Anti-GIRK2 Antibody [PSH05-91]

HA722478

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	WB, IHC-P, IP, IHC-Fr
Molecular Wt:	Predicted band size: 48 kDa
Clone number:	PSH05-91

Description: This potassium channel may be involved in the regulation of insulin secretion by glucose and/or neurotransmitters acting through G-protein-coupled receptors. Inward rectifier potassium channels are characterized by a greater tendency to allow potassium to flow into the cell rather than out of it. Their voltage dependence is regulated by the concentration of extracellular potassium; as external potassium is raised, the voltage range of the channel opening shifts to more positive voltages. The inward rectification is mainly due to the blockage of outward current by internal magnesium. This gene encodes a member of the G protein-coupled inwardly-rectifying potassium channel family of inward rectifier potassium channels. This type of potassium channel allows a greater flow of potassium into the cell than out of it. These proteins modulate many physiological processes, including heart rate in cardiac cells and circuit activity in neuronal cells, through G-protein coupled receptor stimulation. Mutations in this gene are associated with Keppen-Lubinsky Syndrome, a rare condition characterized by severe developmental delay, facial dysmorphism, and intellectual disability.

Immunogen: Recombinant protein.

Positive control: Mouse brain tissue lysate, mouse hippocampus tissue lysate, rat brain tissue lysate, rat hippocampus tissue lysate, human cerebellum tissue, mouse cerebellum tissue, rat cerebellum tissue, mouse brain tissue.

Subcellular location: Membrane.

Database links: SwissProt: P48051 Human | P48542 Mouse | P48550 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000
IP	1-2μg/sample
IHC-Fr	1:500

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

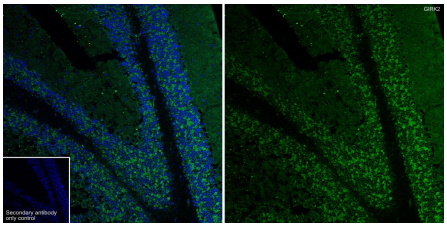

Fig1: Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1/500

Antigen retrieval: The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven.

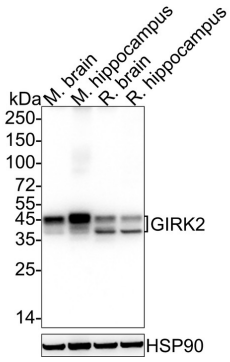

Fig2: Western blot analysis of GIRK2 on different lysates with Rabbit anti-GIRK2 antibody (HA722478) at 1/1,000 dilution.

Lane 1: Mouse brain tissue lysate (no heat)
Lane 2: Mouse hippocampus tissue lysate
Lane 3: Rat brain tissue lysate (no heat)
Lane 4: Rat hippocampus tissue lysate

Notice: no heat means the lysate is not boiled.

Lysates/proteins at 30 µg/Lane.

Predicted band size: 48 kDa
Observed band size: 35/48 kDa

Exposure time: 15 seconds; ECL: K1801;

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 (HA722478) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

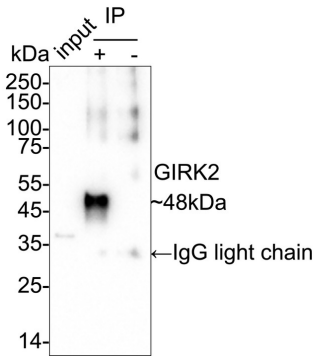

Fig3: GIRK2 was immunoprecipitated from 0.2 mg mouse brain tissue lysate with HA722478 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA722478 at 1/5,000 dilution. Anti-Rabbit IgG for IP, AlpSdAbs® VHH(HRP) (025-100-005) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: Mouse brain tissue lysate (input)
Lane 2: HA722478 IP in mouse brain tissue lysate
Lane 3: Rabbit IgG instead of HA722478 in mouse brain tissue lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 26 seconds; ECL: K1801

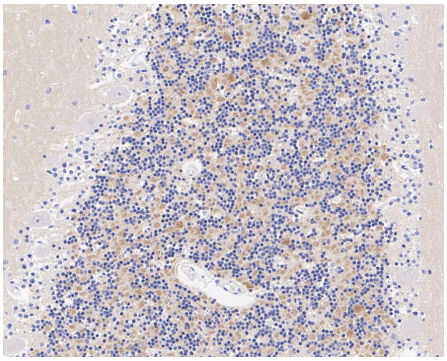

Fig4: Immunohistochemical analysis of paraffin-embedded human cerebellum tissue with Rabbit anti-GIRK2 antibody (HA722478) at 1/1,000 dilution.

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 (HA722478) 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.

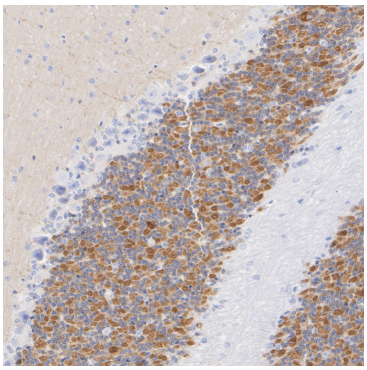

Fig5: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rabbit anti-GIRK2 antibody (HA722478) at 1/1,000 dilution.

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 (HA722478) 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.

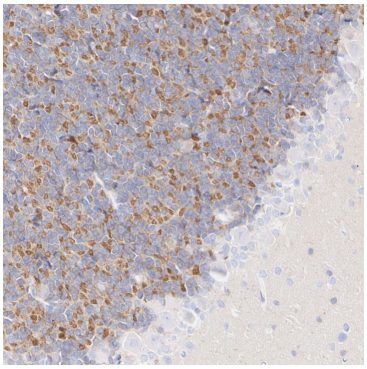

Fig6: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rabbit anti-GIRK2 antibody (HA722478) at 1/1,000 dilution.

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 (HA722478) 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.

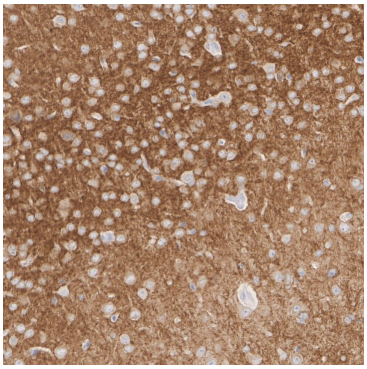

Fig7: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-GIRK2 antibody (HA722478) at 1/1,000 dilution.

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 (HA722478) 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.

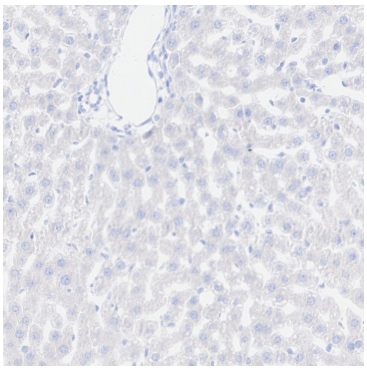

Fig8: Immunohistochemical analysis of paraffin-embedded rat liver tissue (negative) with Rabbit anti-GIRK2 antibody (HA722478) at 1/1,000 dilution.

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 (HA722478) 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.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Reyes S., Fu Y., Double K., Thompson L., Kirik D., Paxinos G., Halliday G.M. GIRK2 expression in dopamine neurons of the substantia nigra and ventral tegmental area. J Comp Neurol 520:2591-2607 (2012)
2. Cramer N.P., Best T.K., Stoffel M., Siarey R.J., Galdzicki Z. GABAB-GIRK2-mediated signaling in Down syndrome. Adv Pharmacol 58:397-426 (2010)