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Anti-BIN1 (MOUSE) Monoclonal Antibody
BIN1 Antibody
Catalog # ASR4209

Specification

Anti-BIN1 (MOUSE) Monoclonal Antibody - Product Information

Host	**Mouse**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human, Mouse**
Clonality	**Monoclonal**
Application	**WB, E, IP, I, LCI**
Application Note	**Anti-BIN1 antibody has been tested for use in ELISA, Western Blot, IP, and IF. Specific conditions for reactivity should be optimized by the end user.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Anti-BIN1 (MOUSE) Monoclonal Antibody was produced in mouse by repeated immunizations with BIN1 polypeptide followed by hybridoma development.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-BIN1 (MOUSE) Monoclonal Antibody - Additional Information

Gene ID 274

Other Names
274

Purity
Anti-BIN1 was purified from concentrated tissue culture supernate by Protein G chromatography followed by extensive dialysis against the buffer stated above. BIN1 antibody is specific for human BIN1 protein. A BLAST analysis was used to suggest cross-reactivity with BIN1 from human and mouse sources based on 100% homology with the immunizing sequence. Cross-reactivity with BIN1 from other sources has not been determined.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-BIN1 (MOUSE) Monoclonal Antibody - Protein Information

Name BIN1

Synonyms AMPHL

Function
Is a key player in the control of plasma membrane curvature, membrane shaping and membrane remodeling. Required in muscle cells for the formation of T-tubules, tubular invaginations of the plasma membrane that function in depolarization-contraction coupling (PubMed:24755653). Is a negative regulator of endocytosis (By similarity). Is also involved in the regulation of intracellular vesicles sorting, modulation of BACE1 trafficking and the control of amyloid-beta production (PubMed:27179792). In neuronal circuits, endocytosis regulation may influence the internalization of PHF-tau aggregates (By similarity). May be involved in the regulation of MYC activity and the control cell proliferation (PubMed:8782822). Has actin bundling activity and stabilizes actin filaments against depolymerization in vitro (PubMed:28893863).

Cellular Location
[Isoform BIN1]: Nucleus. Cytoplasm Endosome {ECO:0000250|UniProtKB:O08539}. Cell membrane, sarcolemma, T- tubule {ECO:0000250|UniProtKB:O08839}

Tissue Location
Ubiquitous. Highest expression in the brain and muscle (PubMed:9182667). Expressed in oligodendrocytes (PubMed:27488240). Isoform IIA is expressed only in the brain, where it is detected in the gray matter, but not in the white matter (PubMed:27488240). Isoform BIN1 is widely expressed with highest expression in skeletal muscle.

Anti-BIN1 (MOUSE) Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-BIN1 (MOUSE) Monoclonal Antibody - Images

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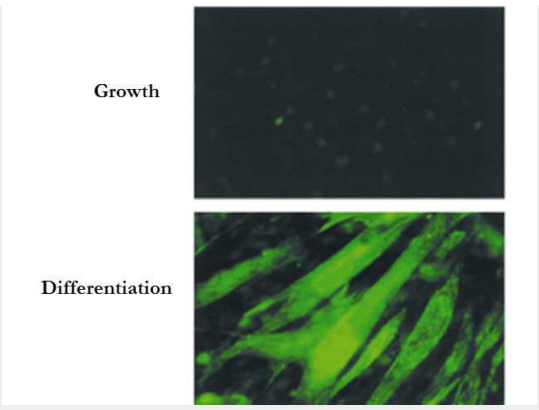

Immunofluorescence Microscopy of Mouse Anti-BIN1 Antibody. Cells: C2C12 cells during growth or differentiation. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: BIN-1 (Exon 10 specific, 99F) monoclonal antibody. Secondary antibody: mouse secondary antibody at 1:10,000 for 45 min at RT. Localization: BIN1 is nuclear and cytoplasmic. Staining: BIN 1 as green fluorescent signal.

Anti-BIN1 (MOUSE) Monoclonal Antibody - Background

Bin1 is a conserved member of the BAR family of genes that have been implicated in diverse cellular processes including endocytosis, actin organization, programmed cell death, stress responses, and transcriptional control. The first mammalian BAR protein to be discovered, Amphiphysin I (AmphI), was identified in an immunoscreen for proteins associated with the plasma membranes of synaptic neurons, functions in the control of clathrin-dependent synaptic vesicle endocytosis. The mammalian Bin1 gene was first identified in a two hybrid screen for polypeptides that bind to the N-terminal Myc box 1 (MB1) portion of the c-Myc oncoprotein. Bin1 is similar to AmphI in overall structure, with an N-terminal BAR domain and a C-terminal SH3 domain. However, the Bin1 gene is more complex than the AmphI gene, encoding at least seven different splice variants that differ widely in subcellular localization, tissue distribution, and ascribed functions. Alternate splicing of the Bin1 gene results in ten transcript variants encoding different isoform. Bin1 is expressed ubiquitously in mammalian cells. Certain splice variants of Bin1 are expressed in the neurons, muscle cells or tumor cells and play a role in cancer suppression. Studies in muscle cells suggest that Bin1 expression, structure, and localization are tightly regulated during muscle differentiation and suggested that Bin1 plays a functional role in the differentiation process. Defects in BIN1 are the cause of centronuclear myopathy autosomal recessive; also known as autosomal recessive myotubular myopathy.