Anti-Dynamin 1 Antibody [A1B1]

EM1901-43

Product Type:	Mouse monoclonal IgM, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IHC-P, WB, IF-Cell
Molecular Wt:	Predicted band size: 97 kDa
Clone number:	A1B1

Description: This gene encodes a member of the dynamin subfamily of GTP-binding proteins. The encoded protein possesses unique mechanochemical properties used to tubulate and sever membranes, and is involved in clathrin-mediated endocytosis and other vesicular trafficking processes. Actin and other cytoskeletal proteins act as binding partners for the encoded protein, which can also self-assemble leading to stimulation of GTPase activity. More than sixty highly conserved copies of the 3' region of this gene are found elsewhere in the genome, particularly on chromosomes Y and 15. Alternatively spliced transcript variants encoding different isoforms have been described.

Immunogen: Recombinant protein within human Dynamin 1 aa 500-800.

Positive control: Rat brain tissue, mouse brain, SiHa, mouse brain tissue lysate, rat brain tissue lysate.

Subcellular location: Cytoskeleton, cytoplasm.

Database links: SwissProt: Q05193 Human | P39053 Mouse | P21575 Rat

Recommended Dilutions:

IHC-P	1:1,000
WB	1:1,000
IF-Cell	1:50

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% 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

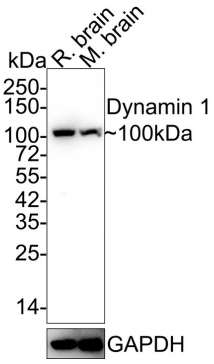

Fig1: Western blot analysis of Dynamin 1 on different lysates with Mouse anti-Dynamin 1 antibody (EM1901-43) at 1/1,000 dilution.

Lane 1: Rat brain tissue lysate
Lane 2: Mouse brain tissue lysate

Lysates/proteins at 40 µg/Lane.

Predicted band size: 97 kDa
Observed band size: 100 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 (EM1901-43) at 1/1,000 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.

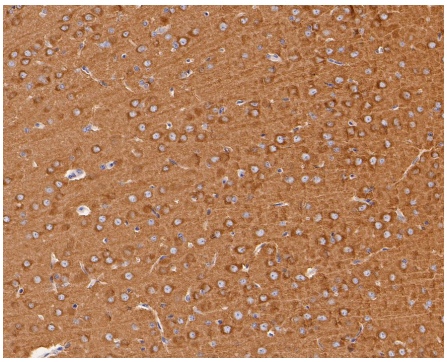

Fig2: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Mouse anti-Dynamin 1 antibody (EM1901-43) at 1/1,000 dilution.

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 (EM1901-43) 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.

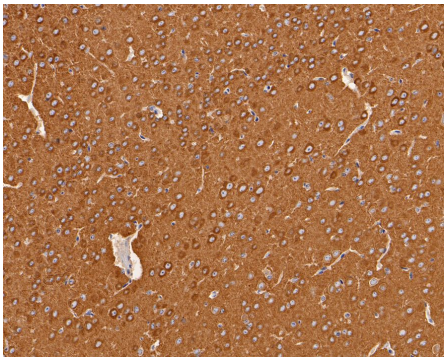

Fig3: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Mouse anti-Dynamin 1 antibody (EM1901-43) at 1/1,000 dilution.

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 (EM1901-43) 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.

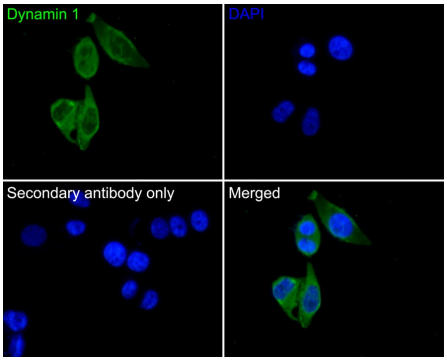

Fig4: Immunocytochemistry analysis of SiHa cells labeling Dynamin 1 with Mouse anti-Dynamin 1 antibody (EM1901-43) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes, and then blocked with 2% BSA for 30 minutes at room temperature. Cells were then incubated with Mouse anti-Dynamin 1 antibody (EM1901-43) at 1/50 dilution in 2% BSA 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.

Background References

1. von Spiczak S. et. al. DNM1 encephalopathy: A new disease of vesicle fission. Neurology. 2017 Jul 25;89(4):385-394.
2. Lee MW. et. al. Molecular Motor Dnm1 Synergistically Induces Membrane Curvature To Facilitate Mitochondrial Fission. ACS Cent Sci. 2017 Nov 22;3(11):1156-1167.