

ACE2 (NCOVID / SARS Receptor) Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP6020d**Specification****ACE2 (NCOVID / SARS Receptor) Antibody
(Center) Blocking Peptide - Product Information**Primary Accession [Q9BYF1](#)**ACE2 (NCOVID / SARS Receptor) Antibody
(Center) Blocking Peptide - Additional
Information****Gene ID** 59272**Other Names**

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

Target/Specificity

The synthetic peptide sequence used to
generate the antibody <a>AP6020d
was selected from the SARS region of
human ACE2 (SARS Receptor). A 10 to 100
fold molar excess to antibody is
recommended. Precise conditions should be
optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder
format. Peptides can be reconstituted in
solution using the appropriate buffer as
needed.

Storage

Maintain refrigerated at 2-8°C for up to 6
months. For long term storage store at
-20°C.

Precautions

This product is for research use only. Not
for use in diagnostic or therapeutic
procedures.

**ACE2 (NCOVID / SARS Receptor) Antibody
(Center) Blocking Peptide - Protein Information****ACE2 (NCOVID / SARS Receptor) Antibody
(Center) Blocking Peptide - Background**

ACE2 cDNA encodes a deduced 805-amino
acid protein containing a potential 17-amino
acid N-terminal signal peptide and a putative
22-amino acid C-terminal membrane anchor. It
also possesses a zinc metalloprotease
consensus sequence and a conserved
glutamine residue that may function as a third
zinc ligand. ACE2 is expressed predominantly
in vascular endothelial cells of the heart and
kidney. ACE converts angiotensin I to
angiotensin II, ACE2 converts angiotensin I to
angiotensin 1-9, which has 9 amino acids.
Angiotensin II is a potent blood vessel
constrictor, while angiotensin 1-9 does not
impact blood vessels but is cleaved by ACE to
a shorter peptide, angiotensin 1-7, which is a
blood vessel dilator. Spike (S) proteins of
coronaviruses, including the SARS coronavirus,
bind with cellular receptors to mediate
infection of target cells. ACE2 binds the S1
domain of the SARS coronavirus S protein.
SARS coronavirus replicates efficiently on
ACE2-transfected but not mock-transfected
293T cells. Anti-ACE2 but not anti-ACE1
antibody blocks viral replication on Vero E6
cells. It has been proposed that ACE2 is a
functional receptor for SARS coronavirus.

Name ACE2 ([HGNC:13557](#))

Function

Essential counter-regulatory carboxypeptidase of the renin- angiotensin hormone system that is a critical regulator of blood volume, systemic vascular resistance, and thus cardiovascular homeostasis (PubMed:[27217402](http://www.uniprot.org/citations/27217402)). Converts angiotensin I to angiotensin 1- 9, a nine-amino acid peptide with anti-hypertrophic effects in cardiomyocytes, and angiotensin II to angiotensin 1-7, which then acts as a beneficial vasodilator and anti-proliferation agent, counterbalancing the actions of the vasoconstrictor angiotensin II (PubMed:[10969042](http://www.uniprot.org/citations/10969042), PubMed:[10924499](http://www.uniprot.org/citations/10924499), PubMed:[11815627](http://www.uniprot.org/citations/11815627), PubMed:[19021774](http://www.uniprot.org/citations/19021774), PubMed:[14504186](http://www.uniprot.org/citations/14504186)). Also removes the C-terminal residue from three other vasoactive peptides, neurotensin, kinetensin, and des-Arg bradykinin, but is not active on bradykinin (PubMed:[10969042](http://www.uniprot.org/citations/10969042), PubMed:[11815627](http://www.uniprot.org/citations/11815627)). Also cleaves other biological peptides, such as apelins (apelin-13, [Pyr1]apelin-13, apelin-17, apelin-36), casomorphins (beta-casomorphin- 7, neocasomorphin) and dynorphin A with high efficiency (PubMed:[11815627](http://www.uniprot.org/citations/11815627), PubMed:[27217402](http://www.uniprot.org/citations/27217402), PubMed:[28293165](http://www.uniprot.org/citations/28293165)). In addition, ACE2 C-terminus is homologous to

collectrin and is responsible for the trafficking of the neutral amino acid transporter SL6A19 to the plasma membrane of gut epithelial cells via direct interaction, regulating its expression on the cell surface and its catalytic activity (PubMed:18424768, PubMed:19185582).

Cellular Location

[Processed angiotensin-converting enzyme 2]: Secreted [Isoform 2]: Apical cell membrane

Tissue Location

Expressed in endothelial cells from small and large arteries, and in arterial smooth muscle cells (at protein level) (PubMed:15141377). Expressed in enterocytes of the small intestine, Leydig cells and Sertoli cells (at protein level) (PubMed:15141377) Expressed in the renal proximal tubule and the small intestine (at protein level) (PubMed:18424768). Expressed in heart, kidney, testis, and gastrointestinal system (at protein level) (PubMed:10969042, PubMed:10924499, PubMed:15231706, PubMed:12459472, PubMed:15671045, PubMed:32715618, PubMed:32170560). In lung, expressed at low levels in some alveolar type 2 cells, the expression seems to be individual- specific (at protein level) (PubMed:32425701, PubMed:15141377, PubMed:32715618, PubMed:32170560, PubMed:33432184). Expressed in nasal epithelial cells (at protein level) (PubMed:33432184, PubMed:32333915) Coexpressed with TMPRSS2 within some lung alveolar type 2 cells, ileal absorptive enterocytes, intestinal epithelial cells, cornea, gallbladder and nasal goblet secretory cells (PubMed:32413319, PubMed:32327758, PubMed:32358202). Coexpressed with TMPRSS4 within mature enterocytes (PubMed:32404436).

ACE2 (NCOVID / SARS Receptor) Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)