Revision 1

**Store at -20C**

**#3841**

# Phospho-LIMK1 (Thr508)/LIMK2 (Thr505) Antibody

**Cell Signaling**
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| | |
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| WB | H | Transfected Only | 72 | Rabbit | #P53671, #P53667 | 3985, 3984 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

Phospho-LIMK1 (Thr508)/LIMK2 (Thr505) Antibody detects transfected levels of LIMK1 and LIMK2 only when phosphorylated at threonine 508 or 505.

**Species predicted to react based on 100% sequence homology:**

Mouse, Rat

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr508 of human LIMK1. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

LIM kinases (LIMK1 and LIMK2) are serine/threonine kinases that have two zinc finger motifs, known as LIM motifs, in their amino-terminal regulatory domains (1). LIM kinases are involved in actin cytoskeletal regulation downstream of Rho-family GTPases, PAKs, and ROCK (2,3). PAK1 and ROCK phosphorylate LIMK1 or LIMK2 at the conserved Thr508 or Thr505 residues in the activation loop, increasing LIMK activity (3-5). Activated LIM kinases inhibit the actin depolymerization activity of cofilin by phosphorylation at the amino-terminal Ser3 residue of cofilin (6,7).

**Background References**

1. Okano, I. et al. (1995) *J. Biol. Chem.* 270, 31321-31330.
2. Maekawa, M. et al. (1999) *Science* 285, 895-898.
3. Edwards, D. C. et al. (1999) *Nat. Cell Biol.* 1, 253-259.
4. Ohashi, K. et al. (2000) *J. Biol. Chem.* 275, 3577-3582.
5. Sumi, T. et al. (2001) *J. Biol. Chem.* 276, 670-676.
6. Arber, S. et al. (1998) *Nature* 393, 805-809.
7. Yang, N. et al. (1998) *Nature* 393, 809-812.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**WB:** Western Blotting

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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