

Product datasheet

Recombinant human LIM Kinase 1 protein ab174066

[2 Images](#)

Description

Product name	Recombinant human LIM Kinase 1 protein
Biological activity	The specific activity of LIMK1 was determined to be 8 nmol/min/mg.
Purity	> 95 % Densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	<u>P53667</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	GSSARQKPVLRSCSIDRSPGAGSLGSPASQRKDLGRSES LRVVCRRPHRIF RPSDLIHGEVLGKGCFIGQAIKVTHRETGEVMVMKELIRFD EETQRTFLKE VKVMRCLEHPNVLKFIVGLYKDKRLNFITEYIKGGTLRGIKS MDSQYPW SQRVSFAKDIASGMAYLHSMNIIHRDLNSHNCLVRENKNV VVADFGGLARL MVDEKTQPEGLRSLKKPDRKKRYTVVGNPYWMAPEMING RSYDEKVDVFS FGMLCEIIGRVNADPDYLPRTMDFGLNVRGFLDRYCPPNC PPSFFPITV RCCDLDPKRPFSVKLEHWLETLRMHLAGHLPLGPQLEQ LDRGFWETYRR GESG
Predicted molecular weight	65 kDa including tags
Amino acids	285 to 638
Tags	proprietary tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab174066** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Western blot Functional Studies
Form	Liquid
Additional notes	ab85154 (Human Cofilin full length protein) and ab64311 (Myelin Basic Protein protein) can be utilized as a substrate for assessing kinase activity

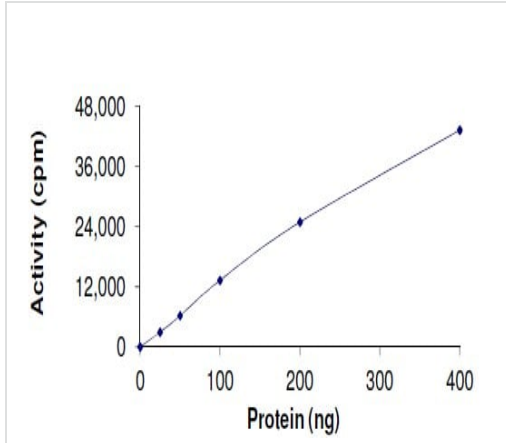
Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 7.50 Constituents: 25% Glycerol (glycerin, glycerine), 0.79% Tris HCl, 0.88% Sodium chloride, 0.31% Glutathione, 0.003% EDTA, 0.004% DTT, 0.002% PMSF This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

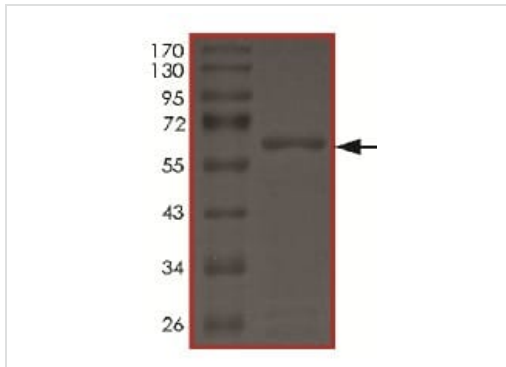
Function	Protein kinase which regulates actin filament dynamics. Phosphorylates and inactivates the actin binding/depolymerizing factor cofilin, thereby stabilizing the actin cytoskeleton. Stimulates axonal outgrowth and may be involved in brain development. Isoform 3 has a dominant negative effect on actin cytoskeletal changes.
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.
Involvement in disease	Note=LIMK1 is located in the Williams-Beuren syndrome (WBS) critical region. WBS results from a hemizygous deletion of several genes on chromosome 7q11.23, thought to arise as a consequence of unequal crossing over between highly homologous low-copy repeat sequences flanking the deleted region.
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.
Post-translational modifications	Autophosphorylated. Phosphorylated on serine and/or threonine residues by ROCK1. May be dephosphorylated and inactivated by SSH1. Ubiquitinated. 'Lys-48'-linked polyubiquitination by RNF6 leads to proteasomal degradation through the 26S proteasome, modulating LIMK1 levels in the growth cone and its effect on axonal outgrowth. Also polyubiquitinated by RLIM.
Cellular localization	Cytoplasm. Cell projection > growth cone.

Images



Kinase Assay demonstrating specific activity of ab174066

Functional Studies - Recombinant human LIM
Kinase 1 protein (ab174066)



SDS-PAGE showing ab174066

SDS-PAGE - Recombinant human LIM Kinase 1
protein (ab174066)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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