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ACE2 (SARS Receptor) Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6020c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9BYF1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4813
Antigen Region	306-338

Additional Information

Other Names	Angiotensin-converting enzyme 2, ACE-related carboxypeptidase, Angiotensin-converting enzyme homolog, ACEH, Metalloprotease MPROT15, Processed angiotensin-converting enzyme 2, ACE2
Target/Specificity	This ACE2 (SARS Receptor) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 306-338 amino acids from the Central region of human ACE2 (SARS Receptor).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
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 (SARS Receptor) Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Background

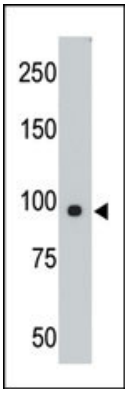
ACE2 cDNA encodes a deduced 805-amino acid protein containing a potential 17-amino acid N-terminal signal peptide and a putative 22-amino acid C-terminal membrane anchor. It also possesses a zinc metalloprotease consensus sequence and a conserved glutamine residue that may function as a third zinc ligand. 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.

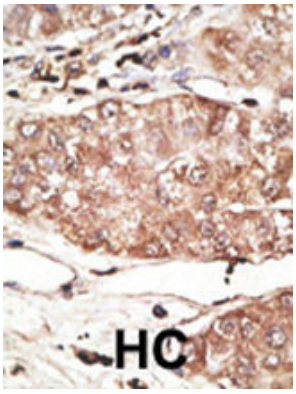
References

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).

Images



The anti-ACE2 Ctr term Pab (Cat. #AP6020c) is used in Western blot to detect ACE2 in 293 cell lysate.



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.