

Rabbit Anti-phospho-Dematin (Ser403)antibody

SL14266R

Product Name	phospho-Dematin (Ser403)
Chinese Name	磷酸化红 The cell membrane 带 4.9 蛋白抗体
Alias	Dematin (phospho S403); P-Dematin (phospho S403); DEMA; DEMA_HUMAN; Dematin; DMT; EPB49; erythrocyte membrane protein band 4.9 (dematin); Erythrocyte membrane protein band 4.9.
Product Type	Phosphorylated anti
Research Area	Cell biology Signal transduction Binding protein Cytoskeleton
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Mouse(predicted:Human,Rat,Pig,Cow,Sheep) WB=1:500-2000 (Paraffin sections need antigen repair)
Applications	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	45kDa
Cellular localization	cytoplasmic The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated Synthesised phosphopeptide derived from human Dematin around the phosphorylation site of Ser403: KA(p-S)LF
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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The protein encoded by this gene is an actin binding and bundling protein that plays a structural role in erythrocytes, by stabilizing and attaching the spectrin/actin cytoskeleton to the erythrocyte membrane in a phosphorylation-dependent manner. This protein contains a core domain in the N-terminus, and a headpiece domain in the C-terminus that binds F-actin. When purified from erythrocytes, this protein exists as a trimer composed of two 48 kDa polypeptides and a 52 kDa polypeptide. The different subunits arise from alternative splicing in the 3' coding region, where the headpiece domain is located. Disruption of this gene has been correlated with the autosomal dominant Marie Unna hereditary hypotrichosis disease, while loss of heterozygosity of this gene is thought to play a role in prostate cancer progression. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Nov 2014]

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. Plays also 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.

Product Detail

Subunit:

Monomeric (isoform 2); under reducing conditions. Self-associates. Exists under oxidizing condition as a trimer of two isoforms 2 and isoform 1 linked by disulfide bonds (Probable). Found in a complex with DMTN, F-actin and spectrin. Found in a complex with ADD2, DMTN and SLC2A1. Interacts with F-actin, ITPKB, RASGRF2 and spectrin. Isoform 2 interacts with SLC2A1 (via C-terminus cytoplasmic region). Isoform 1 and isoform 2 interact (phosphorylated form) with plasmodium berghei 14-3-3 protein; the interaction occurs in a PKA-dependent manner.

Subcellular 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 vacuol in malaria-infected erythrocytes at late stages of plasmodium berghei or falciparum development.

Tissue Specificity:

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

Post-translational modifications:

Phosphorylated. Phosphorylation at Ser-403 by PKA causes the C-terminal headpiece domain to associate with the N-terminal core domain, and leads to the inhibition of its actin bundling activity.

The N-terminus is blocked.

Similarity:

Belongs to the villin/gelsolin family.

Contains 1 HP (headpiece) domain.

SWISS:

Q08495

Gene ID:

2039

Database links:

[Entrez Gene: 2039](#) Human

[Entrez Gene: 13829](#) Mouse

[Entrez Gene: 361069](#) Rat

[Omim: 125305](#) Human

[SwissProt: Q08495](#) Human

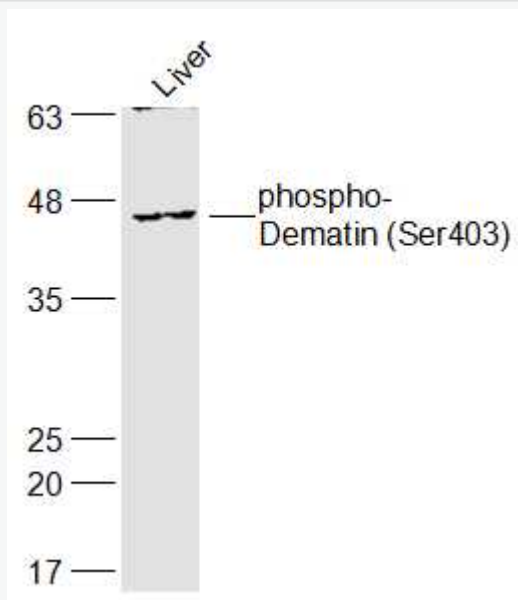
[SwissProt: Q9WV69](#) Mouse

[Unigene: 106124](#) Human

[Unigene: 210863](#) Mouse

[Unigene: 446654](#) Mouse

Product Picture



Sample:

Liver(Mouse) Cell Lysate at 40 ug

Primary: Anti-phospho-Dematin (SL14266R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 45 kD

Observed band size: 45 kD