

Angiotensin (N-10): sc-7419

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.

CHROMOSOMAL LOCATION

Genetic locus: AGT (human) mapping to 1q42.2; Agt (mouse) mapping to 8 E2.

SOURCE

Angiotensin (N-10) is an affinity purified goat polyclonal antibody raised against a peptide mapping representing full length of Angiotensin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7419 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Angiotensin (N-10) is recommended for detection of Angiotensin precursor, Angiotensin I, Angiotensin II and Angiotensin III of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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). Angiotensin (N-10) is also recommended for detection of Angiotensin precursor, Angiotensin I, Angiotensin II and Angiotensin III in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Angiotensin siRNA (h): sc-37196, Angiotensin siRNA (m): sc-37197, Angiotensin shRNA Plasmid (h): sc-37196-SH, Angiotensin shRNA Plasmid (m): sc-37197-SH, Angiotensin shRNA (h) Lentiviral Particles: sc-37196-V and Angiotensin shRNA (m) Lentiviral Particles: sc-37197-V.

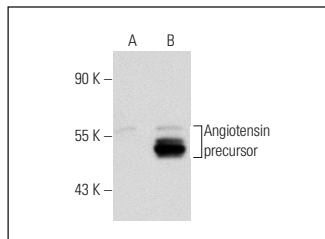
Molecular Weight of Angiotensin: 60 kDa.

Positive Controls: Angiotensin (h): 293T Lysate: sc-159690.

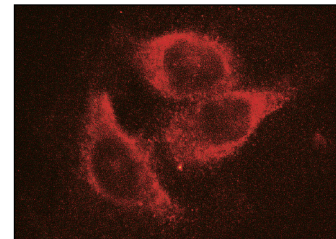
STORAGE

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

DATA



Angiotensin (N-10): sc-7419. Western blot analysis of Angiotensin expression in non-transfected: sc-117752 (A) and human Angiotensin transfected: sc-159690 (B) 293T whole cell lysates.



Angiotensin (N-10): sc-7419. Immunofluorescence staining of methanol-fixed A-10 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Thomas, M.A., et al. 2003. Subcellular identification of Angiotensin I/II- and Angiotensin II (AT1)-receptor-immunoreactivity in the central nervous system of rats. *Brain Res.* 962: 92-104.
2. Thomas, M.A., et al. 2003. Localization of Angiotensin II (AT1)-receptor-immunoreactive fibres in the hypothalamus of rats: Angiotensin II-sensitive tanycytes in the ependyma of the third ventricle. *Brain Res.* 967: 281-284.
3. Niehof, M., et al. 2011. HNF4 α dysfunction as a molecular rational for cyclosporine induced hypertension. *PLoS ONE* 6: e16319.
4. Wang, Y., et al. 2011. An unexpected link between angiotensinogen and thrombin. *FEBS Lett.* 585: 2395-2399.
5. Luo, X., et al. 2011. Hepatorenal correction in murine glycogen storage disease type I with a double-stranded adeno-associated virus vector. *Mol. Ther.* 19: 1961-1970.
6. Diao, T.Y., et al. 2014. Effects of angiotensin-converting enzyme inhibitor, captopril, on bone of mice with streptozotocin-induced type 1 diabetes. *J. Bone Miner. Metab.* 32: 261-270.
7. Oliveira-Junior, S.A., et al. 2014. AT1 receptor blockade attenuates Insulin resistance and myocardial remodeling in rats with diet-induced obesity. *PLoS ONE* 9: e86447.

RESEARCH USE

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

MONOS
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Try **Angiotensin (H-12): sc-374511** or **Angiotensin I (BGN/KA/22H): sc-80682**, our highly recommended monoclonal alternatives to Angiotensin (N-10).