

**LIM Kinase 2 (LIMK2) Antibody (N-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP7815a****Specification**

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**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](/product/products/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](http://www.uniprot.org/citations/10436159), PubMed: [11018042](http://www.uniprot.org/citations/11018042)). Acts downstream of several Rho family GTPase signal transduction pathways (PubMed: [10436159](http://www.uniprot.org/citations/10436159), PubMed: [11018042](http://www.uniprot.org/citations/11018042)). Involved in astral microtubule organization and mitotic spindle orientation during early stages of mitosis by mediating phosphorylation of TPPP (PubMed: [22328514](http://www.uniprot.org/citations/22328514)). Displays serine/threonine-specific phosphorylation of myelin basic protein and histone (MBP) in vitro (PubMed: [8537403](http://www.uniprot.org/citations/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:<a href="http://www.uniprot.org/citations/25849865" target="\_blank">25849865</a>).

**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).