Anti-QKI Antibody [PSH10-21]

HA601377

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, IHC-Fr, IP, mIHC
Molecular Wt:	Predicted band size: 38 kDa
Clone number:	PSH10-21

Description: Quaking homolog, KH domain RNA binding (mouse), also known as QKI, is a protein which in humans is encoded by the QKI gene. QKI belongs to a family of RNA-binding proteins called STAR proteins for Signal Transduction and Activation of RNA. They have an HNRNPK homology (KH) domain embedded in a 200-amino acid region called the GSG domain. Other members of this family include SAM68 (KHDRBS1) and SF1. Two more new members are KHDRBS3 and KHDRBS2. The QKI gene is implicated as being important in schizophrenia, and QKI controls translation of many oligodendrocyte-related genes.

Immunogen: Recombinant protein within human QKI aa 1-341 / 341.

Positive control: HeLa cell lysate, Mouse brain tissue lysate, Mouse cerebellum tissue lysate, Rat cerebellum tissue lysate, HeLa, mouse cerebellum tissue, rat cerebellum tissue.

Subcellular location: Nucleus, Cytoplasm.

Database links: SwissProt: Q96PU8 Human | Q9QYS9 Mouse | Q91XU1 Rat

Recommended Dilutions:

WB	1:2,000
IF-Cell	1:100
IHC-P	1:200
IHC-Fr	1:500
IP	1-2μg/sample
mIHC	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

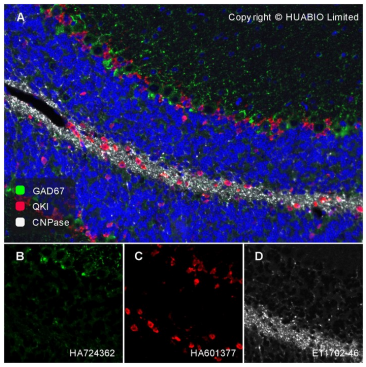


Fig1: mIHC analysis of mouse cerebellum tissue (paraffin-embedded) with QKI (HA601377, 1/500), GAD67 (HA724362, 1/1,000) and CNPase (ET1702-46, 1/2,000).

The immunostaining was performed with the IRISKitCmTSA Kit (900802). DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

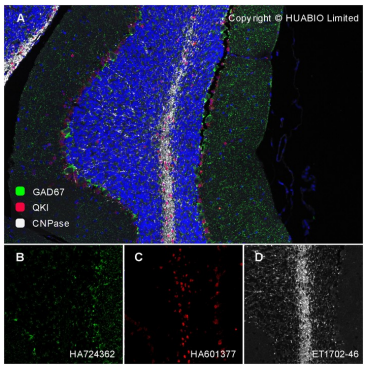


Fig2: mIHC analysis of rat cerebellum tissue (paraffin-embedded) with QKI (HA601377, 1/500), GAD67 (HA724362, 1/1,000) and CNPase (ET1702-46, 1/2,000).

The immunostaining was performed with the IRISKitCmTSA Kit (900802). DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

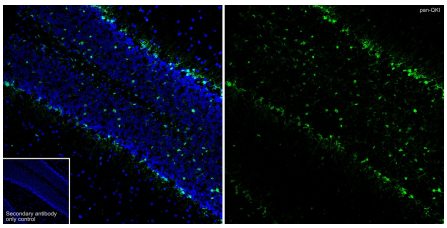


Fig3: Application: Immunofluorescence (IHC-Fr)

Species: Mouse
Tissue: Cerebellum
Sample: Frozen section

Antigen retrieval: Not required

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 0.5 % Triton X-100 + 0.3 M Glycine in TBST, 10 minutes at room temperature.
Primary antibody: QKI (HA601377, 1/500), overnight at 4℃.
Secondary antibody: Goat anti-Mouse IgG (iFluor™ 488, HA1125), 1.5 hours at room temperature.

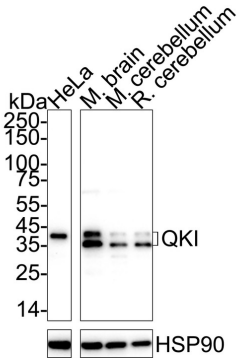


Fig4: Western blot analysis of QKI on different lysates with Mouse anti-QKI antibody (HA601377) at 1/2,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: Mouse brain tissue lysate
Lane 3: Mouse cerebellum tissue lysate
Lane 4: Rat cerebellum tissue lysate

Lysates/proteins at 30 µg/Lane.

Predicted band size: 38 kDa
Observed band size: 35-38 kDa

Exposure time: 3 minutes; 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 (HA601377) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

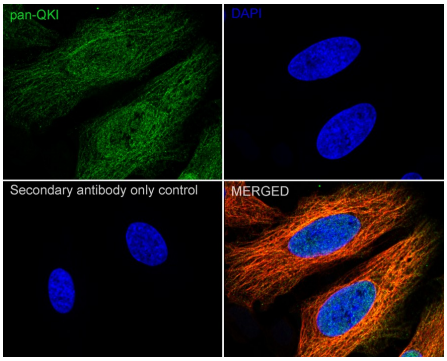


Fig5: Immunocytochemistry analysis of HeLa cells labeling QKI with Mouse anti-QKI antibody (HA601377) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-QKI antibody (HA601377) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

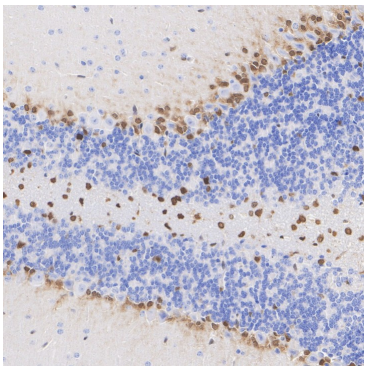


Fig6: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Mouse anti-QKI antibody (HA601377) at 1/200 dilution.

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 (HA601377) at 1/200 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.

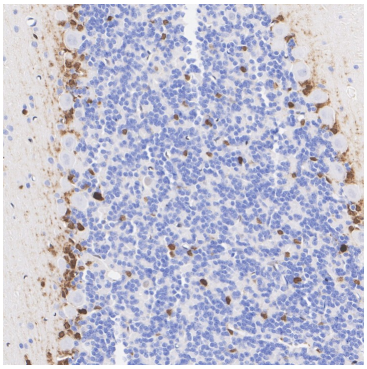


Fig7: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Mouse anti-QKI antibody (HA601377) at 1/200 dilution.

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 (HA601377) at 1/200 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.

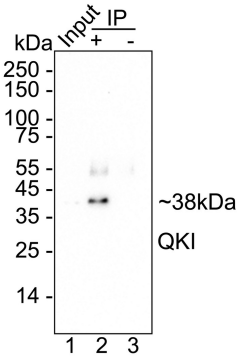


Fig8: QKI was immunoprecipitated from 0.2 mg HeLa cell lysate with HA601377 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA601377 at 1/1,000 dilution. Anti-Mouse IgG for IP, AlpSdAbs® VHH(HRP) (001-100-005) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: HeLa cell lysate (input)
Lane 2: HA601377 IP in HeLa cell lysate
Lane 3: Mouse IgG instead of HA601377 in HeLa cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 3 minutes; ECL: K1801

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

Background References

1. Zhao Z et al. QKI shuttles internal m(7)G-modified transcripts into stress granules and modulates mRNA metabolism. Cell. 2023 Jul
2. Suh YY et al. MYB/MYBL1::QKI fusion-positive diffuse glioma. J Neuropathol Exp Neurol. 2023 Feb