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## Tuberin/TSC2 (D93F12) XP® Rabbit mAb (PE Conjugate)



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TECHNOLOGY®

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<b>Applications:</b> FC-FP	<b>Reactivity:</b> H M R Hm Mk	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P49815	<b>Entrez-Gene Id:</b> 7249
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<b>Product Usage Information</b>	<p><b>Application</b></p> <p>Flow Cytometry (Fixed/Permeabilized)</p> <p><b>Dilution</b></p> <p>1:50</p>
<b>Storage</b>	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.
<b>Specificity / Sensitivity</b>	Tuberin/TSC2 (D93F12) XP® Rabbit mAb (PE Conjugate) detects endogenous levels of total tuberlin protein.
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to carboxy-terminal residues of human tuberlin protein.
<b>Product Description</b>	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in mouse cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Tuberlin/TSC2 (D93F12) XP® Rabbit mAb #4308.
<b>Background</b>	Tuberlin is a product of the TSC2 tumor suppressor gene and an important regulator of cell proliferation and tumor development (1). Mutations in either <i>TSC2</i> or the related <i>TSC1</i> (hamartin) gene cause tuberous sclerosis complex (TSC), an autosomal dominant disorder characterized by development of multiple, widespread non-malignant tumors (2). Tuberlin is directly phosphorylated at Thr1462 by Akt/PKB (3). Phosphorylation at Thr1462 and Tyr1571 regulates tuberlin-hamartin complexes and tuberlin activity (3-5). In addition, tuberlin inhibits the mammalian target of rapamycin (mTOR), which promotes inhibition of p70 S6 kinase, activation of eukaryotic initiation factor 4E binding protein 1 (4E-BP1, an inhibitor of translation initiation), and eventual inhibition of translation (3,6,7).
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Soucek, T. et al. (1998) <i>Proc Natl Acad Sci U S A</i> 95, 15653-8.</li> <li>2. Sparagana, S.P. and Roach, E.S. (2000) <i>Curr Opin Neurol</i> 13, 115-9.</li> <li>3. Manning, B.D. et al. (2002) <i>Mol Cell</i> 10, 151-62.</li> <li>4. Aicher, L.D. et al. (2001) <i>J Biol Chem</i> 276, 21017-21.</li> <li>5. Dan, H.C. et al. (2002) <i>J Biol Chem</i> 277, 35364-70.</li> <li>6. Goncharova, E.A. et al. (2002) <i>J Biol Chem</i> 277, 30958-67.</li> <li>7. Inoki, K. et al. (2002) <i>Nat Cell Biol</i> 4, 648-57.</li> </ol>
<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Applications Key</b>	<b>FC-FP:</b> Flow Cytometry (Fixed/Permeabilized)
<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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