

**EPB49 Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP16598c****Specification**

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**EPB49 Antibody (Center) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q08495</a>
Other Accession	<a href="#">Q9WV69</a> , <a href="#">Q08DM1</a> , <a href="#">NP_001107609.1</a> , <a href="#">NP_001107608.1</a>
Reactivity	Human
Predicted	Bovine, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	45514
Antigen Region	249-277

**EPB49 Antibody (Center) - Additional Information****Gene ID** 2039**Other Names**

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

**Target/Specificity**

This EPB49 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 249-277 amino acids from the Central region of human EPB49.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

EPB49 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**EPB49 Antibody (Center) - 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**

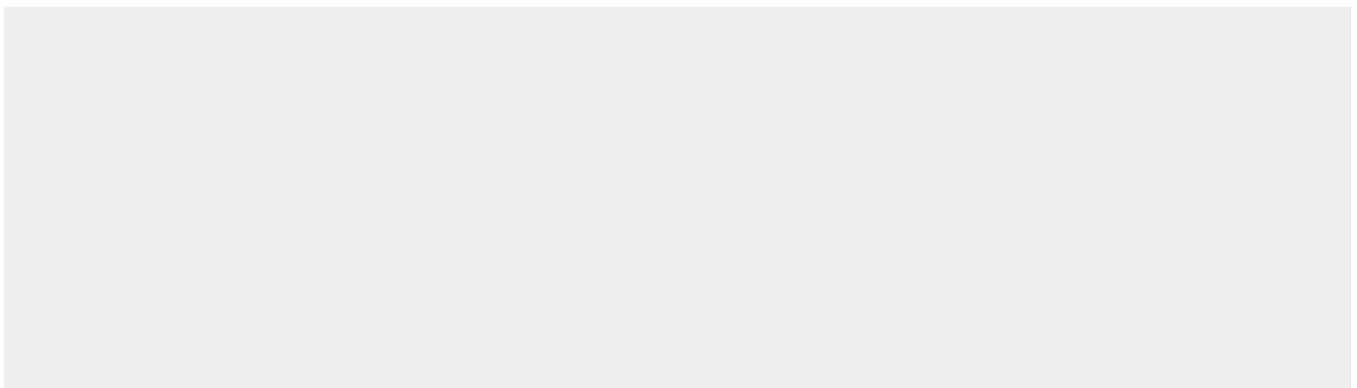
Expressed in platelets (at protein level). Expressed in heart, brain, lung, skeletal muscle, and kidney

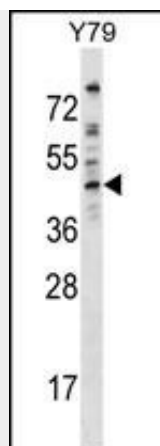
**EPB49 Antibody (Center) - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**EPB49 Antibody (Center) - Images**





EPB49 Antibody (Center) (Cat. #AP16598c) western blot analysis in Y79 cell line lysates (35ug/lane). This demonstrates the EPB49 antibody detected the EPB49 protein (arrow).

#### **EPB49 Antibody (Center) - Background**

Dematin, or EPB49, is an actin-bundling protein originally identified in the erythroid membrane skeleton. Its actin-bundling activity is abolished upon phosphorylation by cAMP-dependent protein kinase and is restored after dephosphorylation (Rana et al., 1993 [PubMed 8341682]).

#### **EPB49 Antibody (Center) - References**

Vugmeyster, L., et al. J. Biomol. NMR 47(2):155-162(2010)  
Chen, L., et al. Protein Sci. 18(3):629-636(2009)  
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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)