protein migrates as 100-115 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

Delivered as bulk protein in a 0.2 µm filtered solution of 50 mM Tris, 150 mM NaCl, Arginine, pH7.5 with glycerol as protectant.

Contact us for customized product form or formulation.

Storage

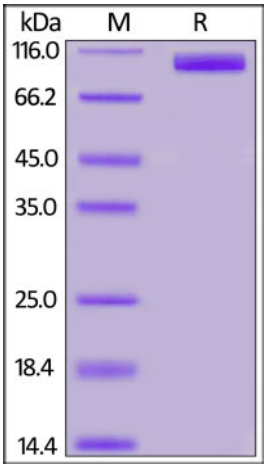
Please avoid repeated freeze-thaw cycles.

- This product is stable after storage at:
- The product MUST be stored at -70°C or lower upon receipt;
 - -70°C for 3 months under sterile conditions.

Shipping

This product is supplied as sterile liquid solution and shipped frozen with dry ice, please inquire the shipping cost.

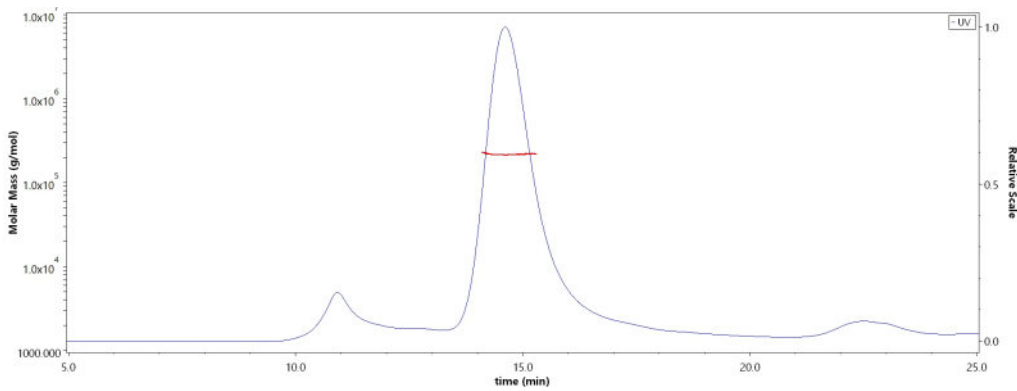
SDS-PAGE



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

