

ACE2 Human, HEK293 Recombinant, Biotinylated

Product Data Sheet

Type: Recombinant protein

Source: HEK293 cells

Species: Human

Cat. No.:

RAG0192B050

(50 µg)

Description

Biotinylated recombinant human Angiotensin-converting enzyme 2 (ACE2) expressed in HEK293 cells. Extracellular domain of human ACE2 (aa 18-740) are fused at the C-terminus to a FLAG®-tag. Molecular weight: ~110kDa (SDS-PAGE); ~240kDa (Dimer, by SEC).

Introduction to the Molecule

Angiotensin-converting enzyme 2 (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. It has been shown that human recombinant soluble ACE2 can significantly block early stages of SARS-CoV-2 infections.

Other Names

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

Purity

≥ 95%

Endotoxin

<0.01 EU/µg (LAL test)

Formulation

1 mg/ml after reconstitution. Lyophilized. Contains PBS.

Reconstitution

Reconstitute with 50 µl endotoxin-free water.

Biological Activity

ACE2 Human, HEK293 Recombinant binds with high affinity to the Spike S1RBD protein of the virus SARS-CoV-2.

ACE2 Human, HEK293 Recombinant was coated on an ELISA plate at 1µg/ml overnight at 4°C. Recombinant SARS-CoV-2 Spike Protein S1RBD was added (starting at a concentration of 500ng/ml with a two-fold serial dilution) during one hour at RT and the interaction was then detected using an anti-human IgG (HRP).

Shipping

Ships on regular ice packs. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Stable for at least 6 months after receipt when stored at -20°C.

After opening, prepare aliquots and store at -20°C. Working aliquots are stable for up to 3 months when stored at -20°C. Avoid freeze/thaw cycles. For maximum product recovery after thawing, centrifuge the vial before opening the cap.

Usage

BioVendor's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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