Angiotensin Converting Enzyme-2 (ACE2)

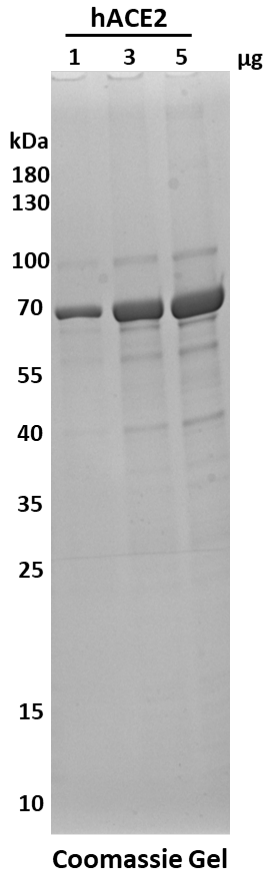
Cat. # CV2007

Background: Angiotensin Converting Enzyme-2 (ACE2) is the first known human homologue of angiotensin-converting enzyme (ACE). It is a membrane-associated and secreted enzyme that is structurally divided into 3 modules: an apparent signal peptide, a single metalloprotease active site, and a transmembrane domain. ACE2 is a critical regulator of blood volume, systemic vascular resistance, and thus cardiovascular homeostasis. SARS and HCoV-NL63 viruses use their surface protein Spike glycoprotein to bind to human ACE-2 receptor. The S protein is cleaved into 2 subunits, S1 and S2, during the COVID-19 infection. S1 contains the receptor binding domain (RBD) which enables coronaviruses to bind to the peptidase domain (PD) of ACE2. These events culminate in viral entry at the basis of the infection. Therefore, ACE2 has become a high focus research target in the fight against COVID-19.

Alternate names: ACE-related Carboxypeptidase, Angiotensin-converting Enzyme Homolog (ACEH), COVID-19 Receptor, Coronavirus Receptor, Metalloprotease MPROT15

Product Information

Molecular Weight:	69.2 kDa (residues 18-615)
Quantity:	100 µg
Physical State:	Liquid
Species:	Human
Tag:	None
Activity:	
Storage:	-80° C. Avoid repeated freeze/thaw cycles.



References

1) Wang D, Hu B, Hu C, et al. Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus–Infected Pneumonia in Wuhan, China. JAMA. 2020;323(11):1061.

2) Zhou P, Yang X-L, Wang X-G, et al. A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature*. 2020;579(7798):270–273.

3) Zhu N, Zhang D, Wang W, et al. A Novel Coronavirus from Patients with Pneumonia in China, 2019. N. Engl. J. Med. 2020;382(8):727–733.

4) Coutard B, Valle C, de Lamballerie X, et al. The spike glycoprotein of the new coronavirus 2019-nCoV contains a furin-like cleavage site absent in CoV of the same clade. Antiviral Res. 2020;176:104742.