

32-190010: Human ACE2 Protein (FLAG Tag)

Application : Functional Assay
Uniprot ID : Q9BYF1
Alternative Name : SARS Receptor; Angiotensin-converting Enzyme 2; ACEH; Metalloprotease MPROT15; SARS-CoV-2 Receptor

Description

Source: HEK 293 cells. Angiotensin-converting enzyme2 (ACE2) is an ectoenzyme (carboxypeptidase) with an extracellular catalytic domain that predominantly localizes at the plasma membrane and is thereby able to hydrolyze circulating peptides. ACE2 has approximately 42% sequence identity with ACE, and its cytoplasmic and transmembrane domains show 48% homology to the protein collectrin that plays a critical role in the amino acid absorption of the kidney. ACE2 converts angiotensin I to angiotensin 1-9, a peptide of unknown function, and angiotensin II to angiotensin 1-7, a vasodilator. ACE2 is involved in the regulation of systemic blood pressure and has direct effects on cardiac functions. It is expressed predominantly in endothelial cells of the lung, gut, heart and kidney. ACE2 together with the protease TMPRSS2 acts as a functional receptor for SARS coronavirus as well as for the new highly pathogenic coronavirus, 2019-nCoV/SARS-CoV-2, which is cause for pneumonia COVID-19.

Product Info

Amount : 50 µg
Purification : 95% (SDS-PAGE)
Content : 1mg/ml after reconstitution. Reconstitute with 50µl endotoxin-free water.
Storage condition : After opening, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles. For maximum product recovery after thawing, centrifuge the vial before opening the cap. Stable for at least 6 months after receipt when stored at -20°C. Working aliquots are stable for up to 3 months when stored at -20°C.
Amino Acid : Extracellular domain of human ACE2 (aa 18-740) are fused at the C-terminus to a FLAG®-tag.

Application Note

~110kDa (SDS-PAGE); ~240kDa (Dimer, by SEC). Binds to the Spike protein of the coronavirus SARS-CoV-2. Endotoxin content: <0.01EU/µg purified protein (LAL test). FLAG is a registered trademark of Sigma-Aldrich Co.

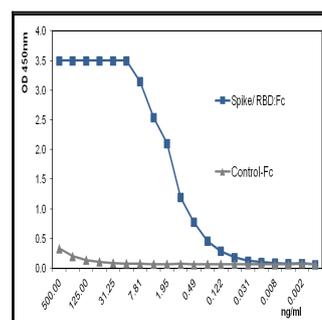


Figure 1 : ACE2 (human)(rec.) (32-190010) binds with high affinity to the Spike (RBD) protein of the virus SARS-CoV-2. Method: ACE2 (human)(rec.) (32-190010) is coated on an ELISA plate at 1 µg/ml overnight at 4°C. Spike (SARS-CoV-2):Fc (human)(RBD)(rec.) (32-190018) is added (starting at a concentration of 500 ng/ml with a two fold serial dilution) during one hour at RT and the interaction is then detected using an anti-human IgG (HRP).