

## Product datasheet for **TA328665**

### Angiotensin II Type 1 Receptor (AGTR1) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	FC, IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide NSSTEDGIKRIQDDC, corresponding to amino acid residues 4-18 of human AT1 receptor. Extracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN <sub>3</sub> .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	angiotensin II receptor type 1
Database Link:	<a href="#">NP_114438</a> <a href="#">Entrez Gene 185 Human</a> <a href="#">P30556</a>



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**Background:**

Angiotensin II receptor type 1 or AT1 receptor is one of the receptors that binds the octapeptide hormone Angiotensin II (Ang II). Ang II is the peptide hormone that generates most of the known effects of the renin-angiotensin system (RAS). Ang II is generated from the angiotensinogen protein by the actions of renin, angiotensin converting enzyme (ACE) and other peptidases. Ang II has a central role in cardiovascular homeostasis by regulating vasoconstriction, renal Na<sup>+</sup> and water reabsorption. In addition, Ang II induces cell growth and proliferation and has pro-inflammatory effects. Most of the physiological actions of Ang II are mediated by AT1 receptor a member of the 7-transmembrane domain, G protein-coupled receptor (GPCR) superfamily. The AT1 receptor is coupled to a Gq/11 protein that activates phospholipase C (PLC) and leads to production of inositol 1,4,5-trisphosphate (InsP3) and intracellular Ca<sup>2+</sup> mobilization. In addition to the rapid actions mediated by InsP3 and Ca<sup>2+</sup> signaling, AT1 receptor elicits other signaling responses including activation of the MAPK and Jak/STAT. Together, these signaling pathways mediate most of Ang II cellular responses that include, control of hormone secretion, regulation of cell growth and apoptosis, regulation of ion channels activation and cell migration. In accordance with the pleiotropic actions of Ang II, the AT1 receptor has a wide distribution with high levels detected in the adrenal gland, kidney, brain, heart, liver, etc. As is the case with many other peptide receptors, the AT1 receptor undergoes ligand-induced endocytosis, a process that contributes to receptor desensitization and sequestration and contributes to regulate receptor signaling.

**Synonyms:**

AG2S; AGTR1B; AT1; AT1AR; AT1B; AT1BR; AT1R; AT2R1; HAT1R

**Note:**

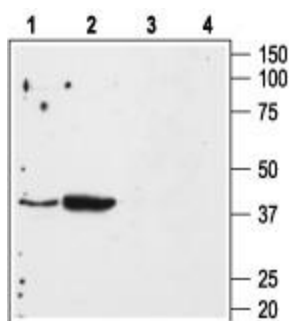
This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

**Protein Families:**

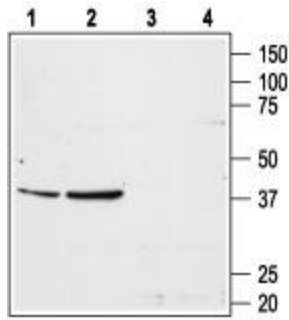
Druggable Genome, GPCR, Transmembrane

**Protein Pathways:**

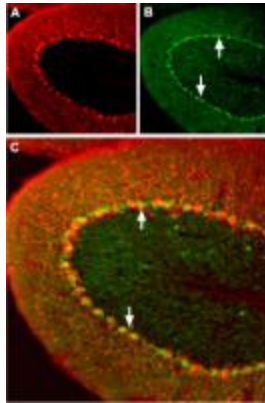
Calcium signaling pathway, Neuroactive ligand-receptor interaction, Renin-angiotensin system, Vascular smooth muscle contraction

**Product images:**

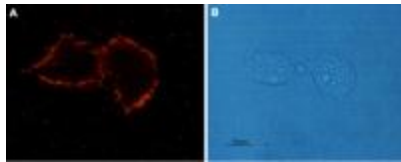
Western blot analysis of mouse kidney (lanes 1 and 3) and mouse heart (lanes 2 and 4) membranes: 1, 2. Anti-Angiotensin II Receptor Type-1 (extracellular) antibody, (1:500). 3, 4. Anti-Angiotensin II Receptor Type-1 (extracellular) antibody, preincubated with the control peptide antigen.



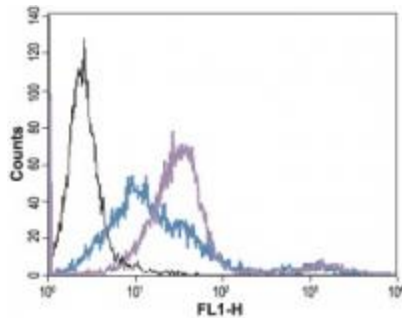
Western blot analysis of rat liver (lanes 1 and 3) and rat kidney (lanes 2 and 4) membranes: 1, 2. Anti-Angiotensin II Receptor Type-1 (extracellular) antibody, (1:200). 3, 4. Anti-Angiotensin II Receptor Type-1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Angiotensin II Receptor Type-1 in mouse cerebellum. Immunohistochemical staining of mouse cerebellum using Anti-Angiotensin II Receptor Type-1 (extracellular) antibody. A. Mouse anti-Parvalbumin (red) is detected in the Purkinje layer. B. In the same section, AT1 receptor (green) is also present in the Purkinje layer. Arrows point at AT1 receptor immunoreactive cells. Merge of A and B panels reveals partial co-localization.



Expression of Angiotensin II Receptor Type-1 in rat C6 glioma cells. Immunocytochemical staining of live intact rat C6 glioma cells. A. Cells were stained using Anti-Angiotensin II Receptor Type-1 (extracellular) antibody, (1:100), followed by goat anti-rabbit-AlexaFluor-555 secondary antibody. B. Live intact C6 cells.



Indirect flow cytometry analysis of live intact human Jurkat T-cell leukemia cells: black line, Unstained cells + goat-anti-rabbit-FITC. blue line, Cells + Anti-Angiotensin II Receptor Type-1 (extracellular) antibody, (5 ug) + goat-anti-rabbit-FITC. purple line, Cells + Anti-Angiotensin II Receptor Type-1 (extracellular) antibody, (10 ug) + goat-anti-rabbit-FITC.