

**Biotin-labeled Antibody to Angiotensin II receptor (AT-1AR), affinity-purified
RABBIT POLYCLONAL**

Catalog Number: BT-N25AP
Quantity: 50 micrograms
Format: PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4).
Host: Rabbit
Immunogen: Synthetic peptide corresponding to a cytoplasmic region of the receptor conjugated to keyhole limpet hemocyanin (KLH)

Background:

The Angiotensin II type 1 receptor (AT-1R) is the primary effector of Angiotensin II, a key regulator of blood pressure and fluid homeostasis. It is involved in pathogenesis of several cardiovascular diseases such as hypertension, cardiac hypertrophy and congestive heart failure. Angiotensin II interacts with two types of G-protein coupled membrane receptors, AT-1R (type 1) and AT-2R (type 2). AT-1 has three isoforms in rat: AT-1A (359 aa), AT-1B (359 aa), and AT-1C (177 aa). Rat AT-1R's are predicted to contain seven transmembrane domains. The N-terminus is predicted to be extracellular, while the C-terminus is predicted to be cytoplasmic. AT-1R's are expressed in the liver, kidney, aorta, lung, uterus, ovary, spleen, heart, adrenal and vascular smooth muscle.

Specificity and Preparation:

This antibody recognizes the AT-1A isoform of the Angiotensin II type 1 receptor in rat, and does not recognize isoform AT-1B or AT-2. The antisera was generated in rabbits by immunization with a synthetic peptide corresponding to a cytoplasmic region of the receptor conjugated to keyhole limpet hemocyanin (KLH). Antisera was then affinity-purified by sequential passage through two affinity columns cross-linked with the carboxy terminal sequences of the rat AT-1A and AT-1B receptors. The antisera was retained by the first, but not the second column indicating recognition of the AT-1A receptor. Adsorption of the sera was also conducted by addition of AT-1A peptide (100µg/ml) to a 1:600 dilution of the antisera. It has been conjugated to biotin via an amide bond.

Usage and Storage:

Applications include immunolabeling (1:500).^{1,2} Store the antibody at -20°C for one year. Avoid repeated freezing and thawing. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

References:

1. Premer C, Lamondin C, Mitzey A, Speth RC, Brownfield MS. (2013) Immunohistochemical Localization of AT1a, AT1b, and AT2 Angiotensin II Receptor Subtypes in the Rat Adrenal, Pituitary, and Brain with a Perspective Commentary. *Int J Hypertens* 2013:175428.
2. Huang J, Hara Y, Anrather J, Speth RC, Iadecola C, Pickel VM (2003) Angiotensin II subtype 1A (AT1A) receptors in the rat sensory vagal complex: Subcellular localization and association with endogenous angiotensin. *Neuroscience* 122(1):21-36.
3. Speth RC, Grove KL, Brownfield MS (2001) Immunohistochemical localization of AT-1A and AT-1B angiotensin II receptor subtypes in the rat adrenal. *Endocrine Soc Mtg*, Denver CO, Abstract.

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