Recombinant Human LIMK1

Cat. No. LIMK1-29945TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant fragment, corresponding to amino acids 285-638 of Human LIM Kinase 1 was expressed by baculovirus in Sf9 cells using an N-terminal tag, 41kDa.
Species	Human
ProteinLength	285-638 a.a.
Description	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.
Tissue specificity	Highest expression in both adult and fetal nervous system. Detected ubiquitously throughout the different regions of adult brain, with highest levels in the cerebral cortex. Expressed to a lesser extent in heart and skeletal muscle.

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Biological activity	This is an inactive protein.
Form	Liquid
Storage buffer	Preservative: NoneConstituents: 25% Glycerol, 50mM Tris HCl, 150mM Sodium chloride, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, pH 7.5
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequence Similarities	Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family.Contains 2 LIM zinc-binding domains.Contains 1 PDZ (DHR) domain.Contains 1 protein kinase domain.

GENE INFORMATION

Gene Name	LIMK1 LIM domain kinase 1 [Homo sapiens]
Official Symbol	LIMK1
Synonyms	LIMK1; LIM domain kinase 1; LIMK;
Gene ID	3984
mRNA Refseq	NM_001204426
Protein Refseq	NP_001191355
MIM	601329
Uniprot ID	P53667

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Chromosome Location	7q11.23
Pathway	Axon guidance, organism-specific biosystem; Axon guidance, conserved biosystem; Axon guidance, organism-specific biosystem; Axon guidance, organism-specific biosystem; CDC42 signaling events, organism-specific biosystem;
Function	ATP binding; heat shock protein binding; metal ion binding; nucleotide binding; protein binding;

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