

PRODUCT DATASHEET

Human ACE2 (19-740), CHO

Cat. No.: RN0002100

Type: Recombinant protein

Size: 0.1 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°C . The protein remains stable until the expiry date when stored at -70°C .

Quality control

Bradford protein assay to determine quantity of the protein.

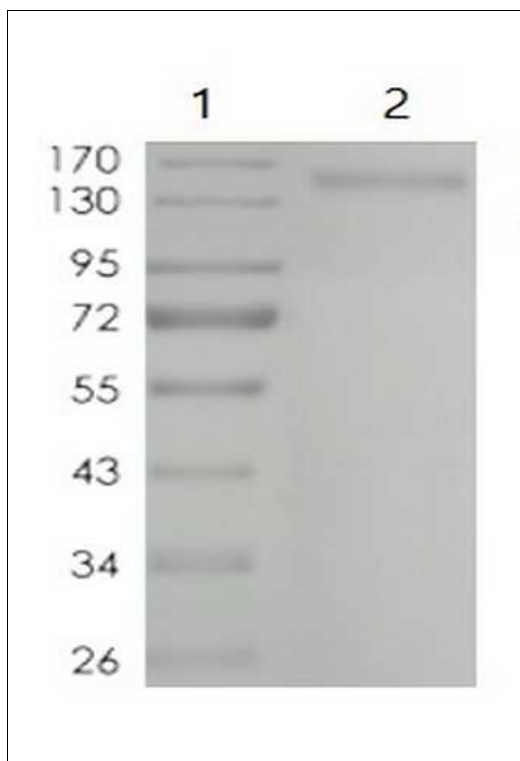
SDS-PAGE to determine purity of the protein.

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)