

ACE (N-20): sc-12184

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 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus 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.

Blocking peptide available for competition studies, sc-12184 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACE (N-20) 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).

ACE (N-20) is also recommended for detection of ACE somatic isoform in additional species, including canine and bovine.

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

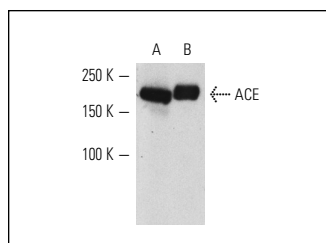
STORAGE

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

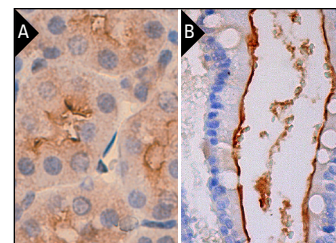
RESEARCH USE

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

DATA



ACE (N-20): sc-12184. Western blot analysis of ACE expression in mouse kidney (A) and human kidney (B) tissue extracts.



ACE (N-20): sc-12184. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing apical membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Daugherty, A., et al. 2004. Hypercholesterolemia stimulates angiotensin peptide synthesis and contributes to atherosclerosis through the AT1A receptor. *Circulation* 110: 3849-3857.
- 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.
- De Falco, M., et al. 2007. Expression and distribution of Notch protein members in human placenta throughout pregnancy. *Placenta* 28: 118-126.
- Jokubaitis, V.J., et al. 2008. Angiotensin-converting enzyme (CD143) marks hematopoietic stem cells in human embryonic, fetal, and adult hematopoietic tissues. *Blood* 111: 4055-4063.
- Liu, H.W., et al. 2009. Characterization of angiotensin-converting enzyme expression during epidermis morphogenesis in humans: a potential marker for epidermal stem cells. *Br. J. Dermatol.* 160: 250-258.
- Gonzalez-Villalobos, R.A., et al. 2010. Intrarenal mouse renin-angiotensin system during ANG II-induced hypertension and ACE inhibition. *Am. J. Physiol. Renal Physiol.* 298: F150-F157.
- Hallersund, P., et al. 2011. The expression of renin-angiotensin system components in the human gastric mucosa. *J. Renin Angiotensin Aldosterone Syst.* 12: 54-64.

PROTOCOLS

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



Try **ACE (2E2): sc-23908** or **ACE (B-6): sc-374198**, our highly recommended monoclonal alternatives to ACE (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **ACE (2E2): sc-23908**.