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Goat Anti-PDLIM4 / RIL Antibody
Peptide-affinity purified goat antibody
Catalog # AF1808a

Specification

Goat Anti-PDLIM4 / RIL Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P50479
Other Accession	NP_003678, 8572, 30794 (mouse), 24915 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Cow**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**35398**

Goat Anti-PDLIM4 / RIL Antibody - Additional Information

Gene ID 8572

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

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-PDLIM4 / RIL Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-PDLIM4 / RIL Antibody - 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.

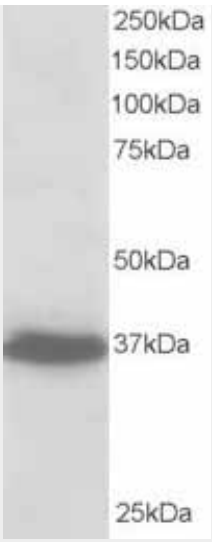
Goat Anti-PDLIM4 / RIL Antibody - Protocols

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

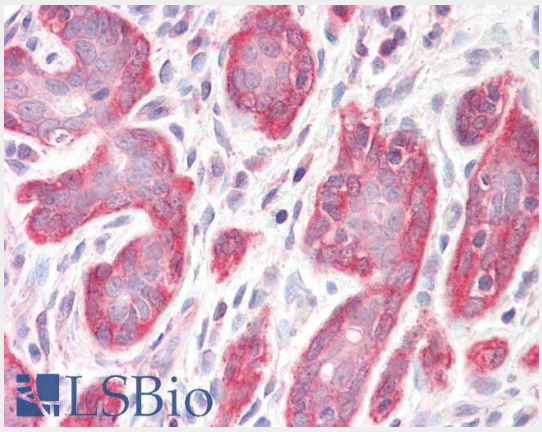
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-PDLIM4 / RIL Antibody - Images

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AF1808a staining (0.2 µg/ml) of A431 lysate (RIPA buffer, 35 µg total protein per lane). Primary incubated for 1 hour. Detected by chemiluminescence.



AF1808a (3.75 µg/ml) staining of paraffin embedded Human Breast. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB06249 (0.2µg/ml) staining of Human Placenta lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.

Goat Anti-PDLIM4 / RIL Antibody - Background

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

Goat Anti-PDLIM4 / RIL Antibody - References

High-density association study of 383 candidate genes for volumetric BMD at the femoral neck and lumbar spine among older men. Yerges LM, et al. J Bone Miner Res, 2009 Dec. PMID 19453261.
Reversion-induced LIM interaction with Src reveals a novel Src inactivation cycle. Zhang Y, et al. J Cell Biol, 2009 Mar 23. PMID 19307596.
PDLIM4, an actin binding protein, suppresses prostate cancer cell growth. Vanaja DK, et al. Cancer Invest, 2009 Mar. PMID 19212833.
Genetic association study for RSV bronchiolitis in infancy at the 5q31 cytokine cluster. Forton JT, et al. Thorax, 2009 Apr. PMID 19131452.
Integrin alpha6beta4 controls the expression of genes associated with cell motility, invasion, and metastasis, including S100A4/metastasin. Chen M, et al. J Biol Chem, 2009 Jan 16. PMID 19011242.