

PhosphoPlus® Rictor (Thr1135) Antibody Duet

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UniProt ID: #Q6R327
Entrez-Gene Id: 253260

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-Rictor (Thr1135) (D30A3) Rabbit mAb	3806	100 µl	200 kDa	Rabbit IgG
Rictor (53A2) Rabbit mAb	2114	100 µl	200 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

Cell growth is a fundamental biological process whereby cells accumulate mass and increase in size. The mammalian TOR (mTOR) pathway regulates growth by coordinating energy and nutrient signals with growth factor-derived signals (1). mTOR is a large protein kinase with two different complexes. One complex contains mTOR, GβL and raptor, which is a target of rapamycin. The other complex, insensitive to rapamycin, includes mTOR, GβL, Sin1, and rictor (1). The mTOR-rictor complex phosphorylates Ser473 of Akt/PKB *in vitro* (2). This phosphorylation is essential for full Akt/PKB activation. Furthermore, an siRNA knockdown of rictor inhibits Ser473 phosphorylation in 3T3-L1 adipocytes (3). This complex has also been shown to phosphorylate the rapamycin-resistant mutants of S6K1, another effector of mTOR (4).

Phosphorylation of Thr1135 on rictor was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's LC-MS/MS platform for phosphorylation site discovery (5). Additional research indicates that rictor is phosphorylated at Thr1135 by p70 S6K, which negatively regulates mTORC2 protein complex as part of a negative feedback mechanism controlling Akt activity (6-8).

Background References

1. Sarbassov, D.D. et al. (2004) *Curr. Biol.* 14, 1296-1302.
2. Sarbassov, D.D. et al. (2005) *Science* 307, 1098-1101.
3. Hresko, R.C. and Mueckler, M. (2005) *J. Biol. Chem.* 280, 40406-40416.
4. Ali, S.M. and Sabatini, D.M. (2005) *J. Biol. Chem.* 280, 19445-19448.
5. Rush, J. et al. (2005) *Nat Biotechnol* 23, 94-101.
6. Dibble, C.C. et al. (2009) *Mol Cell Biol* 29, 5657-70.
7. Julien, L.A. et al. (2010) *Mol Cell Biol* 30, 908-21.
8. Treins, C. et al. (2010) *Oncogene* 29, 1003-16.

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