Anti-FXR1 Antibody [JE40-57]

HA721499

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell, FC, IP
Molecular Wt:	Predicted band size: 70 kDa
Clone number:	JE40-57

Description: Fragile X mental retardation syndrome-related protein 1 is a protein that in humans is encoded by the FXR1 gene. The protein encoded by this gene is an RNA binding protein that interacts with the functionally similar proteins FMR1 and FXR2. These proteins shuttle between the nucleus and cytoplasm and associate with polyribosomes, predominantly with the 60S ribosomal subunit. Three transcript variants encoding different isoforms have been found for this gene. FXR1 has been shown to interact with FXR2, FMR1 and CYFIP2.

Immunogen: Synthetic peptide within Human FXR1 aa 21-70 / 621.

Positive control: HEK-293 cell lysate, A549 cell lysate, K-562 cell lysate, Jurkat cell lysate, HepG2 cell lysate, HeLa cell lysate, C2C12 cell lysate, NIH/3T3 cell lysate, PC-12 cell lysate, human brain tissue, mouse brain tissue, rat brain tissue, HeLa.

Subcellular location: Cytoplasm, cytosol.

Database links: SwissProt: P51114 Human | Q61584 Mouse | Q5XI81 Rat

Recommended Dilutions:

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

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

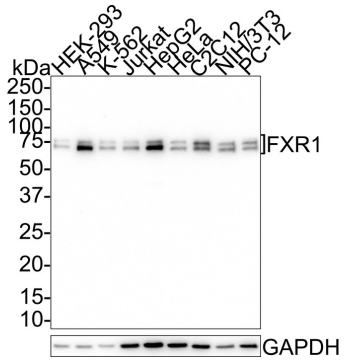

Fig1: Western blot analysis of FXR1 on different lysates with Rabbit anti-FXR1 antibody (HA721499) at 1/1,000 dilution.

Lane 1: HEK-293 cell lysate
Lane 2: A549 cell lysate
Lane 3: K-562 cell lysate
Lane 4: Jurkat cell lysate
Lane 5: HepG2 cell lysate
Lane 6: HeLa cell lysate
Lane 7: C2C12 cell lysate
Lane 8: NIH/3T3 cell lysate
Lane 9: PC-12 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 70 kDa
Observed band size: 70/75 kDa

Exposure time: 1 minute 55 seconds;

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 (HA721499) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

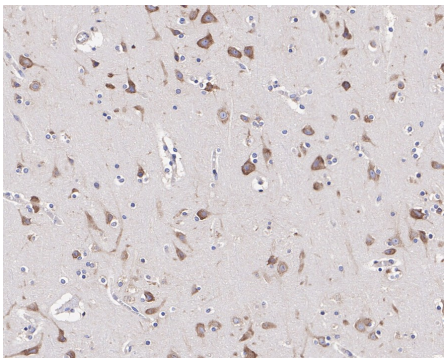

Fig2: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-FXR1 antibody (HA721499) at 1/1,000 dilution.

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 (HA721499) 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.

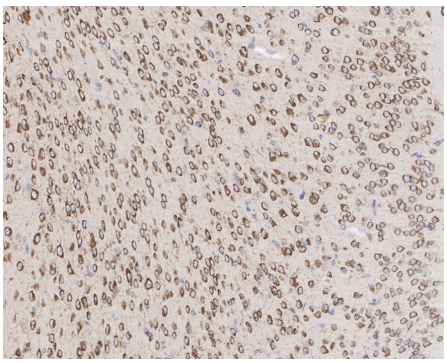

Fig3: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-FXR1 antibody (HA721499) at 1/1,000 dilution.

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 (HA721499) 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.

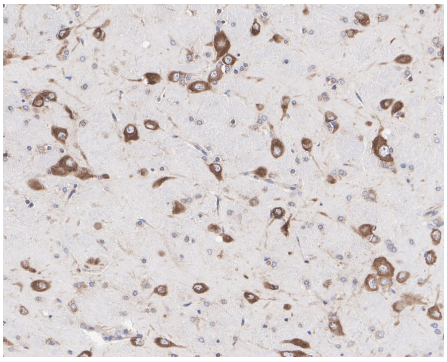

Fig4: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-FXR1 antibody (HA721499) at 1/1,000 dilution.

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 (HA721499) 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.

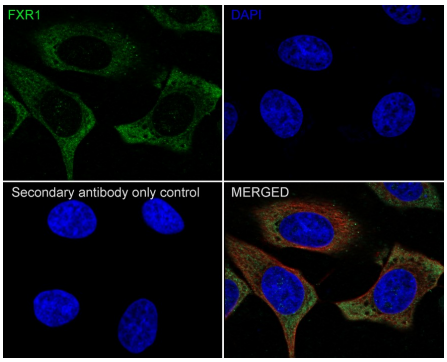

Fig5: Immunocytochemistry analysis of HeLa cells labeling FXR1 with Rabbit anti-FXR1 antibody (HA721499) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 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 Rabbit anti-FXR1 antibody (HA721499) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) 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 (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

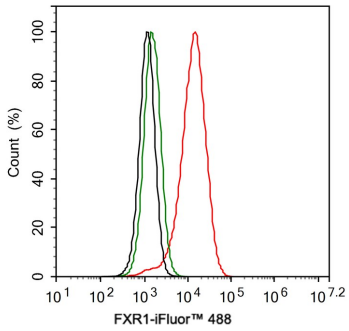

Fig6: Flow cytometric analysis of HeLa cells labeling FXR1.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA721499, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

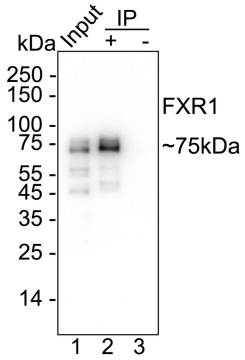

Fig7: FXR1 was immunoprecipitated from 0.2 mg HepG2 cell lysate with HA721499 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA721499 at 1/1,000 dilution. HRP Conjugated Anti-Rabbit IgG for IP Nano-secondary antibody at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: HepG2 cell lysate (input)
Lane 2: HA721499 IP in HepG2 cell lysate
Lane 3: Rabbit IgG instead of HA721499 in HepG2 cell lysate

Blocking/Dilution buffer: primary antibody dilution (K1803)
Exposure time: 2 seconds; ECL: K1801

Background References

1. Kang JY et al. LLPS of FXR1 drives spermiogenesis by activating translation of stored mRNAs. Science. 2022 Aug
2. Khlghatyan J et al. Fxr1 regulates sleep and synaptic homeostasis. EMBO J. 2020 Nov