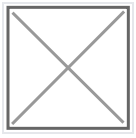
ACE2 Human Active Protein

PRODUCT OVERVIEW

Product Name	ACE2, Active Protein
Full Product Name	Recombinant Human ACE2 Protein (Fc Tag)
Product Gene Name	ACE2 active protein
Product Synonym Names	Angiotensin-Converting Enzyme 2; ACE-Related Carboxypeptidase; Angiotensin-Converting Enzyme Homolog; ACEH; Metalloprotease MPROT15; ACE2
Host	Human Cells
Form/Format	Supplied as a 0.2 uM filtered solution of 20mM Tris-HCl, 300mM NaCl, 1mM ZnCl2, 10% Glycerol, pH 7.4.
Purity/Purification	>95% as determined by reducing SDS-PAGE.
Concentration	1.16mg/mL (lot specific)
Preparation and Storage	Ships on blue ice. Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles. This product is provided as liquid. Upon receipt; store it immediately at<-20°C.
Molecular Weight	Molecular Mass: 110.5 kDa Actual Protein Molecular Mass: 110-140 kDa
Sequence Positions	Gln18-Ser740
OMIM	300335
3D Structure	ModBase 3D Structure for Q9BYF1
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Species	Human
Biological Activity	Immobilized Human ACE-2-Fc(Cat# MBS2563875) at 2ug/ml (100 ul/well) can bind 2019-nCoV S Protein RBD-SD1-mFc(Cat# MBS2563861). The ED50 of MBS2563861 is 15.5 ng/ml.
Endotoxin	< 1.0 EU per ug as determined by the LAL method.
Fusion Tag	C-Fc
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for ACE2 active protein	Protein Construction: Recombinant Human Angiotensin-Converting Enzyme 2 is produced by our Mammalian expression system and the target gene encoding Gln18-Ser740 is expressed with a Fc tag at the C-terminus. Background: Angiotensin-Converting Enzyme 2 (ACE-2) is an integral membrane protein and a zinc metalloprotease of the ACE family, the ACE family includes somatic and germinal ACE. ACE-2 cleaves angiotensins I and II as a carboxypeptidase, ACE-2 converts angiotensin I to angiotensin 1-9, and angiotensin II to angiotensin 1-7. ACE-2 is also able to hydrolyze apelin-13 and dynorphin-13 with high efficiency. ACE-2 can be high expressed in testis, kidney and heart, in colon, small intestine and ovary at moderate levels. Captopril and lisinopril as the classical ACE inhibitor don't inhibit ACE-2 activity. ACE-2 may play an important role in regulating the heart function.
Other Notes	Small volumes of ACE2 active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ACE2 purchase	MBS2563875 is an active protein targeting ACE2. Also known as Recombinant Human ACE2 Protein (Fc Tag). Host: Human Cells.



SDS-PAGE of ACE2 active protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ACE2. It may not necessarily be applicable to this product.

NCBI GI #	11225609
NCBI GeneID	59272
NCBI Accession #	NP_068576.1
UniProt Primary Accession #	Q9BYF1
UniProt Related Accession #	Q9BYF1
GenBank Nucleotide #	NP_068576.1
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
UniProt Protein Name	Angiotensin-converting enzyme 2
UniProt Synonym Protein Names	ACE-related carboxypeptidase; Angiotensin-converting enzyme homolog; ACEH; Metalloprotease MPROT15
Protein Family	Angiotensin-converting enzyme
UniProt Gene Name	ACE2
UniProt Synonym Gene Names	ACEH
UniProt Entry Name	ACE2_HUMAN
NCBI Protein Information	angiotensin-converting enzyme 2
NCBI Summary for ACE2	The protein encoded by this gene belongs to the angiotensin-converting enzyme family of dipeptidyl carboxydipeptidases and has considerable homology to human angiotensin 1 converting enzyme. This secreted protein catalyzes the cleavage of angiotensin I into angiotensin 1-9, and angiotensin II into the vasodilator angiotensin 1-7. The organ- and cell-specific expression of this gene suggests that it may play a role in the regulation of cardiovascular and renal function, as well as fertility. In addition, the encoded protein is a functional receptor for the spike glycoprotein of the human coronavirus HCoV-NL63 and the human severe acute respiratory syndrome coronaviruses, SARS-CoV and SARS-CoV-2 (COVID-19 virus). [provided by RefSeq, Mar 2020]

UniProt Comments for ACE2	ACE2: Carboxypeptidase which converts angiotensin I to angiotensin 1-9, a peptide of unknown function, and angiotensin II to angiotensin 1-7, a vasodilator. Also able to hydrolyze apelin- 13 and dynorphin-13 with high efficiency. May be an important regulator of heart function. In case of human coronaviruses SARS and HCoV-NL63 infections, serve as functional receptor for the spike glycoprotein of both coronaviruses. Interacts with ITGB1. Interacts with SARS-CoV and HCoV- NL63 spike glycoprotein. Up-regulated in failing heart. Expressed in endothelial cells from small and large arteries, and in arterial smooth muscle cells. Expressed in lung alveolar epithelial cells, enterocytes of the small intestine, Leydig cells and Sertoli cells. Expressed in heart, kidney, testis, and gastrointestinal system. Activated by chloride and fluoride, but not bromide. Inhibited by MLN-4760, cFP_Leu, and EDTA, but not by the ACE inhibitors linosipril, captopril and enalaprilat. Belongs to the peptidase M2 family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 3.4.17.23; Membrane protein, integral; Protease Chromosomal Location of Human Ortholog: Xp22 Cellular Component: extracellular space; cell surface; cytoplasm; integral to membrane; plasma membrane; extracellular region; lipid raft Molecular Function: peptidyl-dipeptidase activity; viral receptor activity; protein binding; metallopeptidase activity; carboxypeptidase activity; zinc ion binding; peptide hormone binding; endopeptidase activity; glycoprotein binding Biological Process: virion attachment, binding of host cell surface receptor; entry of virus into host cell; maternal process involved in pregnancy; regulation of vasodilation; proteolysis; angiotensin maturation; regulation of systemic arterial blood pressure by renin-angiotensin; regulation of cell proliferation; regulation of cytokine production; cellular protein metabolic process; regulation of vasoconstriction; regulation of inflammatory response; angiotensin catabolic process in blood; receptor biosynthetic process; angiotensin mediated drinking behavior
Research Articles on ACE2	**1.** Study has shown that elderly age, dyslipidemia and the combination of genetic polymorphisms of ACE and ACE2 were independent risk factors for hypertension in Brazilian patients. The findings achieved suggest that individuals with the DD/G_ genotype and more pronouncedly DD/GG individuals present a greater susceptibility to systemic arterial hypertension development.
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