abcam

Product datasheet

Anti-LIM Kinase 1 (phospho T508) antibody ab38508

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Overview

Product name	Anti-LIM Kinase 1 (phospho T508) antibody
Description	Rabbit polyclonal to LIM Kinase 1 (phospho T508)
Host species	Rabbit
Specificity	This antibody is specific for LIM Kinase only when phosphorylated at threonine 508. It recognizes both LIMK1 and LIMK2 from human, mouse, and rat.
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human LIM Kinase 1 (phospho T508).
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 50% Glycerol, 0.87% Sodium chloride, PBS Without Mg2+ and Ca2+
Purity	Immunogen affinity purified
Purification notes	The antibody was affinity purified from rabbit antiserum by affinity chromatography using epitope specific phosphopeptide. The antibody against non phosphopeptide was removed by chromatography using non phosphopeptide corresponding to the phosphorylation site.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab38508 in the following tested applications.

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

Application	Abreviews	Notes
WB	★★★★☆ **(2)**	1/500 - 1/1000. Detects a band of approximately 65 kDa (predicted molecular weight: 73 kDa).
IHC-P		1/50 - 1/100.

Target

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.

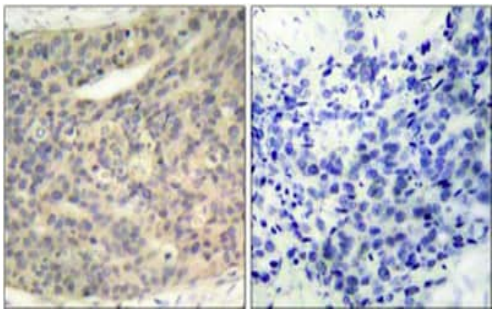
Involvement in disease Note=LIMK1 is located in the Williams-Beuren syndrome (WBS) critical region. WBS results from a hemizygous deletion of several genes on chromosome 7q11.23, thought to arise as a consequence of unequal crossing over between highly homologous low-copy repeat sequences flanking the 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.

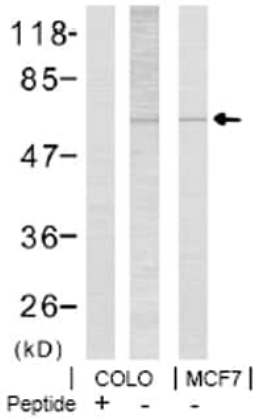
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LIM Kinase 1 (phospho T508) antibody (ab38508)

ab38508 at a 1:50 dilution staining LIM Kinase in Human breast carcinoma tissue using Immunohistochemistry, Paraffin Embedded Tissue.
Left image : untreated.

Right image : treated with phosphopeptide.



Western blot - Anti-LIM Kinase 1 (phospho T508) antibody (ab38508)

All lanes : Anti-LIM Kinase 1 (phospho T508) antibody (ab38508) at 1/500 dilution

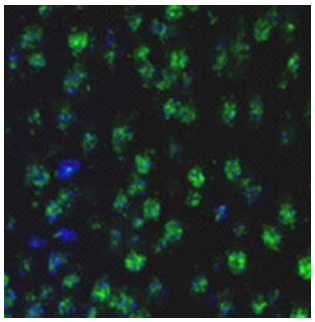
Lane 1 : Extract of COLO cells + peptide.
Lane 2 : Extract of COLO cells.
Lane 3 : Extract of MCF7 cells.

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : Alkaline Phosphatase AffiniPure Goat Anti-Rabbit IgG (H+L)

Predicted band size: 73 kDa
Observed band size: 65 kDa

Lanes can be loaded with 5-30µg of total protein. The arrow next to the image points to LIM Kinase (phospho T508).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LIM Kinase 1 (phospho T508) antibody (ab38508)

Image from Mokalled MH et al, Development. 2010 Jul;137(14):2365-74. Epub 2010 Jun 9, Fig 6. DOI: 10.1242/dev.047605.

ab38508 staining LIM Kinase 1 in mouse brain tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).
bdKO mice were anesthetized and transcardially perfused with PBS, followed by 4% paraformaldehyde (PFA) prior to brain dissection. Brains were then postfixed in 4% PFA for 2 days, embedded in paraffin and sectioned.

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