Anti-Adenosine A1 Receptor Antibody [JE31-35] HA721393

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 36.5 kDa
Clone number:	JE31-35

Description: The adenosine A1 receptor is one member of the adenosine receptor group of G protein-coupled receptors with adenosine as endogenous ligand. A1 receptors are implicated in sleep promotion by inhibiting wake-promoting cholinergic neurons in the basal forebrain. A1 receptors are also present in smooth muscle throughout the vascular system. The adenosine A1 receptor has been found to be ubiquitous throughout the entire body. Activation of the adenosine A1 receptor by an agonist causes binding of Gi1/2/3 or Go protein. Binding of Gi1/2/3 causes an inhibition of adenylate cyclase and, therefore, a decrease in the cAMP concentration. An increase of the inositol triphosphate/diacylglycerol concentration is caused by an activation of phospholipase C, whereas the elevated levels of arachidonic acid are mediated by DAG lipase, which cleaves DAG to form arachidonic acid. Several types of potassium channels are activated but N-, P-, and Q-type calcium channels are inhibited. This receptor has an inhibitory function on most of the tissues in which it rests. In the brain, it slows metabolic activity by a combination of actions. At the neuron's synapse, it reduces synaptic vesicle release.

Immunogen: Recombinant protein within Human Adenosine A1 Receptor aa 103-201 / 326.

Subcellular location: Cell membrane.

Database links: SwissProt: P30542 Human | Q60612 Mouse | P25099 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

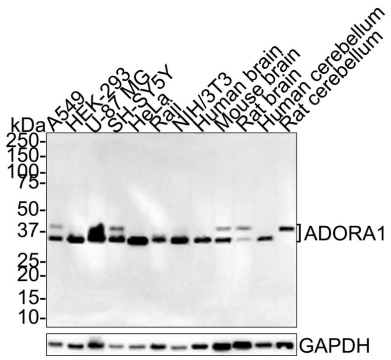

Fig1: Western blot analysis of Adenosine A1 Receptor on different lysates with Rabbit anti-Adenosine A1 Receptor antibody (HA721393) at 1/1,000 dilution.

Lane 1: A549 cell lysate (15 µg/Lane)
Lane 2: HEK-293 cell lysate (15 µg/Lane)
Lane 3: U-87 MG cell lysate (15 µg/Lane)
Lane 4: SH-SY5Y cell lysate (15 µg/Lane)
Lane 5: HeLa cell lysate (15 µg/Lane)
Lane 6: Raji cell lysate (15 µg/Lane)
Lane 7: NIH/3T3 cell lysate (15 µg/Lane)
Lane 8: Human brain tissue lysate (30 µg/Lane)
Lane 9: Mouse brain tissue lysate (30 µg/Lane)
Lane 10: Rat brain tissue lysate (30 µg/Lane)
Lane 11: Human cerebellum tissue lysate (30 µg/Lane)
Lane 12: Rat cerebellum tissue lysate (30 µg/Lane)

Predicted band size: 36.5 kDa
Observed band size: 36.5/40 kDa

Exposure time: 5 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721393) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

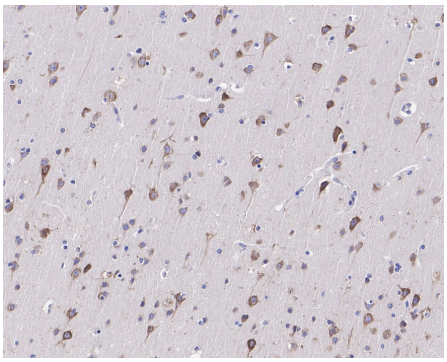

Fig2: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-Adenosine A1 Receptor antibody (HA721393) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721393) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

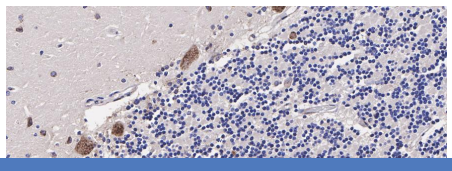

Fig3: Immunohistochemical analysis of paraffin-embedded human cerebellum tissue with Rabbit anti-Adenosine A1 Receptor antibody (HA721393) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval

polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

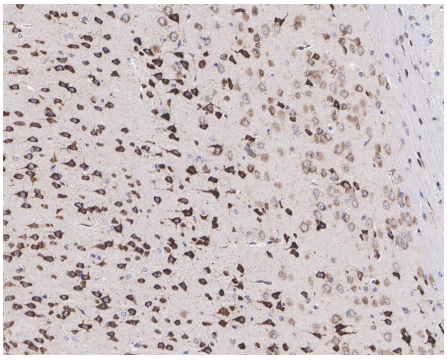

Fig4: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-Adenosine A1 Receptor antibody (HA721393) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721393) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

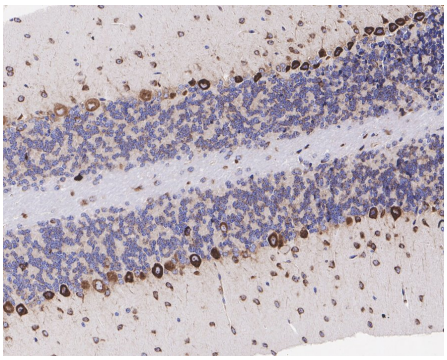

Fig5: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rabbit anti-Adenosine A1 Receptor antibody (HA721393) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721393) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

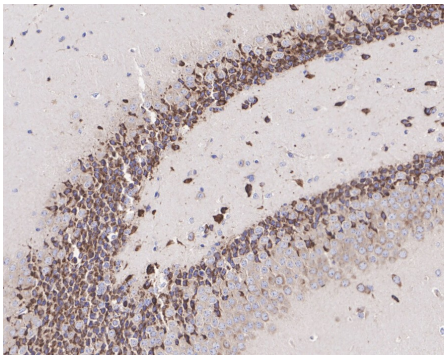

Fig6: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Rabbit anti-Adenosine A1 Receptor antibody (HA721393) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721393) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

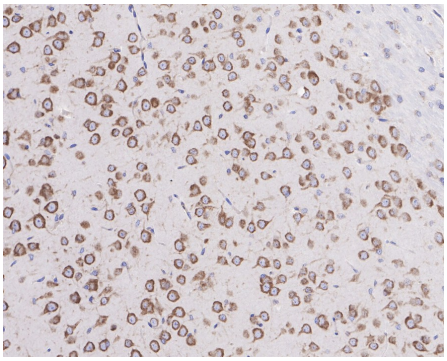

Fig7: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-Adenosine A1 Receptor antibody (HA721393) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721393) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

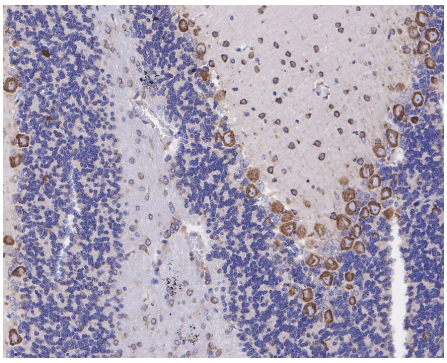

Fig8: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rabbit anti-Adenosine A1 Receptor antibody (HA721393) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721393) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Hao JW et al. A1 Adenosine Receptor Activation Inhibits P2X3 Receptor-Mediated ATP Currents in Rat Dorsal Root Ganglion Neurons. Mol Neurobiol. 2022 Nov
2. Jakova E et al. Adenosine A1 receptor ligands bind to α-synuclein: implications for α-synuclein misfolding and α-synucleinopathy in Parkinson's disease. Transl Neurodegener. 2022 Feb