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LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide

Synthetic peptide
Catalog # BP7815a

Specification

LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide - Product Information

Primary Accession	P53671
Other Accession	P53667

LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide - Additional Information

Gene ID 3985

Other Names
LIM domain kinase 2, LIMK-2, LIMK2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7815a was selected from the N-term region of human LIMK2 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide - Protein Information

Name LIMK2

Function
Serine/threonine-protein kinase that plays an essential role in the regulation of actin filament dynamics (PubMed:10436159, PubMed:11018042). Acts downstream of several Rho family GTPase signal transduction pathways (PubMed:10436159, PubMed:11018042). Involved in astral microtubule organization and mitotic spindle orientation during early stages of mitosis by mediating phosphorylation of TPPP (PubMed:22328514). Displays serine/threonine-specific phosphorylation of myelin basic protein and histone (MBP) in vitro (PubMed:8537403).

Suppresses ciliogenesis via multiple pathways; phosphorylation of CFL1, suppression of directional trafficking of ciliary vesicles to the ciliary base, and by facilitating YAP1 nuclear localization where it acts as a transcriptional corepressor of the TEAD4 target genes AURKA and PLK1 (PubMed:25849865).

Cellular Location
Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome [Isoform LIMK2b]: Cytoplasm. Cytoplasm, perinuclear region. Nucleus Note=Mainly present in the cytoplasm and is scarcely translocated to the nucleus.

LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide - Images

LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide - Background

There are approximately 40 known eukaryotic LIM proteins, so named for the LIM domains they contain. LIM domains are highly conserved cysteine-rich structures containing 2 zinc fingers. Although zinc fingers usually function by binding to DNA or RNA, the LIM motif probably mediates protein-protein interactions. LIM kinase-1 and LIM kinase-2 belong to a small subfamily with a unique combination of 2 N-terminal LIM motifs and a C-terminal protein kinase domain. The LIMK2 protein is phosphorylated and activated by ROCK, a downstream effector of Rho, and LIM kinase 2, in turn, phosphorylates cofilin, inhibiting its actin-depolymerizing activity. It is thought that this pathway contributes to Rho-induced reorganization of the actin cytoskeleton. Two alternative splice variants of LIMK2 that utilize alternative promoters have been identified.

LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide - References

Nomoto, S., et al., Gene 236(2):259-271 (1999).Osada, H., et al., Biochem. Biophys. Res. Commun. 229(2):582-589 (1996).Okano, I., et al., J. Biol. Chem. 270(52):31321-31330 (1995).