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ACE2 (SARS Receptor) Antibody (Center)(Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2197a

Product Information

Application	WB, E
Primary Accession	Q9BYF1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Mouse
Clonality	Monoclonal
Isotype	IgM
Clone Names	881CT16.4.4
Calculated MW	92463
Antigen Region	1-270

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	Purified His-tagged ACE2 protein was used to produced this monoclonal antibody.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.
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)(Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

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).

Background

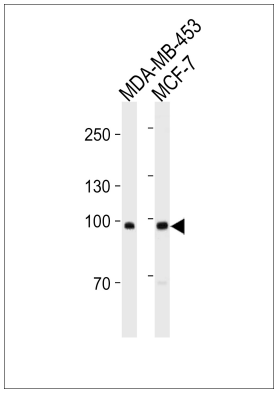
Carboxypeptidase which converts angiotensin I to angiotensin 1-9, a peptide of unknown function, and angiotensin II to angiotensin 1-7, a vasodilator. Also able to hydrolyze apelin-13 and dynorphin-13 with high efficiency. May be an important regulator of heart function. In case of human coronaviruses SARS and HCoV-NL63 infections, serve as functional receptor for the spike glycoprotein of both coronaviruses.

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.

Images

ACE2 (SARS Receptor) Antibody (Center) (Cat. #AM2197a)
western blot analysis in MDA-MB-453,MCF-7 cell line



lysates (35µg/lane).This demonstrates the ACE2 (SARS Receptor) antibody detected the ACE2 (SARS Receptor) protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.