Revision 1

Store at -20C

#5132

PhosphoPlus® LKB1 (Ser428) Antibody Duet

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

UniProt ID:	Entrez-Gene Id:
#Q15831	6794

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-LKB1 (Ser428) (C67A3) Rabbit mAb	3482	100 µl	54 kDa	Rabbit
LKB1 (D60C5) Rabbit mAb	3047	100 µl	54 kDa	Rabbit IgG

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

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.

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.

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).

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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Limited Uses

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