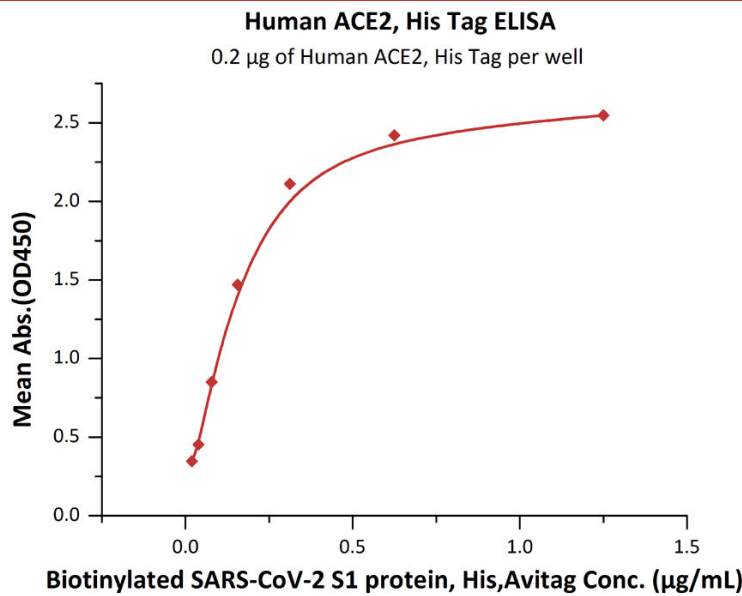
Bioactivity-ELISA

SEC-MALS

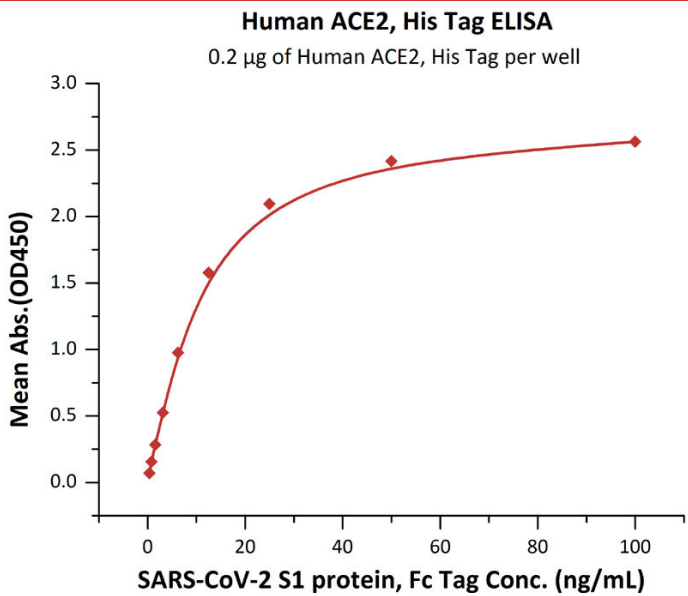


The purity of Human ACE2, His Tag (Cat. No. AC2-H52H8) was more than 85% and the molecular weight of this protein is around 195-220 kDa verified by SEC-MALS.

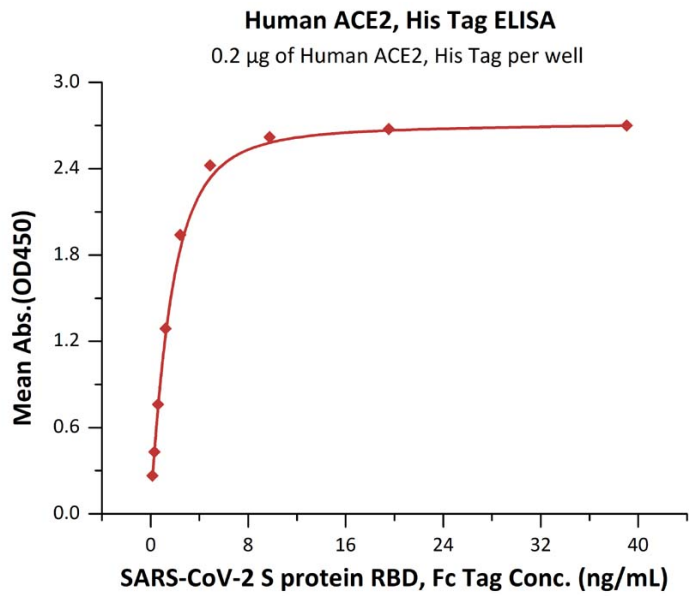
[Report](#)



Immobilized Human ACE2, His Tag (Cat. No. [AC2-H52H8](#)) 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 0.02-0.156 µg/mL (QC tested).

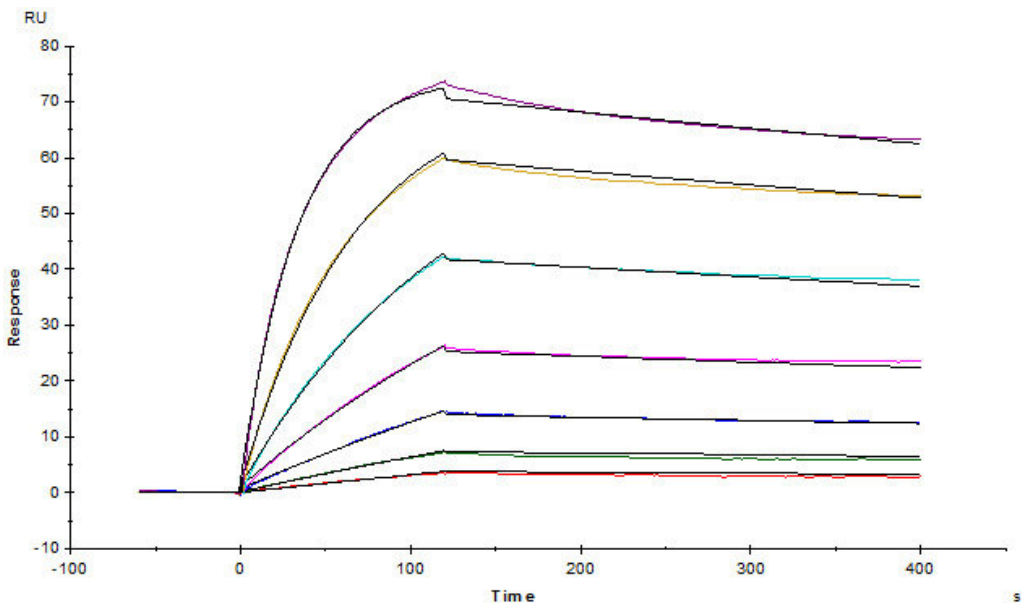


Immobilized Human ACE2, His Tag (Cat. No. [AC2-H52H8](#)) at 2 µg/mL (100 µL/well) can bind SARS-CoV-2 S1 protein, Fc Tag (Cat. No. [S1N-C5255](#)) with a linear range of 0.4-13 ng/mL (Routinely tested).

