

# PDLIM4 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP17994c

## **Product Information**

**Application** WB, E **Primary Accession** P50479 **Other Accession** NP 003678.2 Reactivity Human Host Rabbit Clonality Polyclonal Isotype Rabbit IgG **Clone Names** RB21537 Calculated MW 35398 74-103 **Antigen Region** 

## **Additional Information**

**Gene ID** 8572

Other Names PDZ and LIM domain protein 4, LIM protein RIL, Reversion-induced LIM

protein, PDLIM4, RIL

**Target/Specificity**This PDLIM4 antibody is generated from rabbits immunized with a KLH

conjugated synthetic peptide between 74-103 amino acids from the Central

region of human PDLIM4.

**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** PDLIM4 Antibody (Center) is for research use only and not for use in

diagnostic or therapeutic procedures.

### **Protein Information**

Name PDLIM4

Synonyms RIL

Function [Isoform 1]: Suppresses SRC activation by recognizing and binding to active

SRC and facilitating PTPN13-mediated dephosphorylation of SRC 'Tyr-419' leading to its inactivation. Inactivated SRC dissociates from this protein allowing the initiation of a new SRC inactivation cycle (PubMed:19307596). Involved in reorganization of the actin cytoskeleton (PubMed:21636573). In nonmuscle cells, binds to ACTN1 (alpha-actinin-1), increases the affinity of ACTN1 to F-actin (filamentous actin), and promotes formation of actin stress fibers. Involved in regulation of the synaptic AMPA receptor transport in dendritic spines of hippocampal pyramidal neurons directing the receptors toward an insertion at the postsynaptic membrane. Links endosomal surface-internalized GRIA1- containing AMPA receptors to the alpha-actinin/actin cytoskeleton. Increases AMPA receptor-mediated excitatory postsynaptic currents in neurons (By similarity).

#### **Cellular Location**

[Isoform 1]: Cytoplasm, cytoskeleton. Nucleus. Cytoplasm Cytoplasm, perinuclear region. Cell projection, lamellipodium. Cell projection, dendritic spine {ECO:0000250 | UniProtKB:P36202}. Early endosome membrane {ECO:0000250|UniProtKB:P36202}; Peripheral membrane protein {ECO:0000250|UniProtKB:P36202}; Cytoplasmic side {ECO:0000250|UniProtKB:P36202}. Recycling endosome membrane {ECO:0000250|UniProtKB:P36202}; Peripheral membrane protein {ECO:0000250|UniProtKB:P36202}; Cytoplasmic side {ECO:0000250|UniProtKB:P36202}. Synapse, synaptosome {ECO:0000250|UniProtKB:P36202}. Note=Localizes to actin stress fibers in nonmuscle cells. Colocalizes with GRIA1 in early endosomes. Enriched in numerous but not all spine-like structures along dendritic branches Colocalizes with actin and enriched at sites containing larger amounts of actin and alpha-actinin. Targeted efficiently to spines via its PDZ domain-mediated interaction with the alpha-actinin/actin cytoskeletal complex. Localizes to synaptosomes in brain (By similarity) Colocalizes with F-actin (PubMed:10826496). Colocalizes with TRIP6 at cell-cell contacts and lamellipodia (PubMed:10826496). In the cytoplasm, displays a fibrillar pattern with characteristic thick fibers and occasional clusters. Colocalizes with the actin stress fibers. Oxidative stress induces redistribution from cytoskeleton to cytosol (PubMed:21636573). Colocalizes with SRC at the perinuclear region, but not at focal adhesions (PubMed:19307596) {ECO:0000250|UniProtKB:P36202, ECO:0000269|PubMed:10826496, ECO:0000269 | PubMed:19307596, ECO:0000269 | PubMed:21636573 }

**Tissue Location** 

[Isoform 2]: Found in brain.

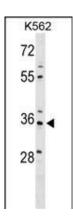
## **Background**

This gene encodes a protein which may be involved in bone development. Mutations in this gene are associated with susceptibility to osteoporosis.

## References

Yerges, L.M., et al. J. Bone Miner. Res. 24(12):2039-2049(2009) Forton, J.T., et al. Thorax 64(4):345-352(2009) Zhang, Y., et al. J. Cell Biol. 184(6):785-792(2009) Vanaja, D.K., et al. Cancer Invest. 27(3):264-272(2009) Chen, M., et al. J. Biol. Chem. 284(3):1484-1494(2009)

# **Images**



analysis in K562 cell line lysates (35ug/lane). This demonstrates the PDLIM4 antibody detected the PDLIM4 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.