

Datasheet for ABIN7554431

## LIM Domain Kinase 1 Protein (LIMK1) (AA 1-647) (His tag)



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### Overview

Quantity:	1 mg
Target:	LIM Domain Kinase 1 (LIMK1)
Protein Characteristics:	AA 1-647
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This LIM Domain Kinase 1 protein is labelled with His tag.

### Product Details

Purpose:	Custom-made recombinant LIMK1 Protein expressed in mammalian cells.
Sequence:	<p>MRLTLLCCTW REERMGEEGS ELPVCASCGQ RIYDGQYLQA LNADWHADCF RCCDCSASLS</p> <p>HQYYEKDGQL FCKKDYWARY GESCHGCSEQ ITKGLVMVAG ELKYHPECFI CLTCGTFIGD</p> <p>GDTYTLVEHS KLYCGHCYYQ TVVTPVIEQI LPDSPGSHLP HTVTLVSIPA SSHGKRGLSV</p> <p>SIDPPHGPPG CGTEHSHTVR VQGVDPGCMS PDVKNSIHVG DRILEINGTP IRNVPLDEID</p> <p>LLIQETSRLL QLTLEHDPHD TLGHGLGPET SPLSSPAYTP SGEAGSSARQ KPVLRSID</p> <p>RSPGAGSLGS PASQRKDLGR SESLRVWCRP HRIFRPSDLI HGEVLGKGCF GQAIKVTHRE</p> <p>TGEVMVMKEL IRFDEETQRT FLKEVKVMRC LEHPNVLFKI GVLYKDKRLN FITEYIKGGT</p> <p>LRGIKSMDS QYPWSQRVSF AKDIASGMAY LHSMNIIHRD LNSHNCLVRE NKNVVVADFG</p> <p>LARLMVDEKT QPEGLRSLKK PDRKKRYTVV GNPYWMAPEM INGRSYDEKV DVFSFGIVLC</p> <p>EIIGRVNADP DYLPRTMDFG LNVRGFLDRY CPPNCPPSFF PITVRCCDL D PEKRPSFVKL</p> <p>EHWLETLMH LAGHLPLGPQ LEQLDRGFE TYRRGESGLP AHPEVPD <b>Sequence without tag.</b></p> <p><b>The proposed Purification-Tag is based on experiences with the expression system, a</b></p>

**different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	<p>Key Benefits:</p> <ul style="list-style-type: none"><li>• Made to order protein - from design to production - by highly experienced protein experts.</li><li>• Protein expressed in mammalian cells and purified in one-step affinity chromatography</li><li>• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.</li><li>• State-of-the-art algorithm used for plasmid design (Gene synthesis).</li></ul> <p>This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.</p> <p>If you are not interested in a full length protein, please contact us for individual protein fragments.</p> <p>The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.</p>
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	LIM Domain Kinase 1 (LIMK1)
Alternative Name:	LIMK1 ( <a href="#">LIMK1 Products</a> )
Background:	LIM domain kinase 1 (LIMK-1) (EC 2.7.11.1),FUNCTION: Serine/threonine-protein kinase that plays an essential role in the regulation of actin filament dynamics. Acts downstream of several Rho family GTPase signal transduction pathways (PubMed:10436159, PubMed:11832213, PubMed:12807904, PubMed:15660133, PubMed:16230460, PubMed:18028908, PubMed:22328514, PubMed:23633677). Activated by upstream kinases including ROCK1, PAK1 and PAK4, which phosphorylate LIMK1 on a threonine residue located in its activation loop (PubMed:10436159). LIMK1 subsequently phosphorylates and inactivates the actin binding/depolymerizing factors cofilin-1/CFL1, cofilin-2/CFL2 and destrin/DSTN, thereby preventing the cleavage of filamentous actin (F-actin), and stabilizing the actin cytoskeleton

## Target Details

(PubMed:11832213, PubMed:15660133, PubMed:16230460, PubMed:23633677). In this way LIMK1 regulates several actin-dependent biological processes including cell motility, cell cycle progression, and differentiation (PubMed:11832213, PubMed:15660133, PubMed:16230460, PubMed:23633677). Phosphorylates TPPP on serine residues, thereby promoting microtubule disassembly (PubMed:18028908). Stimulates axonal outgrowth and may be involved in brain development (PubMed:18028908). {ECO:0000269|PubMed:10436159, ECO:0000269|PubMed:11832213, ECO:0000269|PubMed:12807904, ECO:0000269|PubMed:15660133, ECO:0000269|PubMed:16230460, ECO:0000269|PubMed:18028908, ECO:0000269|PubMed:22328514, ECO:0000269|PubMed:23633677}., FUNCTION: [Isoform 3]: Has a dominant negative effect on actin cytoskeletal changes. Required for atypical chemokine receptor ACKR2-induced phosphorylation of cofilin (CFL1). {ECO:0000269|PubMed:10196227}.

Molecular Weight:	72.6 kDa
UniProt:	<a href="#">P53667</a>
Pathways:	<a href="#">Caspase Cascade in Apoptosis</a> , <a href="#">Regulation of Cell Size</a> , <a href="#">CXCR4-mediated Signaling Events</a>

## Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

## Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months