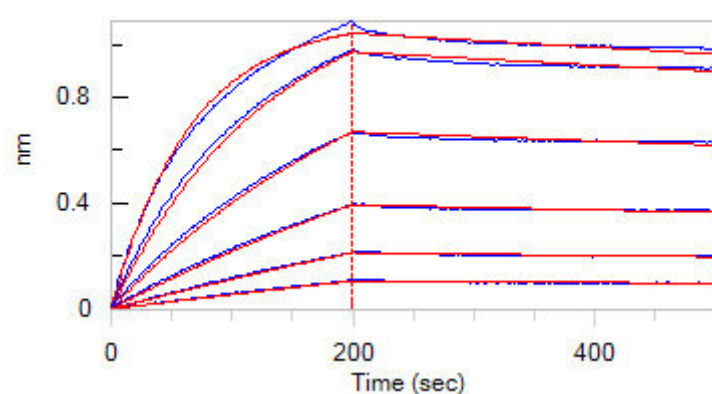


Immobilized Human ACE2, His Tag (Cat. No. [AC2-H52H8](#)) at 2 µg/mL (100 µL/well) can bind SARS-CoV-2 S protein RBD, Fc Tag (Cat. No. [SPD-C5255](#)) with a linear range of 0.2-5 ng/mL (Routinely tested).

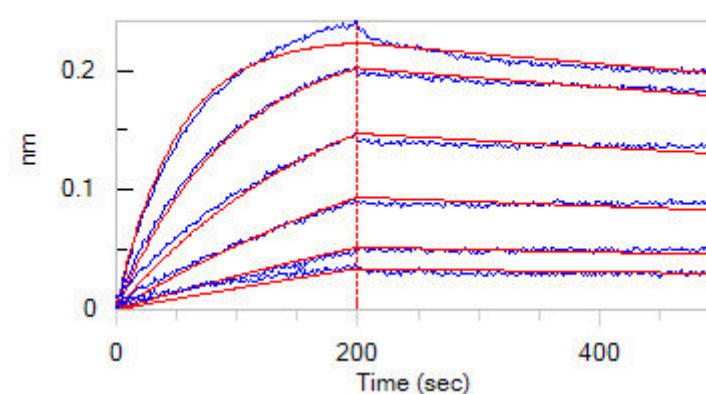
Bioactivity-SPR



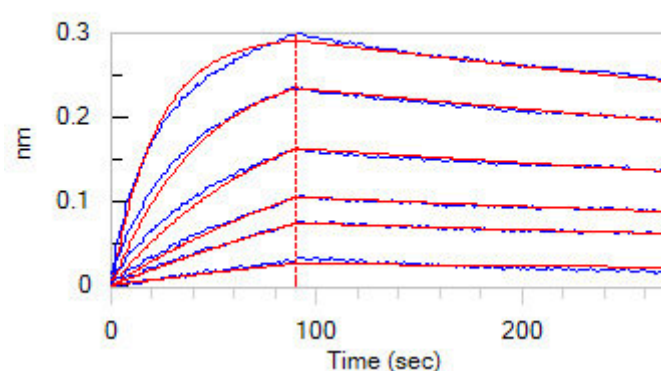
SARS-CoV-2 S1 protein, Fc Tag (Cat. No. [S1N-C5255](#)) captured on CM5 Chip via anti-human IgG Fc antibodies can bind Human ACE2, His Tag (Cat. No. [AC2-H52H8](#)) with an affinity constant of 3.79 nM as determined in SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI

Loaded SARS-CoV-2 S protein RBD, Fc Tag (Cat. No. SPD-C5255) on Protein A Biosensor, can bind Human ACE2, His Tag (Cat. No. AC2-H52H8) with an affinity constant of 2.16 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded SARS-CoV-2 S1 protein, Mouse IgG2a Fc Tag (Cat. No. S1N-C5257) on AMC Biosensor, can bind Human ACE2, His Tag (Cat. No. AC2-H52H8) with an affinity constant of 2.53 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded SARS-CoV-2 S protein (R683A, R685A), His Tag (Cat. No. SPN-C52H4) on AR2G Biosensor, can bind Human ACE2, His Tag (Cat. No. AC2-H52H8) with an affinity constant of 11.4 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.

References

- (1) [Turner AJ, et al., 2002, Can. J. Physiol. Pharmacol. 80 \(4\): 346–53.](#)
- (2) [Katovich MJ, et al., 2005, Exp. Physiol. 90 \(3\): 299–305.](#)
- (3) [Donoghue M, et al., 2000, Circ. Res. 87:E1-E9.](#)
- (4) [Tipnis S.R, et al., 2000, J. Biol. Chem. 275:33238-33243.](#)
- (5) [Vickers C, et al., 2002, J. Biol. Chem. 277:14838-14843.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.