

ACE (H-170): sc-20791

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 ACE. Unlike ACE, which is expressed ubiquitously throughout the vasculature, ACE2 is expressed only in cardiac, renal and testicular cells.

CHROMOSOMAL LOCATION

Genetic locus: ACE (human) mapping to 17q23.3; Ace (mouse) mapping to 11 E1.

SOURCE

ACE (H-170) is a rabbit polyclonal antibody raised against amino acids 1-170 of ACE 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.

APPLICATIONS

ACE (H-170) is recommended for detection of ACE somatic isoform of mouse, rat and human 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 ACE siRNA (h): sc-29626, ACE siRNA (m): sc-29627, ACE shRNA Plasmid (h): sc-29626-SH, ACE shRNA Plasmid (m): sc-29627-SH, ACE shRNA (h) Lentiviral Particles: sc-29626-V and ACE shRNA (m) Lentiviral Particles: sc-29627-V.

Molecular Weight of ACE: 195 kDa.

Positive Controls: mouse kidney extract: sc-2255, human kidney tissue extract: sc-363764 or IB4 whole cell lysate: sc-364780.

STORAGE

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

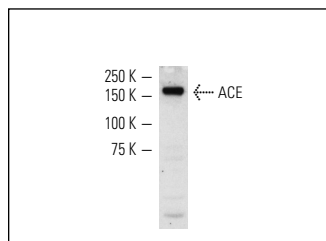
PROTOCOLS

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

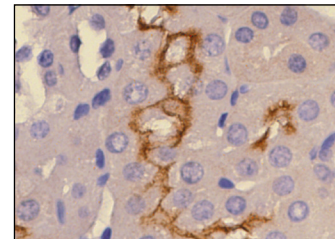
RESEARCH USE

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

DATA



ACE (H-170): sc-20791. Western blot analysis of ACE expression in mouse kidney tissue extract.



ACE (H-170): sc-20791. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing membrane localization.

SELECT PRODUCT CITATIONS

1. Maeda, S., et al. 2005. Acute exercise causes an enhancement of tissue Renin-Angiotensin system in the kidney in rats. *Acta Physiol. Scand.* 185: 79-86.
2. Hemming, M. and Selkoe, D. 2005. Amyloid β -protein is degraded by cellular Angiotensin-converting enzyme (ACE) and elevated by an ACE inhibitor. *J. Biol. Chem.* 280: 37644-37650.
3. Arsenescu, R., et al. 2011. Role of the xenobiotic receptor in inflammatory bowel disease. *Inflamm. Bowel Dis.* 17: 1149-1162.
4. Wang, G., et al. 2011. Expression of ACE and ACE2 in patients with hypertensive nephrosclerosis. *Kidney Blood Press. Res.* 34: 141-149.
5. Colucci, J.A., et al. 2011. Renin-angiotensin system may trigger kidney damage in NOD mice. *J. Renin Angiotensin Aldosterone Syst.* 12: 15-22.
6. Lim, Y.Y., et al. 2012. A comparison of neuropeptide expression in skin with allergic contact dermatitis in human and mouse. *Int. J. Dermatol.* 51: 939-946.
7. Nogueira-Silva, C., et al. 2012. Local fetal lung renin-angiotensin system as a target to treat congenital diaphragmatic hernia. *Mol. Med.* 18: 231-243.
8. Oyama, J., et al. 2012. Repetitive hyperthermia attenuates progression of left ventricular hypertrophy and increases telomerase activity in hypertensive rats. *Am. J. Physiol. Heart Circ. Physiol.* 302: H2092-H2101.
9. Samuel, P., et al. 2012. High Na intake increases renal angiotensin II levels and reduces expression of the ACE2-AT(2)R-MasR axis in obese Zucker rats. *Am. J. Physiol. Renal Physiol.* 303: F412-F419.



Try **ACE (2E2): sc-23908** or **ACE (B-6): sc-374198**, our highly recommended monoclonal alternatives to ACE (H-170). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **ACE (2E2): sc-23908**.