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# PDLIM4 Antibody (Center) Blocking Peptide

**Synthetic peptide**
**Catalog # BP17994c**

## Specification

### PDLIM4 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P50479

### PDLIM4 Antibody (Center) Blocking Peptide - Additional Information

**Gene ID** 8572

**Other Names**
PDZ and LIM domain protein 4, LIM protein RIL, Reversion-induced LIM protein, PDLIM4, RIL

**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.

### PDLIM4 Antibody (Center) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/19307596" target="_blank">19307596</a>). Involved in reorganization of the actin cytoskeleton (PubMed:<a href="http://www.uniprot.org/citations/21636573" target="_blank">21636573</a>). 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.

## PDLIM4 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

## PDLIM4 Antibody (Center) Blocking Peptide - Images

## PDLIM4 Antibody (Center) Blocking Peptide - Background

This gene encodes a protein which may be involved in bonedevelopment. Mutations in this gene are associated withsusceptibility to osteoporosis.

## PDLIM4 Antibody (Center) Blocking Peptide - 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)