Revision 1

Store at -20C

#2309

γ-Catenin Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P, IF-IC	H M R Hm Mk	Endogenous	83	Rabbit	#P14923	3728

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:50
Immunofluorescence (Immunocytochemistry)	1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

γ-Catenin Antibody detects endogenous levels ot total γ-catenin protein. The antibody does not cross-react with β-catenin.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the carboxy terminus of human γ-catenin. Antibodies are purified using protein A and peptide affinity chromatography.

Background

Also known as plakoglobin, γ-catenin is a member of the Armadillo family of signaling molecules, which includes β-catenin and the *Drosophila* protein armadillo (1). This family of proteins is involved in Wnt signaling, which is important in embryonic development and in tumorigenesis (2-3). Although the two vertebrate proteins β- and γ-catenin display sequence homology, γ-catenin likely plays a role distinct from that of β-catenin (1, 4-6). γ-catenin localizes to desmosomes and adherens junctions, both sites of intercellular adhesion, and interacts with the cytoplasmic domains of classical and desmosomal cadherins. Interaction of γ- or β-catenin with α-catenin, desmoplakin and other junction proteins provides a link between intercellular junctions and the actin and intermediate filament cytoskeleton. Maintenance and/or modification of this link is vital for control of cell adhesion and migration (1). γ-catenin is modified by phosphorylation, affecting both adhesion and β-catenin dependent transcription (7), and by and O-glycosylation, affecting adhesion (8). Recent evidence suggests that γ-catenin regulates desmosomal adhesion in response to growth factor stimulation (9).

Background References

1. Zhurinsky, J. et al. (2000) *J Cell Sci* 113 (Pt 18), 3127-39.
2. Wodarz, A. and Nusse, R. (1998) *Annu Rev Cell Dev Biol* 14, 59-88.
3. Polakis, P. (1999) *Curr Opin Genet Dev* 9, 15-21.
4. Zhurinsky, J. et al. (2000) *Mol Cell Biol* 20, 4238-52.
5. Charpentier, E. et al. (2000) *J Cell Biol* 149, 503-20.
6. Kolligs, F.T. et al. (2000) *Genes Dev* 14, 1319-31.
7. Miravet, S. et al. (2003) *Mol Cell Biol* 23, 7391-402.
8. Hu, P. et al. (2006) *J Biol Chem* 281, 12786-91.
9. Yin, T. et al. (2005) *J Biol Chem* 280, 40355-63.

Species Reactivity

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

Western Blot Buffer

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.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey

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