SANTA CRUZ BIOTECHNOLOGY, INC.

# Angiotensinogen (H-12): sc-374511

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. Angiotensin, an octapeptide hormone, is an important physiological effector of blood pressure and volume regulation through vasoconstriction, aldosterone release, sodium uptake and thirst stimulation. It has been shown that mechanical stress causes release of Angiotensin from cardiac myocytes and that Angiotensin acts as an initial mediator of the hypertrophic response. Angiotensin treatment also stimulates phosphorylation of Shc, FAK and MAP kinases and induces MKP-1, indicating stimulation of growth factor pathways. Angiotensin 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

Angiotensinogen (H-12) is a mouse monoclonal antibody raised against amino acids 1-300 of Angiotensinogen of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Angiotensinogen (H-12) is available conjugated to agarose (sc-374511 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374511 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374511 PE), fluorescein (sc-374511 FITC), Alexa Fluor® 488 (sc-374511 AF488), Alexa Fluor® 546 (sc-374511 AF546), Alexa Fluor® 594 (sc-374511 AF594) or Alexa Fluor® 647 (sc-374511 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374511 AF680) or Alexa Fluor® 790 (sc-374511 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Angiotensinogen (H-12) is recommended for detection of Angiotensinogen of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

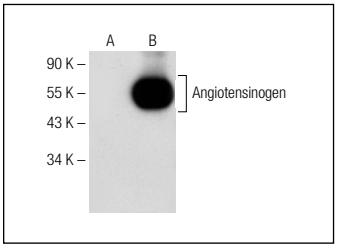
Suitable for use as control antibody for Angiotensinogen siRNA (h): sc-37196, Angiotensinogen siRNA (m): sc-37197, Angiotensinogen shRNA Plasmid (h): sc-37196-SH, Angiotensinogen shRNA Plasmid (m): sc-37197-SH, Angiotensinogen shRNA (h) Lentiviral Particles: sc-37196-V and Angiotensinogen shRNA (m) Lentiviral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

Molecular Weight of Angiotensinogen: 60 kDa.

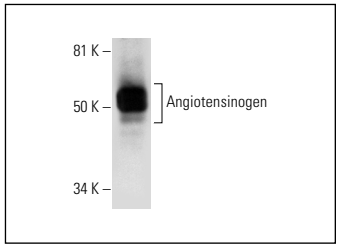
## STORAGE

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

## DATA




Angiotensinogen (H-12): sc-374511. Western blot analysis of Angiotensinogen expression in non-transfected: sc-117752 (**A**) and human Angiotensinogen transfected: sc-170533 (**B**) 293T whole cell lysates.




Angiotensinogen (H-12): sc-374511. Western blot analysis of Angiotensinogen expression in human kidney tissue extract.

## SELECT PRODUCT CITATIONS


1. Liktor, B., et al. 2013. No evidence for the expression of Renin-Angiotensin-aldosterone system in otosclerotic stapes footplates. Otol. Neurotol. 34: 808-815.
2. Wang, Z., et al. 2016. The IL-24 gene protects human umbilical vein endothelial cells against $H_2O_2$-induced injury and may be useful as a treatment for cardiovascular disease. Int. J. Mol. Med. 37: 581-592.
3. Kalra, J., et al. 2020. PKR inhibitor imoxin prevents hypertension, endothelial dysfunction and cardiac and vascular remodelling in L-NAME-treated rats. Life Sci. 262: 118436.
4. Chang, J., et al. 2021. Vitamin D suppresses bleomycin-induced pulmonary fibrosis by targeting the local Renin-Angiotensin system in the lung. Sci. Rep. 11: 16525.
5. Wei, X., et al. 2021. Vitamin D deficiency exacerbates colonic inflammation due to activation of the local Renin-Angiotensin system in the colon. Dig. Dis. Sci. 66: 3813-3821.
6. Xu, H., et al. 2022. Heme oxygenase-1 protects against PM2.5 induced endothelial dysfunction through inhibition of HIF1α. Environ. Toxicol. Pharmacol. 97: 104024.
7. Schon, S.B., et al. 2022. Obesity-related alterations in protein expression in human follicular fluid from women undergoing *in vitro* fertilization. F S Sci. 3: 331-339.
8. Meister, M.L., et al. 2023. Berry consumption mitigates the hypertensive effects of a high-fat, high-sucrose diet via attenuation of renal and aortic $AT_1R$ expression resulting in improved endothelium-derived NO bioavailability. J. Nutr. Biochem. 112: 109225.


## RESEARCH USE

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