

## PRODUCT DATASHEET

### Human ACE2 (19-740), CHO

**Cat. No.:** RN0002020  
**Type:** Recombinant protein  
**Size:** 0.02 mg  
**Source:** CHO  
**Species:** Human

#### Description

Recombinant human angiotensin-converting enzyme 2 (ACE2) extracellular domain (19-740) was expressed in CHO cells using a C-terminal Fc-tag and binds to the SARS Coronavirus 2 (COVID-19) receptor binding domain (RBD).

#### Other names

Angiotensin-converting enzyme 2, ACE2, hACE2, ACE-related carboxypeptidase, Angiotensin-converting enzyme homolog, ACEH, Metalloprotease MPROT15

#### Introduction to the molecule

ACE-2 (Angiotensin converting enzyme 2) an enzyme bound to cell membranes in various organs such as intestines arteries, lungs, heart & kidney. ACE2 an entry receptor of SARS coronaviruses as well as SARS-CoV-2. The coronavirus spike (S) glycoprotein is a class I viral fusion antigen located on the external envelope of the virion that takes part in a critical part in viral infection by identifying host cell receptors and facilitating fusion of the viral and cellular membranes. 2 main domains in coronavirus S1 have been recognized, the N-terminal domain and C-terminal domain. One or the other and/or both S1 domains function as a receptor-binding domain. SARS-CoV + MERS-CoV equally use C-domain to attach their receptors. ACE2 is a type I transmembrane antigen with an extracellular N-terminal domain having the catalytic site and an intracellular C-terminal tail. ACE2 obtains a signal peptide, a transmembrane domain, and a single metalloproteinase active site containing an HEXXH zinc-binding domain. ACE-2 plays a role as a mono-carboxypeptidase which degrades Ang I to produce the nonapeptide Ang 1-9 and Ang II to create the heptapeptide Ang 1-7.

#### Research topic

Blood pressure regulation and NO metabolism, Cardiovascular disease, COVID-19, Immune Response, Infection and Inflammation, Pulmonary diseases, Renal disease

#### Purity

Purified to greater than 95% purity.

#### Biological activity

Measured by its binding ability in a functional ELISA. Immobilized human ACE2 (19-740) protein at 2µg/ml can bind to SARS-CoV-2 Spike protein RBD.

#### Formulation:

Presented in 50mM Tris-HCl, pH7.5, 90mM glycine.

**Reconstitution:**

Defrost at ambient temperature

**Shipping**

On ice. Upon receipt, store the product at the temperature recommended below.

**Storage, Stability/Shelf Life**

Store frozen protein at min.  $-70^{\circ}\text{C}$ . The protein remains stable until the expiry date when stored at  $-70^{\circ}\text{C}$ .

**Quality control**

Bradford protein assay to determine quantity of the protein.

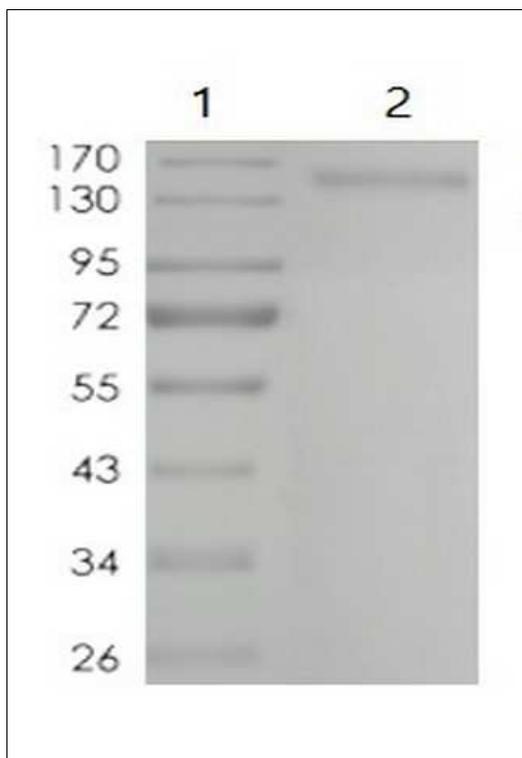
SDS-PAGE to determine purity of the protein.

**Applications**

COVID-19, ELISA, Western blotting

**Note**

Products are for Research Use or for Further Manufacturing Use only. Not for Diagnostic or Therapeutic Use.



1. MW Marker
2. ACE2 (19-740)