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EPB49 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP16598c

Specification

EPB49 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q08495

EPB49 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 2039

Other Names
Dematin, Dematin actin-binding protein, Erythrocyte membrane protein band 49, DMTN, DMT, EPB49

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

EPB49 Antibody (Center) Blocking Peptide - Protein Information

Name DMTN

Synonyms DMT, EPB49

Function
Membrane-cytoskeleton-associated protein with F-actin-binding activity that induces F-actin bundles formation and stabilization. Its F-actin-bundling activity is reversibly regulated upon its phosphorylation by the cAMP-dependent protein kinase A (PKA). Binds to the erythrocyte membrane glucose transporter-1 SLC2A1/GLUT1, and hence stabilizes and attaches the spectrin-actin network to the erythrocytic plasma membrane. Plays a role in maintaining the functional integrity of PKA-activated erythrocyte shape and the membrane mechanical properties. Also plays a role as a modulator of actin dynamics in fibroblasts; acts as a negative regulator of the RhoA activation pathway. In platelets, functions as a regulator of internal calcium mobilization across the dense tubular system that affects platelet granule secretion pathways and aggregation. Also required for the formation of a diverse set of cell protrusions, such as filopodia and lamellipodia, necessary for platelet cell spreading, motility and migration. Acts as a tumor suppressor and inhibits malignant cell transformation.

Cellular Location
Cytoplasm. Cytoplasm, cytosol. Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton. Cell

membrane. Membrane. Endomembrane system. Cell projection. Note=Localized at the spectrin-actin junction of erythrocyte plasma membrane. Localized to intracellular membranes and the cytoskeletal network. Localized at intracellular membrane-bounded organelle compartment in platelets that likely represent the dense tubular network membrane. Detected at the cell membrane and at the parasitophorous vacuole in malaria-infected erythrocytes at late stages of plasmodium berghei or falciparum development

Tissue Location
Expressed in platelets (at protein level). Expressed in heart, brain, lung, skeletal muscle, and kidney

EPB49 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

EPB49 Antibody (Center) Blocking Peptide - Images

EPB49 Antibody (Center) Blocking Peptide - Background

Dematin, or EPB49, is an actin-bundling protein originallyidentified in the erythroid membrane skeleton. Its actin-bundlingactivity is abolished upon phosphorylation by cAMP-dependentprotein kinase and is restored after dephosphorylation (Rana etal., 1993 [PubMed 8341682]).

EPB49 Antibody (Center) Blocking Peptide - References

Vugmeyster, L., et al. J. Biomol. NMR 47(2):155-162(2010)Chen, L., et al. Protein Sci. 18(3):629-636(2009)Vugmeyster, L., et al. J. Biomol. NMR 43(1):39-50(2009)Vermeulen, W., et al. J. Mol. Biol. 359(5):1277-1292(2006)Frank, B.S., et al. J. Biol. Chem. 279(9):7909-7916(2004)