ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Angiotensin II Type 1 Receptor (AT1) Antibody

Cat. AT13-M **Mouse monoclonal** Anti-human Angiotensin II Type 1 IgG **SIZE**: 100 ul

Angiotensin II, interacts with two types of G-protein coupled membrane receptors, AT1 (type 1) and AT2 (type 2). However, major cardiovascular effects appear to be mediated through AT1. AT1 has three isoforms (rat AT1A 359 aa; AT1B/AT III, 359 aa; and AT1C, 177 aa). Rat AT1 receptors are predicted to contain seven transmembrane domains. The N-terminus is predicted to be extracellular, while C-terminus inside the membrane (cytoplasmic). The binding of angiotensin II with AT1 receptors activate a phosphatidylinositol-calcium second messenger system. AT1 receptors are expressed in the liver, kidney, aorta, lung, uterus, ovary, spleen, heart, adrenal and vascular smooth muscle. AT2 gene (chromosome x) encodes 363 aa protein. It is highly expressed in myometrium with lower levels in adrenal and fallopian tube. It is also expressed at high levels in fetal kidney and intestine.

AGTRA or Type-1A angiotensin II receptor ; Synonyms AT1; AT1A , Gene name Name: Agtr1 , Synonyms: Agtr1a, At1a

Source of Antigen and Antibodies

Antigen	Fusion protein: LNPL FYGFL GKKFK RYFL QLLKYI PPK AKSHSNL ST KMSTLSYR P SDNVSSSTK KPAPCF, corresponding to C terminal amino acids 297-356 of Human Angiotensin II Type 1 Receptor
Ab Host/type	Mouse monoclonal purified IgG1 (cat #AT13-M)
2-ab	**Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available) or anti-mouse IgG1-HRP**
-ve control	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer**: PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (5-10 ug/ml) using Chemiluminescence technique). The antibodies detected approx. 40-45 and 60-kDa band due to glycosylation differences. Recommend using non-reducing SDS-PAGE and do not use milk for blocking.

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: use 5-20 ug/ml

Specificity & Cross-reactivity

The antibody reacts with human, rat, and rabbit but not with dog AT1. Antibody cross-reactivity in various species has not been studied. Antibody detects both natural and recombinant receptor expressed in CHO cells and in rat smooth muscle cells.

General References: **(1)** Murphy Tj et al (1991) Nature 351, 233; Iwai N et al (1991) BBRC 177, 299; Langford K et al (1992) BBRC 183, 1025; Sasamura h et al (1992) BBRC 185, 253; Yoshida H et al (1992) BBRC 186, 1042; Mauzy CA et al (1992) BBRC 183, 8;

(2) Citations of ADI's Antibodies (see web site for updated list)

Stewart JA; 2006; J Mol Cell Cardiol, 41, 97-107; WB;
Hoffman A; 2004; J. Recept Signal Transduction, 23 1; WB; IHC
Javeshghani D; 2003; Hypertension, 42, 761-767; WB;
Nadal JA; 2002; Am. J. Physiol 282, H739-H748; WB,;
Javeshghani D; 2003; Hypertension, 42, 761-767; WB;
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Su J-Z; 2002; Hypertension : 40, 853-858; WB;
Javeshghani D; 2003; Hypertension, 42, 761-767; WB;
Hussain T; 1998; Hypertension 32: 1054-1059; WB,;
Rodriguez-Iturbe B; 2001; Kidney Intl. 59, 6, 2222; ; IHC,
Lee Jongun; 2002; Pharmacological Res. 46, 5, 383-387; WB;
Hakam AC; 2006; AJEP, 290: F503 - F508.; WB;

*This product is for in vitro research use only.

Related material available from ADI

AT13-M 110812A

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