

Rabbit anti-Human ACE2 (SARS Receptor) Polyclonal Antibody | anti-ACE2 antibody

ACE2 (SARS Receptor) Antibody (C-term)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA28762	Rabbit	Human	Western Blot, ELISA, Immunohistochemistry

PRODUCT SYNONYMS

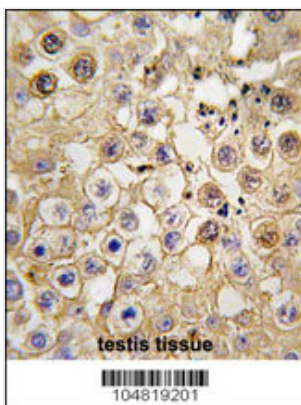
ACE2 (SARS Receptor); Polyclonal Antibody; ACE2 (SARS Receptor) Antibody (C-term); Angiotensin-converting enzyme 2; ACE-related carboxypeptidase; Angiotensin-converting enzyme homolog; ACEH; Metalloprotease MPROT15; Processed angiotensin-converting enzyme2; ACE2; Coronavirus receptor; COVIDreceptor; SARS reeptor; COVID-19 Receptor; COVID19 receptor; anti-ACE2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This ACE2 (SARS Receptor) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 773-805 amino acids from the C-terminal region of human ACE2 (SARS Receptor).
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Sequence Positions	773-805
Sequence Length	555
Applicable Applications for anti-ACE2 antibody	WB (Western Blot), ELISA, IHC (Immunohistochemistry)
Application Notes	WB~~1:1000 IHC-P~~1:50~100
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). 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)

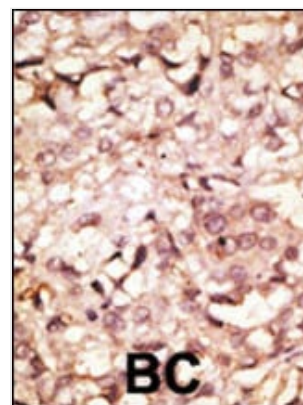
Function	Essential counter-regulatory carboxypeptidase of the renin- angiotensin hormone system that is a critical regulator of blood volume, systemic vascular resistance, and thus cardiovascular homeostasis (PubMed:27217402). Converts angiotensin I to angiotensin 1- 9, a nine-amino acid peptide with anti-hypertrophic effects in cardiomyocytes, and angiotensin II to angiotensin 1-7, a vasodilator (PubMed:10969042, PubMed:10924499, PubMed:11815627, PubMed:19021774). 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, PubMed:11815627). Also cleaves other biological peptides, such as apelins, casomorphins and dynorphin A with high efficiency (PubMed: 11815627, PubMed:27217402). 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 enzyme2]: 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 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.
Preparation and Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

IMAGES



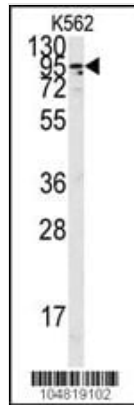
IHC (Immunohistochemistry)

Formalin-fixed and paraffin-embedded human testis tissue reacted with ACE2 (SARS Receptor) Antibody (C-term) (AAA28762), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



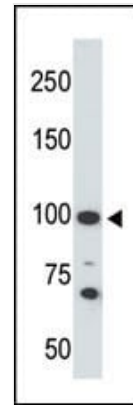
IHC (Immunohistochemistry)

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



WB (Western Blot)

Western blot analysis of anti-ACE2 C-term Pab (AAA28762) in K562 cell line lysates (35ug/lane). ACE2 (arrow) was detected using the purified Pab.



WB (Western Blot)

The anti-ACE2 C-term Pab (AAA28762) is used in Western blot to detect ACE2 in 293 cell lysate.

ADDITIONAL INFORMATION

Related Product Information for anti-ACE2 antibody	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.
Product Categories/Family for anti-ACE2 antibody	Cardiovascular ; Cell biology
References	Douglas, G.C., et al., Endocrinology 145(10):4703-4711 (2004). Turner, A.J., et al., Trends Pharmacol. Sci. 25(6):291-294 (2004). Towler, P., et al., J. Biol. Chem. 279(17):17996-18007 (2004). Wong, S.K., et al., J. Biol. Chem. 279(5):3197-3201 (2004). Li, W., et al., Nature 426(6965):450-454 (2003).

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
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
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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/ace2-sars-receptor-antibody-western-blot-immunohistochemistry-elisa/28762>