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## Non-phospho (Active) $\beta$ -Catenin (Ser33/37/Thr41) (D13A1) Rabbit mAb (PE Conjugate)



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<b>Applications:</b> FC-FP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P35222	<b>Entrez-Gene Id:</b> 1499
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<b>Product Usage Information</b>	<b>Application</b> Flow Cytometry (Fixed/Permeabilized)	<b>Dilution</b> 1:50
<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 antibodies. Protect from light. Do not freeze.	
<b>Specificity / Sensitivity</b>	Non-phospho (Active) $\beta$ -Catenin (Ser33/37/Thr41) (D13A1) Rabbit mAb (PE Conjugate) recognizes endogenous $\beta$ -catenin protein when residues Ser33, Ser37, and Thr41 are not phosphorylated. It does not detect $\beta$ -catenin protein if tri-phosphorylated at Ser33/Ser37/Thr41.	
<b>Species predicted to react based on 100% sequence homology:</b>	Chicken, Xenopus, Zebrafish, Bovine, Dog, Pig, Horse, Guinea Pig	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser37 of human $\beta$ -catenin 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 human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Non-phospho (Active) $\beta$ -Catenin (Ser33/37/Thr41) (D13A1) Rabbit mAb #8814.	
<b>Background</b>	<p><math>\beta</math>-catenin is a key downstream effector in the Wnt signaling pathway (1). It is implicated in two major biological processes in vertebrates: early embryonic development (2) and tumorigenesis (3). CK1 phosphorylates <math>\beta</math>-catenin at Ser45. This phosphorylation event primes <math>\beta</math>-catenin for subsequent phosphorylation by GSK-3<math>\beta</math> (4-6). GSK-3<math>\beta</math> destabilizes <math>\beta</math>-catenin by phosphorylating it at Ser33, Ser37, and Thr41 (7). Mutations at these sites result in the stabilization of <math>\beta</math>-catenin protein levels and have been found in many tumor cell lines (8).</p> <p>Non-phospho (Active) <math>\beta</math>-Catenin (Ser33/37/Thr41) (D13A1) Rabbit mAb #8814 is designed to specifically recognize the stabilized form of <math>\beta</math>-catenin, i.e., protein that has not been phosphorylated by GSK-3, and thus is functionally active in cell-cell adhesion and/or the canonical Wnt signaling pathway.</p>	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Cadigan, K.M. and Nusse, R. (1997) <i>Genes Dev</i> 11, 3286-3305.</li> <li>2. Wodarz, A. and Nusse, R. (1998) <i>Annu Rev Cell Dev Biol</i> 14, 59-88.</li> <li>3. Polakis, P. (1999) <i>Curr Opin Genet Dev</i> 9, 15-21.</li> <li>4. Amit, S. et al. (2002) <i>Genes Dev</i> 16, 1066-76.</li> <li>5. Liu, C. et al. (2002) <i>Cell</i> 108, 837-47.</li> <li>6. Yanagawa, S. et al. (2002) <i>EMBO J</i> 21, 1733-42.</li> <li>7. Yost, C. et al. (1996) <i>Genes Dev</i> 10, 1443-54.</li> <li>8. Morin, P.J. et al. (1997) <i>Science</i> 275, 1787-90.</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>	

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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