

# ACE2 (D-20): sc-21834

## 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.
3. Caldwell, P.R., et al. 1976. Angiotensin-converting enzyme: vascular endothelial localization. *Science* 191: 1050-1051.
4. Soffer, R.L. 1981. Biochemical regulation of blood pressure. New York: Wiley-Interscience, 123-164.
5. El-Dorry, H.A., et al. 1982. Molecular and catalytic properties of rabbit testicular dipeptidyl carboxypeptidase. *J. Biol. Chem.* 257: 14128-14133.
6. Kumar, R.S., et al. 1991. The mRNAs encoding the two Angiotensin-converting isozymes are transcribed from the same gene by a tissue-specific choice of alternative transcription initiation sites. *J. Biol. Chem.* 266: 3854-3862.

## CHROMOSOMAL LOCATION

Genetic locus: Ace2 (mouse) mapping to X F5.

## SOURCE

ACE2 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ACE2 of mouse 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-21834 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## RESEARCH USE

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

## APPLICATIONS

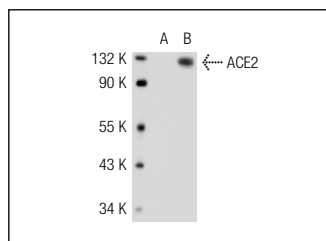
ACE2 (D-20) is recommended for detection of ACE2 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

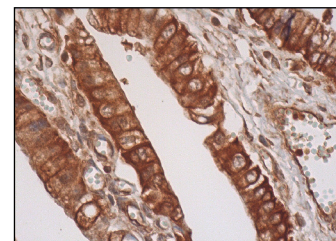
Molecular Weight of ACE2: 90 kDa.

Positive Controls: ACE2 (m): 293T Lysate: sc-118196, mouse heart extract: sc-2254 or mouse kidney extract: sc-2255.

## DATA



ACE2 (D-20): sc-21834. Western blot analysis of ACE2 expression in non-transfected: sc-117752 (A) and mouse ACE2 transfected: sc-118196 (B) 293T whole cell lysates.



ACE2 (D-20): sc-21834. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Wiener, R.S., et al. 2007. Angiotensin converting enzyme 2 is primarily epithelial and is developmentally regulated in the mouse lung. *J. Cell. Biochem.* 101: 1278-1291.
2. Gupte, M., et al. 2008. ACE2 is expressed in mouse adipocytes and regulated by a high-fat diet. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 295: R781-R788.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **ACE2 (E-11): sc-390851**, our highly recommended monoclonal alternative to ACE2 (D-20).