Anti-SAP97 Antibody [JE39-74]

HA721502

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, FC
Molecular Wt:	Predicted band size: 100 kDa
Clone number:	JE39-74

Description: Discs large homolog 1 (DLG1), also known as synapse-associated protein 97 or SAP97, is a scaffold protein that in humans is encoded by the SAP97 gene. SAP97 is a mammalian MAGUK-family member protein that is similar to the Drosophila protein Dlg1 (the protein is alternatively referred to as hDlg1, and the human gene is DLG1). SAP97 is expressed throughout the body in epithelial cells. In the brain it is involved in the trafficking of ionotropic receptors from the endoplasmic reticulum to the plasma membrane, and may be involved in the trafficking AMPAR during synaptic plasticity. SAP97 is expressed throughout the body in epithelial cells, including the kidney and brain. There is some evidence that SAP97 regulates cell-to-cell adhesion during cell death, and may interact with HPV. In the brain, SAP97's function is involved in the trafficking of transmembrane receptors from the ER to the plasma membrane. SAP97's function has been investigated by reducing its expression by knockout or increasing its expression heterologously. Mice in which the SAP97 gene has been knocked out die perinatally, have a cleft palate, and deficiencies in renal function. Overexpression of SAP97 in mammalian neurons leads to increased synaptic strength.

Immunogen: Synthetic peptide within N terminal Human SAP97.

Positive control: MCF7 cell lysate, HepG2 cell lysate, U-87 MG cell lysate, SiHa cell lysate, NCI-H226 cell lysate, NIH/3T3 cell lysate, mouse liver tissue, rat cerebellum tissue, SiHa.

Subcellular location: Membrane, Basolateral cell membrane, Endoplasmic reticulum membrane, Postsynaptic density, Synapse, Cell membrane, sarcolemma, Apical cell membrane, Cell junction, Cytoplasm.

Database links: SwissProt: Q12959 Human | Q811D0 Mouse | Q62696 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:200
FC	1:500-1:1,000

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

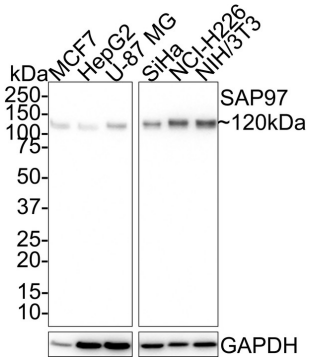

Fig1: Western blot analysis of SAP97 on different lysates with Rabbit anti-SAP97 antibody (HA721502) at 1/1,000 dilution.

Lane 1: MCF7 cell lysate
Lane 2: HepG2 cell lysate
Lane 3: U-87 MG cell lysate
Lane 4: SiHa cell lysate
Lane 5: NCI-H226 cell lysate
Lane 6: NIH/3T3 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 100 kDa
Observed band size: 120 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 (HA721502) 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.

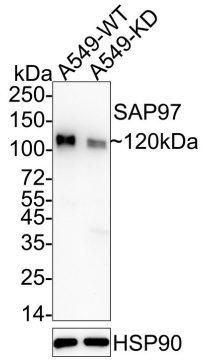

Fig2: Western blot analysis of SAP97 on different lysates with Rabbit anti-SAP97 antibody (HA721502) at 1/2,000 dilution.

Lane 1: A549-WT cell lysate
Lane 2: A549-KD SAP97 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 100 kDa
Observed band size: 120 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 (HA721502) at 1/2,000 dilution was used in 2% 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.

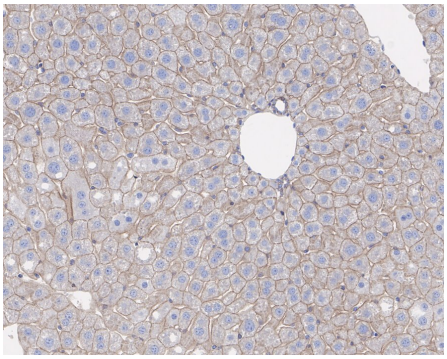

Fig3: Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rabbit anti-SAP97 antibody (HA721502) at 1/200 dilution.

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 (HA721502) 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.

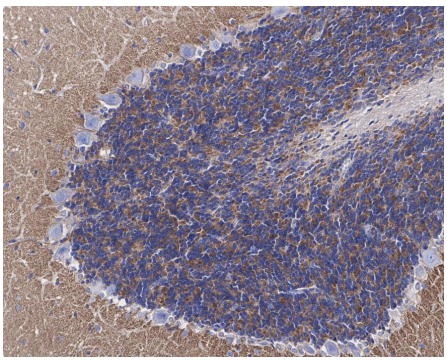

Fig4: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rabbit anti-SAP97 antibody (HA721502) at 1/200 dilution.

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 (HA721502) 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.

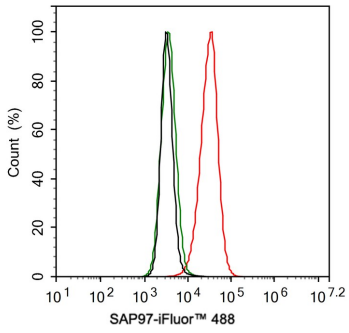

Fig5: Flow cytometric analysis of SiHa cells labeling SAP97.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA721502, 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).

Background References

1. Bahouth SW et al. Involvement of SAP97 anchored multiprotein complexes in regulating cardiorenal signaling and trafficking networks. Biochem Pharmacol. 2023 Feb
2. Xu X et al. SAP97 polymorphisms associated with early onset Parkinson's disease. Neurosci Lett. 2020 May