

**ACE2 (NCOVID / SARS Receptor) Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP6020d****Specification**

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**ACE2 (NCOVID / SARS Receptor) Antibody (Center) - Product Information**

Application	WB, IHC-P, FC,E
Primary Accession	<a href="#">Q9BYF1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	140-172

**ACE2 (NCOVID / SARS Receptor) Antibody (Center) - 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, Coronavirus receptor, COVID receptor, SARS reeptor, COVID-19 Receptor, COVID19 receptor

**Target/Specificity**

This ACE2 (SARS Receptor) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 140-172 amino acids from the Central region of human ACE2 (SARS Receptor).

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100  
FC~~1:10~50

**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.

**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.

**Precautions**

ACE2 (NCOVID / SARS Receptor) Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**ACE2 (NCOVID / SARS Receptor) Antibody (Center) - Protein Information****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](#)). 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:[10924499](#), PubMed:[10969042](#), PubMed:[11815627](#), PubMed:[14504186](#), 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 (apelin-13, [Pyr1]apelin-13, apelin-17, apelin-36), casomorphins (beta-casomorphin- 7, neocasomorphin) and dynorphin A with high efficiency (PubMed:[11815627](#), PubMed:[27217402](#), PubMed:[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:[10924499](#), PubMed:[10969042](#), PubMed:[12459472](#), PubMed:[15231706](#), PubMed:[15671045](#), PubMed:[32170560](#), PubMed:[32715618](#)). In lung, expressed at low levels in some alveolar type 2 cells, the expression seems to be individual- specific (at protein level) (PubMed:[15141377](#), PubMed:[32170560](#), PubMed:[32425701](#), PubMed:[32715618](#), PubMed:[33432184](#)). Expressed in nasal epithelial cells (at protein level) (PubMed:[32333915](#), PubMed:[33432184](#)) Coexpressed with TMPRSS2 within some lung alveolar type 2 cells, ileal absorptive enterocytes, intestinal epithelial cells, cornea, gallbladder and nasal goblet secretory cells (PubMed:[32327758](#), PubMed:[32358202](#), PubMed:[32413319](#)). Coexpressed with TMPRSS4 within mature enterocytes (PubMed:[32404436](#)).

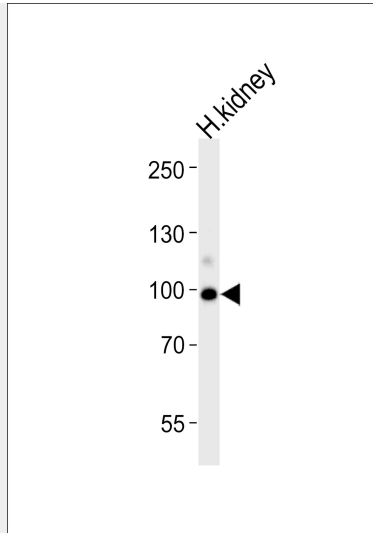
## ACE2 (NCOVID / SARS Receptor) Antibody (Center) - Protocols

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

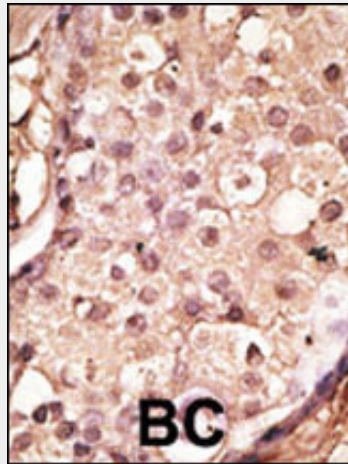
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## ACE2 (NCOVID / SARS Receptor) Antibody (Center) - Images

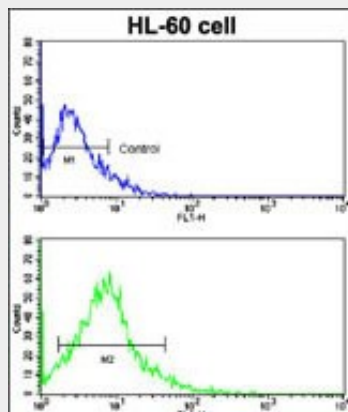




Western blot analysis of lysate from human kidney tissue lysate, using ACE2(SARS-R) Antibody (S155)(Cat. #AP6020d). AP6020d was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.



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.



Flow cytometric analysis of HL-60 cells using ACE2 (SARS Receptor) Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit

secondary antibodies were used for the analysis.

### **ACE2 (NCOVID / SARS Receptor) Antibody (Center) - 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.

### **ACE2 (NCOVID / SARS Receptor) Antibody (Center) - 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).