

#3806 Store at -20C

## Phospho-Rictor (Thr1135) (D30A3) Rabbit mAb



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| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| WB            | H M Mk      | Endogenous   | 200       | Rabbit IgG      | #Q6R327     | 253260          |

|                                  |   |                           |
|----------------------------------|---|---------------------------|
| <b>Product Usage Information</b> | <b>Application</b><br>Western Blotting  | <b>Dilution</b><br>1:1000 |
| <b>Storage</b>                   | 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.  |                           |
| <b>Specificity / Sensitivity</b> | Phospho-Rictor (Thr1135) (D30A3) Rabbit mAb detects endogenous levels of rictor protein only when phosphorylated at Thr1135.  |                           |
| <b>Source / Purification</b>     | Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to the sequence surrounding Thr1135 of human Rictor protein.  |                           |
| <b>Background</b>                | 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 <i>in vitro</i> (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). |                           |
| <b>Background References</b>     | <ol style="list-style-type: none"> <li>1. Sarbassov, D.D. et al. (2004) <i>Curr. Biol.</i> 14, 1296-1302.</li> <li>2. Sarbassov, D.D. et al. (2005) <i>Science</i> 307, 1098-1101.</li> <li>3. Hresko, R.C. and Mueckler, M. (2005) <i>J. Biol. Chem.</i> 280, 40406-40416.</li> <li>4. Ali, S.M. and Sabatini, D.M. (2005) <i>J. Biol. Chem.</i> 280, 19445-19448.</li> <li>5. Rush, J. et al. (2005) <i>Nat Biotechnol</i> 23, 94-101.</li> <li>6. Dibble, C.C. et al. (2009) <i>Mol Cell Biol</i> 29, 5657-70.</li> <li>7. Julien, L.A. et al. (2010) <i>Mol Cell Biol</i> 30, 908-21.</li> <li>8. Treins, C. et al. (2010) <i>Oncogene</i> 29, 1003-16.</li> </ol>  |                           |

|                               |  |
|-------------------------------|--|
| <b>Species Reactivity</b>     | Species reactivity is determined by testing in at least one approved application (e.g., western blot).   |
| <b>Western Blot Buffer</b>    | 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.   |
| <b>Applications Key</b>       | <b>WB:</b> Western Blotting  |
| <b>Cross-Reactivity Key</b>   | <b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected |
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