

Synonym

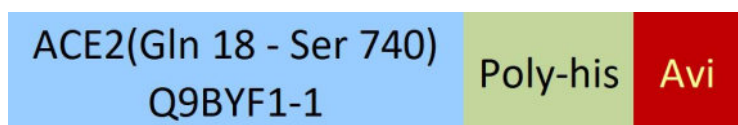
ACE-2,ACEH,ACE2

Source

Biotinylated Human ACE2, His,Avitag(AC2-H82E6) is expressed from human 293 cells (HEK293). It contains AA Gln 18 - Ser 740 (Accession # [Q9BYF1-1](#)).

Predicted N-terminus: Gln 18

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™)

The protein has a calculated MW of 87.2 kDa. The protein migrates as 95-125 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, pH8.0 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

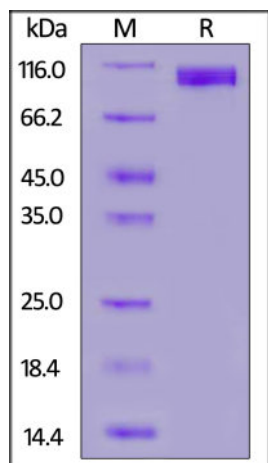
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

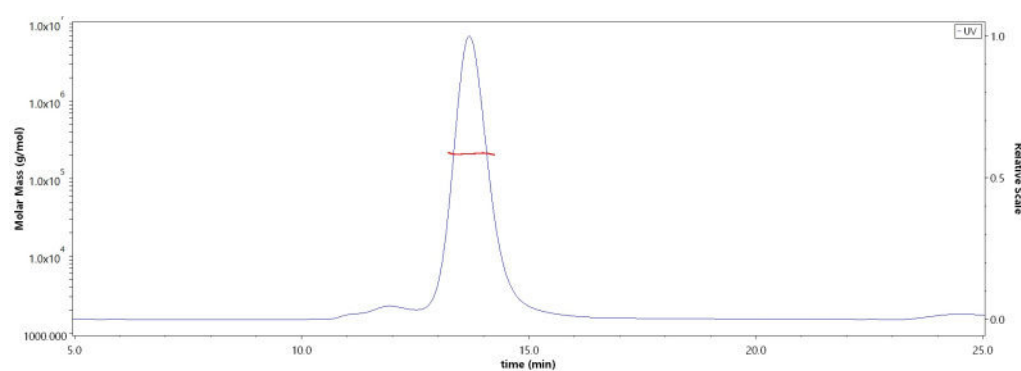
SDS-PAGE



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

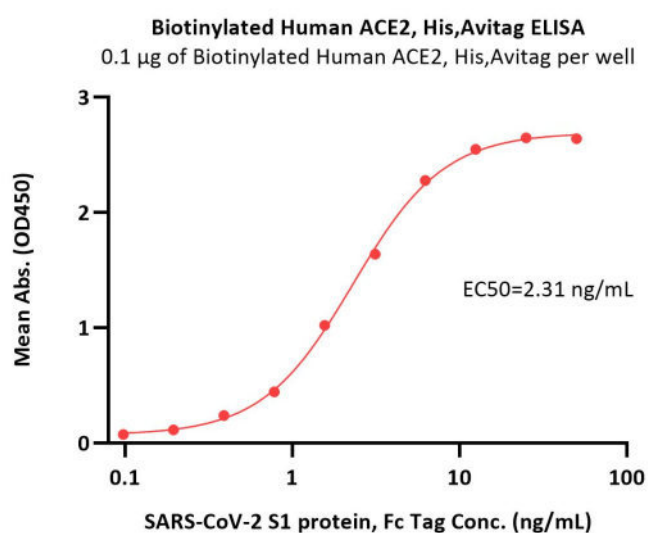
Bioactivity-ELISA

SEC-MALS



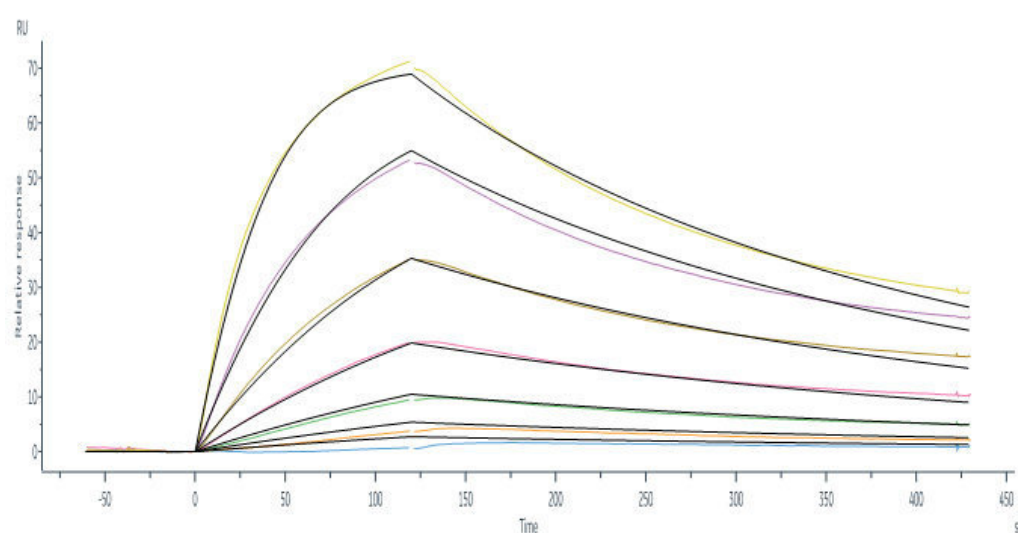
The purity of Biotinylated Human ACE2, His,Avitag (Cat. No. AC2-H82E6) is more than 90% and the molecular weight of this protein is around 187-229 kDa verified by SEC-MALS.

