

Phospho-LKB1 (Thr189) Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #6794
Swiss-Prot Acc. #Q15831

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Transfected	H	54 kDa	Rabbit**

Background: LKB1 (STK11) is a serine/threonine kinase and tumor suppressor that helps control cell structure, apoptosis and energy homeostasis through regulation of numerous downstream kinases (1,2). A cytosolic protein complex comprised of LKB1, putative kinase STRAD, and the MO25 scaffold protein, activates both AMP-activated protein kinase (AMPK) and several AMPK-related kinases (3). AMPK plays a predominant role as the master regulator of cellular energy homeostasis, controlling downstream effectors that regulate cell growth and apoptosis in response to cellular ATP concentrations (4). LKB1 appears to be phosphorylated in cells at several sites, including human LKB1 at Ser31/325/428 and Thr189/336/363 (5).

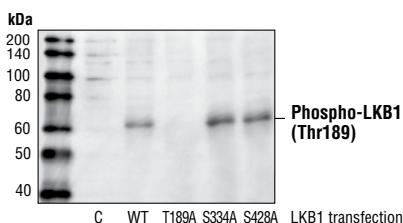
Mutation in the corresponding LKB1 gene causes Peutz-Jeghers syndrome (PJS), an autosomal dominant disorder characterized by benign GI tract polyps and dark skin lesions of the mouth, hands and feet (6). A variety of other LKB1 gene mutations have been associated with the formation of sporadic cancers in several tissues (7).

Specificity/Sensitivity: Phospho-LKB1 (Thr189) Antibody detects transfected levels of LKB1 only when phosphorylated at threonine 189. The antibody does not cross-react with LKB1 phosphorylated at other sites.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr189 of human LKB1. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Baas, A.F. et al. (2004) *Trends Cell Biol* 14, 312–9.
- (2) Marignani, P.A. (2005) *J Clin Pathol* 58, 15–9.
- (3) Lizcano, J.M. et al. (2004) *EMBO J* 23, 833–43.
- (4) Hardie, D.G. (2004) *J Cell Sci* 117, 5479–87.
- (5) Sapkota, G.P. et al. (2002) *Biochem J* 362, 481–90.
- (6) Jenne, D.E. et al. (1998) *Nat Genet* 18, 38–43.
- (7) Sanchez-Cespedes, M. (2007) *Oncogene* 26, 7825–32.



Western blot analysis of extracts from COS cells, untransfected or transfected with Wild-type LKB1, LKB1 (T189A), LKB1 (S334A) or LKB1 (S428A), using Phospho-LKB1 (Thr189) Antibody.

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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