SANTA CRUZ BIOTECHNOLOGY, INC.

Angiotensin (H-300): sc-20717

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Angiotensin is formed from a precursor, angiotensinogen, which is produced by the liver and found in the α-globulin fraction of plasma. The lowering of blood pressure is a stimulus to secretion of renin by the kidney into the blood. Renin cleaves from angiotensinogen a terminal decapeptide, Angiotensin I (Ang I). This is further altered by the enzymatic removal of a dipeptide to form Angiotensin II (Ang II). Screening a panel of human-mouse somatic cell hybrids confirmed the assignment of the AGT locus to human chromosome 1. Ang II, an octapeptide hormone, is an important physiological effector of blood pressure and volume regulation through vasoconstriction, aldosterone release, sodium uptake and thirst stimulation. Mechanical stress causes release of Ang II from cardiac myocytes and that Ang II acts as an initial mediator of the hypertrophic response. Ang II treatment also stimulates phosphorylation of Shc, FAK and MAP kinases and induces MKP-1, indicating stimulation of growth factor pathways. Ang II stimulation through AT1 has been shown to activate the JAK/Stat pathway involving a direct interaction between JAK2 and AT1 as demonstrated by co-immunoprecipitation.

REFERENCES

1. Tsuda, et al. 1991. Vasoconstrictor-induced protein-tyrosine phosphorylation in cultured vascular smooth muscle cells. FEBS Lett. 285: 44-48.
2. Abonia, J.P., et al. 1993. Linkage of Agt and Actsk-1 to distal mouse chromosome 8 loci: a new conserved linkage. Mamm. Genome 4: 25-32.

CHROMOSOMAL LOCATION

Genetic locus: AGT (human) mapping to 1q42.2.

SOURCE

Angiotensin (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of Angiotensin 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

Angiotensin (H-300) is recommended for detection of Angiotensinogen precursor, Angiotensin I, Angiotensin II and Angiotensin III of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Angiotensin siRNA (h): sc-37196, Angiotensin shRNA Plasmid (h): sc-37196-SH and Angiotensin shRNA (h) Lentiviral Particles: sc-37196-V.

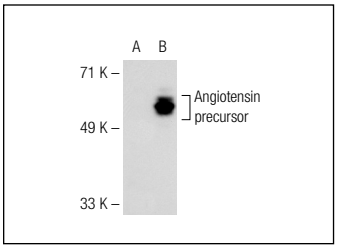
Molecular Weight of Angiotensin: 60 kDa.

Positive Controls: Angiotensin (h): 293 Lysate: sc-111052 or Hep G2 cell lysate: sc-2227.

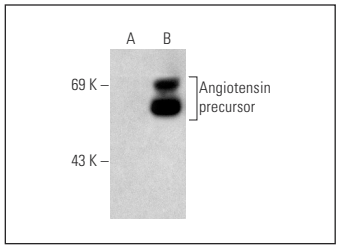
STORAGE

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

DATA



Angiotensin (H-300): sc-20717. Western blot analysis of Angiotensin expression in non-transfected: sc-110760 (**A**) and human Angiotensin transfected: sc-111052 (**B**) 293 whole cell lysates.



Angiotensin (H-300): sc-20717. Western blot analysis of Angiotensin expression in non-transfected: sc-117752 (**A**) and human Angiotensin transfected: sc-170533 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Rondelet, B., et al. 2006. Prevention of pulmonary vascular remodeling and of decreased BMPR-2 expression by losartan therapy in shunt-induced pulmonary hypertension. Am. J. Physiol. Heart Circ. Physiol. 289: H2319-H2324.
2. Bouquet, C., et al. 2006. Suppression of angiogenesis, tumor growth, and metastasis by adenovirus-mediated gene transfer of human angiotensinogen. Mol. Ther. 14: 175-182.
3. Cimica, V., et al. 2007. Serial analysis of gene expression (SAGE) in rat liver regeneration. Biochem. Biophys. Res. Commun. 360: 545-552.
4. Yano, N., et al. 2009. High ambient glucose induces angiotensin-independent AT-1 receptor activation, leading to increases in proliferation and extracellular matrix accumulation in MES-13 mesangial cells. Biochem. J. 423: 129-143.

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.