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ACE2 / ACE-2 Antibody (Internal)
Rabbit Polyclonal Antibody
Catalog # ALS12677

Specification

ACE2 / ACE-2 Antibody (Internal) - Product Information

Application	**IF, IHC**
Primary Accession	Q9BYF1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**92kDa KDa**

ACE2 / ACE-2 Antibody (Internal) - Additional Information

Gene ID 59272

Other Names
Angiotensin-converting enzyme 2, 3.4.17.23, ACE-related carboxypeptidase, Angiotensin-converting enzyme homolog, ACEH, Metalloprotease MPROT15, Processed angiotensin-converting enzyme 2, ACE2

Target/Specificity
synthetic peptide corresponding to amino acids near the center of human ACE2

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
ACE2 / ACE-2 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

ACE2 / ACE-2 Antibody (Internal) - 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:10969042, PubMed:10924499, PubMed:11815627, PubMed:19021774, PubMed:<a

href="http://www.uniprot.org/citations/14504186" target="_blank">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, 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: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).

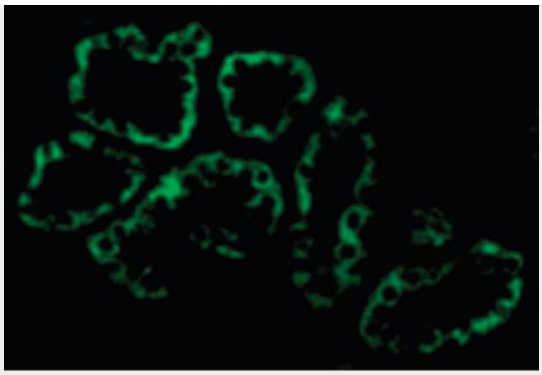
ACE2 / ACE-2 Antibody (Internal) - Protocols

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

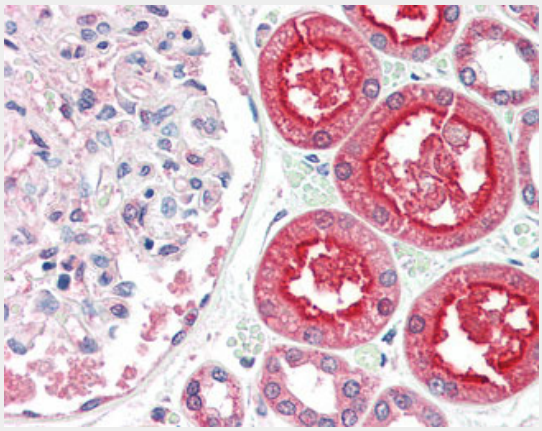
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ACE2 / ACE-2 Antibody (Internal) - Images

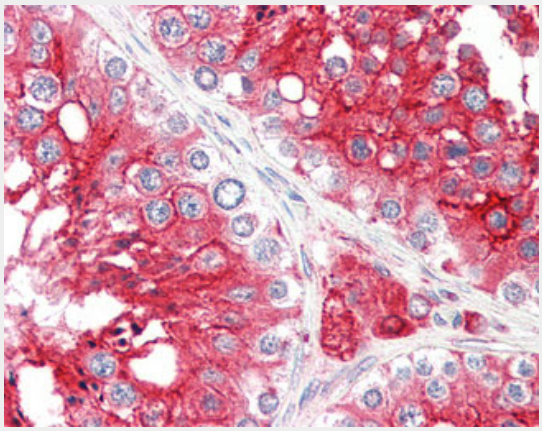
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Immunofluorescence of ACE2 in Human Kidney cells with ACE2 antibody at 2 ug/ml.



Anti-ACE-2 antibody IHC of human kidney.



Anti-ACE-2 antibody IHC of human testis.

ACE2 / ACE-2 Antibody (Internal) - Background

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.

ACE2 / ACE-2 Antibody (Internal) - References

Donoghue M.,et al.Circ. Res. 87:E1-E9(2000).
Tipnis S.R.,et al.J. Biol. Chem. 275:33238-33243(2000).

Douglas G.C.,et al.Endocrinology 145:4703-4711(2004).
Itoyama S.,et al.Am. J. Med. Genet. A 136:52-57(2005).
Suzuki Y.,et al.Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.