ACE2 (IN1) Blocking Peptide

PRODUCT OVERVIEW

Product Name	ACE2, Blocking Peptide
Full Product Name	ACE2 (IN1) Peptide
Product Gene Name	ACE2 blocking peptide
Product Synonym Names	ACEH; Angiotensin-converting enzyme 2; ACE-related carboxypeptidase; ACEH; angiotensin I converting enzyme (peptidyl-dipeptidase A) 2
Form/Format	Liquid
Concentration	200 ug/mL (lot specific)
Preparation and Storage	Store ACE2 (IN1) peptide at -20 degree C, stable for one year.
Antibody/Peptide Pairs	ACE2 peptide (MBS152576) is used for blocking the activity of ACE2 antibody (MBS150723)
Molecular Weight	63,912 Da
OMIM	300335
Species	Human
Buffer	PBS pH 7.2 (10 mM NaH2PO4, 10 mM Na2HPO4, 130 mM NaCl) containing 0.1% bovine serum albumin and 0.02% sodium azide
Location	17 amino acids near the center of human ACE2.
Applications Tested/Suitable for ACE2 blocking peptide	Blocking (BL)
Application Notes for ACE2 blocking peptide	ACE2 peptide is used for blocking the activity of ACE2 antibody.
Related Product Information for ACE2 blocking peptide	MBS152576 is a blocking peptide targeting ACE2. Also known as ACE2 (IN1) Peptide.
Other Notes	Small volumes of ACE2 blocking peptide 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.

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
UniProt Primary Accession #	Q9BYF1
UniProt Secondary Accession #	Q6UWP0; Q86WT0; Q9NRA7; Q9UFZ6; C7ECU1
UniProt Related Accession #	Q9BYF1
GenBank Nucleotide #	NM_021804.2
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 MPROT15Processed angiotensin-converting enzyme 2
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; peptidyl-dipeptidase A; metalloprotease MPROT15; ACE-related carboxypeptidase; angiotensin-converting enzyme homolog; angiotensin I converting enzyme (peptidyl-dipeptidase A) 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 coronaviruses SARS and HCoV-NL63. [provided by RefSeq, Jul 2008]
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; Protease; Membrane protein, integral Chromosomal Location of Human Ortholog: Xp22 Cellular Component: extracellular space; cell surface; cytoplasm; extracellular region; plasma membrane; integral to membrane; lipid raft Molecular Function: viral receptor activity; peptidyl-dipeptidase activity; protein binding; zinc ion binding; metallopeptidase activity; carboxypeptidase activity; peptide hormone binding; endopeptidase activity; glycoprotein binding Biological Process: virion attachment, binding of host cell surface receptor; entry of virus into host cell; cellular protein metabolic process; maternal process involved in pregnancy; regulation of vasodilation; regulation of vasoconstriction; regulation of inflammatory response; angiotensin catabolic process in blood; receptor biosynthetic process; angiotensin maturation; proteolysis; regulation of systemic arterial blood pressure by renin-angiotensin; angiotensin mediated drinking behavior; regulation of cell proliferation; regulation of cytokine production
Research Articles on ACE2	**1.** ACE2 cleavage is regulated by influenza A H1N1 neuraminidase.
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