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ANK2 / Ankyrin B Antibody
Mouse Monoclonal Antibody
Catalog # ALS15330

Specification

ANK2 / Ankyrin B Antibody - Product Information

Application	**WB, IHC**
Primary Accession	Q01484
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**434kDa KDa**

ANK2 / Ankyrin B Antibody - Additional Information

Gene ID 287

Other Names
Ankyrin-2, ANK-2, Ankyrin-B, Brain ankyrin, Non-erythroid ankyrin, ANK2

Target/Specificity
Detects ~>200kDa. No crossreactivityagainst Ankyrin-G.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
ANK2 / Ankyrin B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ANK2 / Ankyrin B Antibody - Protein Information

Name ANK2

Synonyms ANKB {ECO:0000303|PubMed:27718357}

Function
Plays an essential role in the localization and membrane stabilization of ion transporters and ion channels in several cell types, including cardiomyocytes, as well as in striated muscle cells. In skeletal muscle, required for proper localization of DMD and DCTN4 and for the formation and/or stability of a special subset of microtubules associated with costameres and neuromuscular junctions. In cardiomyocytes, required for coordinate assembly of Na/Ca exchanger, SLC8A1/NCX1, Na/K ATPases ATP1A1 and ATP1A2 and inositol 1,4,5- trisphosphate (InsP3) receptors at sarcoplasmic reticulum/sarcolemma sites. Required for expression and targeting of SPTBN1 in neonatal cardiomyocytes and for the regulation of neonatal cardiomyocyte contraction rate (PubMed:12571597). In the inner segment of rod photoreceptors, required for the coordinated expression of the Na/K ATPase, Na/Ca exchanger and beta-2-spectrin (SPTBN1) (By similarity). Plays a role in endocytosis

and intracellular protein transport. Associates with phosphatidylinositol 3-phosphate (PI3P)-positive organelles and binds dynactin to promote long-range motility of cells. Recruits RABGAP1L to (PI3P)-positive early endosomes, where RABGAP1L inactivates RAB22A, and promotes polarized trafficking to the leading edge of the migrating cells. Part of the ANK2/RABGAP1L complex which is required for the polarized recycling of fibronectin receptor ITGA5 ITGB1 to the plasma membrane that enables continuous directional cell migration (By similarity).

Cellular Location

Cytoplasm, cytoskeleton. Membrane Cytoplasm, myofibril, sarcomere, M line {ECO:0000250|UniProtKB:Q8C8R3} Apical cell membrane {ECO:0000250|UniProtKB:Q8C8R3}. Cell membrane. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q8C8R3}. Early endosome {ECO:0000250|UniProtKB:Q8C8R3}. Recycling endosome {ECO:0000250|UniProtKB:Q8C8R3}. Lysosome {ECO:0000250|UniProtKB:Q8C8R3}. Mitochondrion {ECO:0000250|UniProtKB:Q8C8R3}. Cytoplasm, myofibril, sarcomere, Z line {ECO:0000250|UniProtKB:Q8C8R3}. Cell membrane, sarcolemma, T-tubule {ECO:0000250|UniProtKB:Q8C8R3}. Note=Expressed at the apical membrane of airway lung epithelial cells (By similarity). Localized to the plasma membrane of the inner segments of photoreceptors in retina Colocalizes with SPTBN1 in a distinct intracellular compartment of neonatal cardiomyocytes (PubMed:19007774). In skeletal muscle, localizes to neuromuscular junctions (By similarity). Localizes with puncta at mitochondria ends. Colocalizes and cotransports on motile vesicles with RABGAP1L (By similarity). {ECO:0000250|UniProtKB:Q8C8R3, ECO:0000269|PubMed:19007774}

Tissue Location

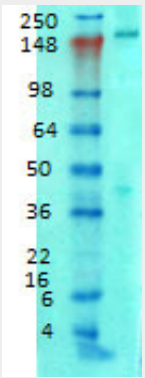
Present in plasma membrane of neurons as well as glial cells throughout the brain. Expressed in fetal brain and in temporal cortex of adult brain. Also expressed in the inner segments of rod photoreceptors in retina.

ANK2 / Ankyrin B 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

ANK2 / Ankyrin B Antibody - Images



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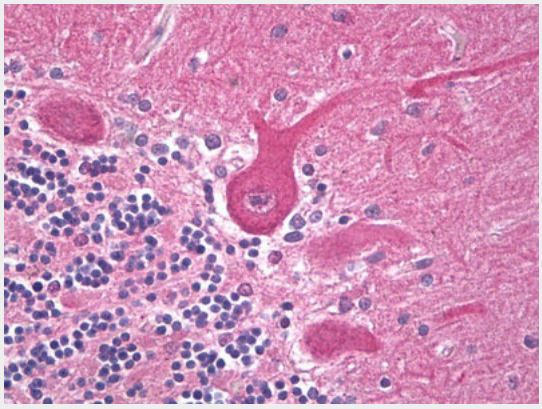
Western blot analysis of Ankyrin-B in rat brain membrane tissues, using a 1:1000 dilution of...



Anti-ANK2 / Ankyrin B antibody IHC of human brain, cerebellum, Purkinje.

ANK2 / Ankyrin B Antibody - Background

In skeletal muscle, required for proper localization of DMD and DCTN4 and for the formation and/or stability of a special subset of microtubules associated with costameres and neuromuscular junctions (By similarity). Attaches integral membrane proteins to cytoskeletal elements. Also binds to cytoskeletal proteins. Required for coordinate assembly of Na/Ca exchanger, Na/K ATPase and InsP3 receptor at sarcoplasmic reticulum sites in cardiomyocytes. Required for the coordinated expression of the Na/K ATPase, Na/Ca exchanger and beta-2-spectrin (SPTBN1) in the inner segment of rod photoreceptors. Required for expression and targeting of SPTBN1 in neonatal cardiomyocytes and for the regulation of neonatal cardiomyocyte contraction rate.

ANK2 / Ankyrin B Antibody - References

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Carpenter S.,et al.Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
Chan W.,et al.J. Cell Biol. 123:1463-1473(1993).
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