[Report](#)



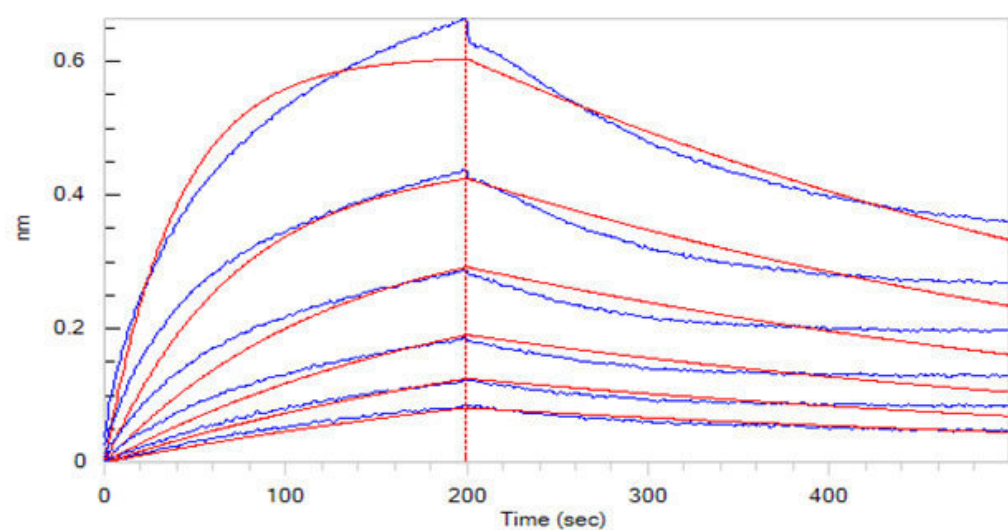
Immobilized Biotinylated Human ACE2, His,Avitag (Cat. No. AC2-H82E6) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind SARS-CoV-2 S1 protein, Fc Tag (Cat. No. S1N-C5255) with a linear range of 0.1-6 ng/mL (QC tested).

Bioactivity-SPR



Biotinylated Human ACE2, His,Avitag (Cat. No. AC2-H82E6) captured on Biotin CAP - Series S sensor Chip can bind SARS-CoV-2 S protein (R683A, R685A), His Tag (Cat. No. SPN-C52H4) with an affinity constant of 54.5 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Human ACE2, His,Avitag (Cat. No. AC2-H82E6) on SA Biosensor, can bind SARS-CoV-2 S protein (R683A, R685A), His Tag (Cat.

Catalog # AC2-H82E6

No. SPN-C52H4) with an affinity constant of 42.8 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

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