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## β-Catenin (L54E2) Mouse mAb (Alexa Fluor® 488 Conjugate)



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| R   | eactivity:<br>HR                                | Sensitivity:<br>Endogenous  | Source/Isotype:<br>Mouse IgG1 | <b>UniProt ID:</b><br>#P35222 | Entrez-Gene Id<br>1499 |  |
|---|---|---|-------------------------------|-------------------------------|------------------------|--|
| Product Usage<br>Information                                | Ар  | Application   |                               | D                             | Dilution               |  |
|   | Imr   | Immunofluorescence (Frozen)   |                               |                               | 1:25 - 1:100           |  |
|   | Imr   | Immunofluorescence (Immunocytochemistry)  |                               | 1:                            | 1:25 - 1:100           |  |
|   | Flo   | Flow Cytometry (Fixed/Permeabilized)  |                               | 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 / Sensitivit                                    | •   | $\beta$ -Catenin (L54E2) Mouse mAb (Alexa Fluor 488 Conjugate) detects endogenous levels of total $\beta$ -catenin protein.   |                               |                               |                        |  |
| Species predicted to react based on 100% sequence homology: | Mou   | Mouse, Rat, Pig   |                               |                               |                        |  |
| Source / Purification                                       | carb  | Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the carboxy terminus of human $\beta$ -catenin. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-5.  |                               |                               |                        |  |
| Product Description   | hous<br>to ex                                   | This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested inhouse for direct flow cytometry and immunofluorescent analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated $\beta$ -Catenin (L54E2) Mouse mAb (IF Preferred) #2677.  |                               |                               |                        |  |
| Background  | biolo<br>phos<br>phos<br>and                    | $\beta$ -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 $\beta$ -catenin at Ser45. This phosphorylation event primes $\beta$ -catenin for subsequent phosphorylation by GSK-3 $\beta$ (4-6). GSK-3 $\beta$ destabilizes $\beta$ -catenin by phosphorylating it at Ser33, Ser37, and Thr41 (7). Mutations at these sites result in the stabilization of $\beta$ -catenin protein levels and have been found in many tumor cell lines (8). |                               |                               |                        |  |
| Background Reference  | 2. W<br>3. P<br>4. A<br>5. Li<br>6. Ya<br>7. Yo | <ol> <li>Cadigan, K.M. and Nusse, R. (1997) Genes Dev 11, 3286-3305.</li> <li>Wodarz, A. and Nusse, R. (1998) Annu Rev Cell Dev Biol 14, 59-88.</li> <li>Polakis, P. (1999) Curr Opin Genet Dev 9, 15-21.</li> <li>Amit, S. et al. (2002) Genes Dev 16, 1066-76.</li> <li>Liu, C. et al. (2002) Cell 108, 837-47.</li> <li>Yanagawa, S. et al. (2002) EMBO J 21, 1733-42.</li> <li>Yost, C. et al. (1996) Genes Dev 10, 1443-54.</li> <li>Morin, P.J. et al. (1997) Science 275, 1787-90.</li> </ol>  |                               |                               |                        |  |

**Species Reactivity** 

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

 $\textbf{H:} \ \text{human M:} \ \text{mouse R:} \ \text{rat Hm:} \ \text{hamster Mk:} \ \text{monkey Vir:} \ \text{virus Mi:} \ \text{mink C:} \ \text{chicken Dm:} \ \text{D.} \ \text{melanogaster}$ 

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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