

ACE2 recombinant protein

ACE2 Protein, Human, Recombinant (mFc Tag)

CATALOG #
AAA257401

HOST
HEK293 Cells

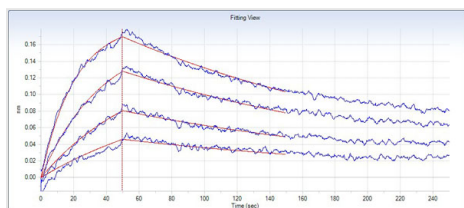
PRODUCT SYNONYMS

ACE2; ACE2 Protein; Human; Recombinant (mFc Tag); Human ACE2/Angiotensin-Converting Enzyme 2 Protein (Fc Tag); angiotensin I converting enzyme 2; ACEH Protein; ACE2 recombinant protein

PRODUCT SPECIFICATIONS

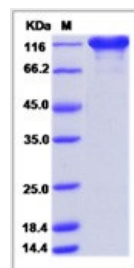
Host	HEK293 Cells
Purity/Purification	>90 % as determined by SDS-PAGE.
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Sequence Positions	957aa
Sequence	Met1-Ser740
Species	Human
Tag	mFc
Endotoxin	<1.0EU per ug protein as determined by the LAL method
Predicted N Terminal	Gln18
Protein Construction	JA DNA sequence encoding the human ACE2 (NP_068576.1) (Met1-Ser740) was expressed with the Fc region of mouse IgG1 at the C-terminus
Activity	Measured by its ability to cleave a fluorogenic peptide substrate, McaYVADAPK (Dnp)OH, (R&D Systems). The specific activity is >500 pmols/min/ug.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. Shipping: They are shipped out with blue ice pack

IMAGES



Application Data

Loaded Human ACE2 Protein (Fc tag) on AMC Biosensor, can bind SARS-CoV-2 (2019-nCoV) Spike S1-His Recombinant Protein with an affinity constant of 18.6 nM as determined by Octet RED System.



Application Data

ADDITIONAL INFORMATION

Related Product Information for ACE2 recombinant protein	Angiotensin-converting enzyme 2 (ACE2), a first homolog of ACE, regulates the renin angiotensin system (RAS) by counterbalancing ACE activity. Accumulating evidence in recent years has demonstrated a physiological and pathological role of ACE2 in the cardiovascular, renal and respiratory systems. ACE2 also has an important role in blood pressure control. This enzyme, an homolog of ACE, hydrolyzes angiotensin (Ang) I to produce Ang-(1-9), which is subsequently converted into Ang-(1-7) by a neutral endopeptidase and ACE. ACE2 releases Ang-(1-7) more efficiently than its catalysis of Ang-(1-9) by cleavage of Pro(7)-Phe(8) bound in Ang II. Thus, the major biologically active product of ACE2 is Ang-(1-7), which is considered to be a beneficial peptide of the RAS cascade in the cardiovascular system. A physiological role for ACE2 has been implicated in hypertension, cardiac function, heart function and diabetes, and as a receptor of the severe acute respiratory syndrome coronavirus. In the acute respiratory distress syndrome (ARDS), ACE, AngII, and AT1R promote the disease pathogenesis, whereas ACE2 and the AT2R protect from ARDS. Importantly, ACE2 has been identified as a key SARS-coronavirus receptor and plays a protective role in severe acute respiratory syndrome (SARS) pathogenesis. Furthermore, the recent explosion of research into the ACE2 homolog, collectrin, has revealed a new physiological function of ACE2 as an amino acid transporter, which explains the pathogenic role of gene mutations in Hartnup disorder. This review summarizes and discusses the recently unveiled roles for ACE2 in disease pathogenesis.
References	Koitka A, et al. (2008) Angiotensin converting enzyme 2 in the kidney. Clin Exp Pharmacol Physiol. 35(4): 420-5. Raizada MK, et al. (2007) ACE2: a new target for cardiovascular disease therapeutics. J Cardiovasc Pharmacol. 50(2): 112-9. Imai Y, et al. (2007) Angiotensin-converting enzyme 2 (ACE2) in disease pathogenesis. Circ J. 74(3): 405-10. Turner AJ, et al. (2004) ACE2: from vasopeptidase to SARS virus receptor. Trends Pharmacol Sci. 25(6): 291-4.

NCBI AND UNIPROT INFORMATION

NCBI GI #	11225609
NCBI GeneID	59272
NCBI Accession #	NP_068576.1
NCBI GenBank Nucleotide #	NM_021804.2
UniProt Accession #	Q9BYF1; Q6UWP0; Q86WT0; Q9NRA7; Q9UFZ6; C7ECU1
Molecular Weight	92,463 Da
NCBI Official Full Name	angiotensin-converting enzyme 2
NCBI Official Synonym Full Names	angiotensin I converting enzyme 2
NCBI Official Symbol	ACE2
NCBI Official Synonym Symbols	ACEH
NCBI Protein Information	angiotensin-converting enzyme 2; peptidyl-dipeptidase A; metalloprotease MPROT15; ACE-related carboxypeptidase; angiotensin-converting enzyme homolog; angiotensin I converting enzyme (peptidyl-dipeptidase A) 2
UniProt Protein Name	Angiotensin-converting enzyme 2
UniProt Gene Name	ACE2
UniProt Synonym Gene Names	ACEH
UniProt Entry Name	ACE2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.