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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
Antigen Region	74-103

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

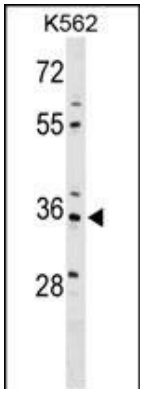
This gene encodes a protein which may be involved in bone development. Mutations in this gene are associated with susceptibility to osteoporosis.

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

PDLIM4 Antibody (Center) (Cat. #AP17994c) western blot



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