

ACE2 (C-18): sc-17720

BACKGROUND

Angiotensin-converting enzyme (ACE) is a carboxyl-terminal dipeptidyl exopeptidase that converts Angiotensin I to the potent vasopressor hormone, Angiotensin II. There are two isoforms of ACE, the pulmonary ACEP and the testicular ACET. ACEP is a glycoprotein expressed in vascular endothelial cells of the lung, liver, adrenal cortex, pancreas, kidney and spleen. The ACET isoform is expressed exclusively in adult testis by developing sperm cells, specifically late pachytene spermatocytes. Additionally, ACE inactivates bradykinin, a vasodepressor peptide, and is involved in blood pressure regulation and fluid/electrolyte homeostasis. ACE2 is the first known human homolog of Angiotensin-converting enzyme (ACE). Unlike ACE, which is expressed ubiquitously throughout the vasculature, ACE2 is expressed only in cardiac, renal and testicular cells.

REFERENCES

1. Erdos, E.G., et al. 1967. An enzyme in microsomal fraction of kidney that inactivates bradykinin. *Life Sci.* 6: 569-754.
2. Soffer, R.L. 1976. Angiotensin-converting enzyme and the regulation of vasoactive peptides. *Annu. Rev. Biochem.* 45: 73-94.

CHROMOSOMAL LOCATION

Genetic locus: ACE2 (human) mapping to Xp22.2; Ace2 (mouse) mapping to X F5.

SOURCE

ACE2 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ACE2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17720 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACE2 (C-18) is recommended for detection of ACE2 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ACE2 (C-18) is also recommended for detection of ACE2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ACE2 siRNA (h): sc-41400, ACE2 siRNA (m): sc-41401, ACE2 shRNA Plasmid (h): sc-41400-SH, ACE2 shRNA Plasmid (m): sc-41401-SH, ACE2 shRNA (h) Lentiviral Particles: sc-41400-V and ACE2 shRNA (m) Lentiviral Particles: sc-41401-V.

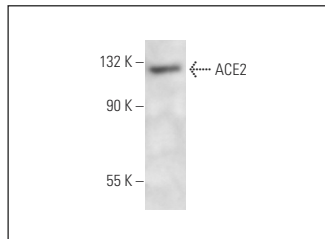
Molecular Weight of ACE2: 90 kDa.

Positive Controls: Hs 181 Tes whole cell lysate: sc-364779.

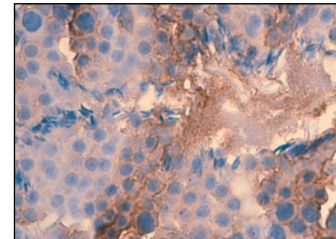
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



ACE2 (C-18): sc-17720. Western blot analysis of glycosylated ACE2 expression in Hs 181 Tes whole cell lysate.



ACE2 (C-18): sc-17720. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing membrane localization.

SELECT PRODUCT CITATIONS

1. Velez, J.C., et al. 2007. Characterization of Renin-Angiotensin system enzyme activities in cultured mouse podocytes. *Am. J. Physiol. Renal Physiol.* 293: F398-F407.
2. Jia, H.P., et al. 2009. Ectodomain shedding of Angiotensin converting enzyme 2 in human airway epithelia. *Am. J. Physiol. Lung Cell Mol. Physiol.* 297: L84-L96.
3. Giani, J.F., et al. 2012. Upregulation of the angiotensin-converting enzyme 2/angiotensin-(1-7)/Mas receptor axis in the heart and the kidney of growth hormone receptor knock-out mice. *Growth Horm. IGF Res.* 22: 224-233.
4. Le, Q.T., et al. 2015. Plasma membrane tetraspanin CD81 complexes with proprotein convertase Subtilisin/Kexin Type 9 (PCSK9) and Low Density Lipoprotein Receptor (LDLR), and its levels are reduced by PCSK9. *J. Biol. Chem.* 290: 23385-23400.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
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Try **ACE2 (E-11): sc-390851** or **ACE2 (AC182): sc-73668**, our highly recommended monoclonal alternatives to ACE2 (C-18).