Anti-Mucolipin-1 Antibody [PSH09-01]

HA723054

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 65 kDa
Clone number:	PSH09-01

Description: Mucolipin-1 (ML1) also known as TRPML1 (transient receptor potential cation channel, mucolipin subfamily, member 1) is a protein that in humans is encoded by the MCOLN1 gene. It is a member of the small family of the TRPML channels, a subgroup of the large protein family of TRP ion channels. TRPML1 is a 65 kDa protein associated with mucolipidosis type IV. Its predicted structure includes six transmembrane domains, a transient receptor potential (TRP) cation-channel domain, and an internal channel pore. TRPML1 is believed to channel iron ions across the endosome/lysosome membrane into the cell and so its malfunction causes cellular iron deficiency. It is important in lysosome function and plays a part in processes such as vesicular trafficking, exocytosis and autophagy.

Immunogen: Recombinant protein within human Mucolipin-1 aa 66-321.

Positive control: SK-MEL-28 cell lysate, NCI-H226 cell lysate, TT cell lysate, Mouse brain tissue lysate, Rat brain tissue lysate, human brain tissue, mouse brain tissue, rat brain tissue.

Subcellular location: Late endosome membrane, Lysosome membrane, Cytoplasmic vesicle membrane, Cell projection, phagocytic cup, Cytoplasmic vesicle, phagosome membrane, Cell membrane.

Database links: SwissProt: Q9GZU1 Human | Q99J21 Mouse

Recommended Dilutions:

WB	1:2,000
IHC-P	1:1,000

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

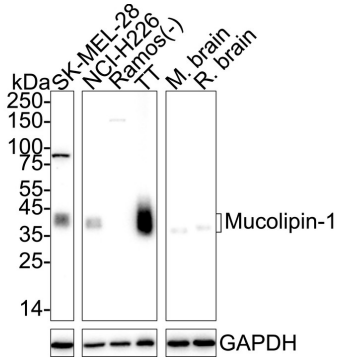


Fig1: Western blot analysis of Mucolipin-1 on different lysates with Rabbit anti-Mucolipin-1 antibody (HA723054) at 1/2,000 dilution.

Lane 1: SK-MEL-28 cell lysate
Lane 2: NCI-H226 cell lysate
Lane 3: Ramos cell lysate (negative)
Lane 4: TT cell lysate
Lane 5: Mouse brain tissue lysate
Lane 6: Rat brain tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 65 kDa
Observed band size: 35-40 kDa (PMID: 16257972)

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 (HA723054) at 1/2,000 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.

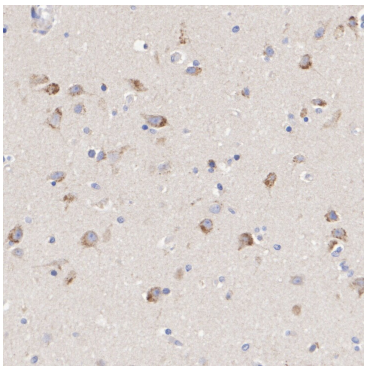


Fig2: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-Mucolipin-1 antibody (HA723054) at 1/1,000 dilution.

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 (HA723054) 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.

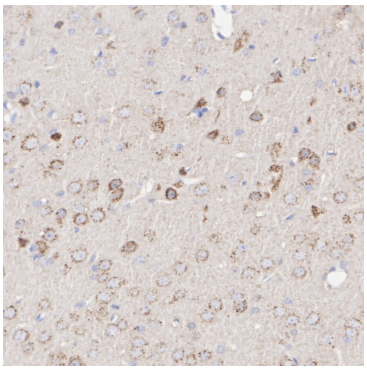


Fig3: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-Mucolipin-1 antibody (HA723054) at 1/1,000 dilution.

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 (HA723054) 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.

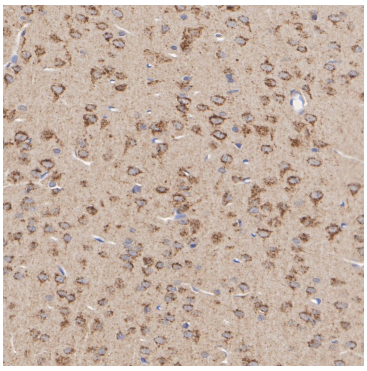


Fig4: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-Mucolipin-1 antibody (HA723054) at 1/1,000 dilution.

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 (HA723054) 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. Di Paola S, Scotto-Rosato A, Medina DL (January 2018). "TRPML1: The Ca(2+)retaker of the lysosome". Cell Calcium. 69: 112–121. doi:10.1016/j.ceca.2017.06.006. PMID 28689729.
2. Schmiege P, Fine M, Blobel G, Li X (October 2017). "Human TRPML1 channel structures in open and closed conformations". Nature. 550 (7676): 366–370. Bibcode:2017Natur.550..366S. doi:10.1038/nature24036. PMC 5920536. PMID 29019983.