

Store at
-20°C

PhosphoPlus® LKB1 (Ser428) Antibody Duet

#5132



Support: +1-978-867-2388 (U.S.)
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Entrez-Gene ID #6794
UniProt ID #Q15831

Rev. 05/14/18

For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
P-LKB1 (S428) (C67A3) Rabbit mAb	3482	100 µl	54 kDa	Rabbit IgG
LKB1 (D60C5) Rabbit mAb	3047	100 µl	54 kDa	Rabbit IgG

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

Description: PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

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 (Ser428) (C67A3) Rabbit mAb detects endogenous levels of LKB1 when phosphorylated at Ser428. LKB1 (D60C5) Rabbit mAb detects endogenous levels of total LKB1 protein.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser428 of human LKB1 (Ser431 of mouse) or with an LKB1 partial fusion protein.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.