LIMK1/2 Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	LIMK1/2, Blocking Peptide
Full Product Name	LIMK1/2 Blocking Peptide
Product Gene Name	LIMK1 blocking peptide
Product Synonym Names	EC 2.7.11.1; LIM domain kinase 1; LIM motif-containing protein kinase; LIMK; LIMK-1; limk1; LIMK1_HUMAN
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	LIMK1/2 peptide (MBS9617466) is used for blocking the activity of LIMK1/2 antibody (MBS9601913)
Molecular Weight	72,585 Da
Chromosome Location	Chromosome: 7; NC_000007.13 (73498107..73536855). Location: 7q11.23
OMIM	601329
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for LIMK1 blocking peptide	Blocking/Control
Related Product Information for LIMK1 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of LIMK1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for LIMK1 purchase	MBS9617466 is a blocking peptide targeting LIMK1. Also known as LIMK1/2 Blocking Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LIMK1. It may not necessarily be applicable to this product.

NCBI GI #	324715046
NCBI GeneID	3984
NCBI Accession #	NP_001191355.1
UniProt Primary Accession #	P53667
UniProt Secondary Accession #	O15283; Q15820; Q15821; Q75MU3; Q9Y5Q1; B7Z6I8; D3DXF4; D3DXF5

UniProt Related Accession #	P53667
GenBank Nucleotide #	NM_001204426.1
NCBI Official Full Name	LIM domain kinase 1 isoform 2
NCBI Official Synonym Full Names	LIM domain kinase 1
NCBI Official Symbol	LIMK1
NCBI Official Synonym Symbols	LIMK; LIMK-1
UniProt Protein Name	LIM domain kinase 1
Protein Family	LIM domain kinase
UniProt Gene Name	LIMK1
UniProt Synonym Gene Names	LIMK; LIMK-1
UniProt Entry Name	LIMK1_HUMAN
NCBI Protein Information	LIM domain kinase 1; LIM motif-containing protein kinase
NCBI Summary for LIMK1	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. LIMK1 is a serine/threonine kinase that regulates actin polymerization via phosphorylation and inactivation of the actin binding factor cofilin. This protein is ubiquitously expressed during development and plays a role in many cellular processes associated with cytoskeletal structure. This protein also stimulates axon growth and may play a role in brain development. LIMK1 hemizygosity is implicated in the impaired visuospatial constructive cognition of Williams syndrome. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, Feb 2011]
UniProt Comments for LIMK1	LIMK1: a TKL kinase of the LISK family which mediates Rho signaling to cytoskeleton. Contains two N-terminal LIM motifs. Phosphorylated and activated by PAK1 and ROCK, downstream effectors of Rho. May be involved in brain development. Phosphorylates and inactivates the actin binding/depolymerizing factor cofilin and induces actin cytoskeletal changes. The LIM domain interacts with the cytoplasmic domain of NRG1. Binds ROCK1. Interacts with slingshot 1. Overexpressed in prostate tumors and prostate and breast cancer cell lines; manipulation of activity correlates with invasiveness in breast and prostate cancer models. Located within the 7q11.2 amplicon associated with metastatic prostate cancer. Loss of one copy of LIMK1 is the likely cause of visuospatial cognition defects seen in small chromosomal deletions associated with dominant Williams-Beuren syndrome Three splice variant have been identified. Protein type: Protein kinase, TKL; Kinase, protein; EC 2.7.11.1; Protein kinase, Ser/Thr (non-receptor); TKL group; LISK family; LIMK subfamily Chromosomal Location of Human Ortholog: 7q11.23 Cellular Component: nucleoplasm; neuron projection; focal adhesion; cytoplasm; cytosol Molecular Function: protein serine/threonine kinase activity; protein binding; zinc ion binding; protein heterodimerization activity; heat shock protein binding; ATP binding; protein kinase activity Biological Process: axon guidance; nervous system development; positive regulation of axon extension; positive regulation of stress fiber formation; negative regulation of ubiquitin-protein ligase activity; ephrin receptor signaling pathway; innate immune response; positive regulation of actin filament bundle formation; actin cytoskeleton organization and biogenesis; signal transduction; protein amino acid phosphorylation; Rho protein signal transduction Disease: Williams-beuren Syndrome
Research Articles on LIMK1	**1.** Overexpression of LIMK1 is associated with breast cancer growth and invasiveness.

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