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

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

Applications: FC-FP	Reactivity: H M R Hm Mk	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P49815	Entrez-Gene Id: 7249
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	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.	
Specificity/Sensitivity	Tuberin/TSC2 (D93F12) XP [®] Rabbit mAb (PE Conjugate) detects endogenous levels of total tuberin protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to carboxy-terminal residues of human tuberin protein.	
Description	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 Tuberin/TSC2 (D93F12) XP [®] Rabbit mAb #4308.	
Background	Tuberin 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). Tuberin is directly phosphorylated at Thr1462 by Akt/PKB (3). Phosphorylation at Thr1462 and Tyr1571 regulates tuberin-hamartin complexes and tuberin activity (3-5). In addition, tuberin 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).	
Background References	<ol style="list-style-type: none"> 1. Soucek, T. et al. (1998) <i>Proc Natl Acad Sci U S A</i> 95, 15653-8. 2. Sparagana, S.P. and Roach, E.S. (2000) <i>Curr Opin Neurol</i> 13, 115-9. 3. Manning, B.D. et al. (2002) <i>Mol Cell</i> 10, 151-62. 4. Aicher, L.D. et al. (2001) <i>J Biol Chem</i> 276, 21017-21. 5. Dan, H.C. et al. (2002) <i>J Biol Chem</i> 277, 35364-70. 6. Goncharova, E.A. et al. (2002) <i>J Biol Chem</i> 277, 30958-67. 7. Inoki, K. et al. (2002) <i>Nat Cell Biol</i> 4, 648-57. 	
Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)	
Cross-Reactivity Key	H: Human M: Mouse R: Rat Hm: Hamster Mk: Monkey	
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