## SANTA CRUZ BIOTECHNOLOGY, INC.

# AT<sub>1</sub> (306): sc-579



### BACKGROUND

Angiotensin II (Ang II) is an important physiological effector of blood pressure and volume regulation through vasoconstriction, aldosterone release, sodium uptake and thirst stimulation. Although Ang II interacts with two types of cell surface receptors, AT<sub>1</sub> and AT<sub>2</sub>, most of the major cardiovascular effects seem to be mediated through AT<sub>1</sub>. Molecular cloning of the AT<sub>1</sub> protein has shown it to be a member of the G protein-associated seven transmembrane protein receptor family. Ang II treatment of cells results in activation of several signal transduction pathways as evidenced by tyrosine phosphorylation of several proteins and induction of others. PLCy is phosphorylated after 30 seconds of treatment with angiotensin II, indicating this as an early signal transduction event. 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 AT<sub>1</sub> has been shown to activate the JAK Stat pathway involving a direct interaction between JAK2 and AT<sub>1</sub> as demonstrated by coimmunprecipitation. The AT<sub>1</sub> receptor has no cytoplasmic kinase domain, but is able to function as a substrate for Src kinases and has several putative phosphorylation sites.

#### CHROMOSOMAL LOCATION

Genetic locus: AGTR1 (human) mapping to 3q24; Agtr1a (mouse) mapping to 3 A2.

#### SOURCE

 $AT_1$  (306) is a rabbit polyclonal antibody raised against amino acids 306-359 of antgiotensin II  $AT_1$  of human origin.

#### PRODUCT

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

#### **APPLICATIONS**

 $AT_1$  (306) is recommended for detection of  $AT_1$  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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

 $AT_1$  (306) is also recommended for detection of  $AT_1$  in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for AT<sub>1</sub> siRNA (h): sc-29750, AT<sub>1</sub> siRNA (m): sc-29751, AT<sub>1</sub> siRNA (r): sc-155992, AT<sub>1</sub> shRNA Plasmid (h): sc-29750-SH, AT<sub>1</sub> shRNA Plasmid (m): sc-29751-SH, AT<sub>1</sub> shRNA Plasmid (r): sc-155992-SH, AT<sub>1</sub> shRNA (h) Lentiviral Particles: sc-29750-V, AT<sub>1</sub> shRNA (m) Lentiviral Particles: sc-29751-V and AT<sub>1</sub> shRNA (r) Lentiviral Particles: sc-155992-V.

Molecular Weight of AT<sub>1</sub>: 43 kDa.

#### **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



AT<sub>1</sub> (306): sc-579. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

#### SELECT PRODUCT CITATIONS

- 1. Bird, I.M., et al. 1996. Immunohistochemical analysis of AT<sub>1</sub> receptor versus P450c17 and 3  $\beta$  HSD expression in ovine adrenals. Endocr. Res. 22: 349-353.
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