

Anti-β-Catenin Antibody

Catalog # AN1674

### Specification

# Anti-β-Catenin Antibody - Product Information

| Application       | WB, IHC, IF      |
|-------------------|------------------|
| Primary Accession | <u>P35222</u>    |
| Reactivity        | Bovine           |
| Host              | Mouse            |
| Clonality         | Mouse Monoclonal |
| Isotype           | IgG1             |
| Calculated MW     | 85497            |

## Anti-β-Catenin Antibody - Additional Information

Gene ID Other Names Catenin beta1, CTNNB1, catenin 1499

### **Target/Specificity**

 $\beta$ -Catenin is a 92 kDa protein that binds to the cytoplasmic tail of E-Cadherin. The cadherins, transmembrane adhesion molecules, are found with catenins at adherens junctions. Deletions in the cytoplasmic domain of E-Cadherin eliminate catenin binding and result in a loss of cell adhesion. Tyrosine phosphorylation of  $\beta$ -Catenin can regulate its interaction with critical components of adherens junctions. Both Fer and Fyn kinases phosphorylate tyrosine 142 in vitro. Overexpression of these kinases in epithelial cells disrupts interactions between  $\alpha$ - and  $\beta$ -Catenins. The phosphorylation of tyrosine 142 may act as a switch from the transcriptional to the adhesive role of  $\beta$ -Catenin. Src family kinases can also phosphorylate tyrosine 86 and 654 in  $\beta$ -Catenin. The Tyr-654 phosphorylation regulates  $\beta$ -Catenin binding to E-cadherin. Thus, site-specific tyrosine phosphorylation of  $\beta$ -Catenin may regulate protein-protein interactions leading to changes in cell adhesion.

Dilution WB~~1:1000 IHC~~1:100~500 IF~~1:50~200

Format Protein A Purified

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

Anti- $\beta$ -Catenin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping Blue Ice

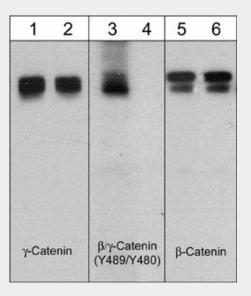


# Anti-β-Catenin Antibody - Protocols

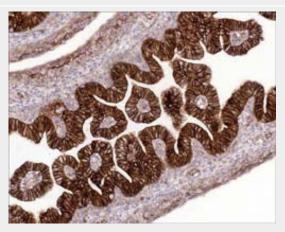
Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

## Anti-β-Catenin Antibody - Images



Western blot analysis of A431 cells stimulated with pervanadate (1 mM) for 30 min (lanes 1, 3, & 5) then treated with akaline phosphatase (lanes 2, 4, & 6). The blot was probed with anti- $\gamma$ -Catenin (CM1111), anti- $\beta$ -Catenin (Tyr-489) conserved site (CP2961), or anti- $\beta$ -Catenin (CM1181).



Formalin fixed, citric acid treated parafin sections of embryonic Rat E16 intestines. Sections were probed with anti- $\beta$ -Catenin (CM1181) then anti-mouse:HRP before detection using DAB. (Images provided by Carl Hobbs and Dr. Pat Doherty at Wolfson Centre for Age-Related Diseases, King's



# College London).

## Anti-β-Catenin Antibody - Background

 $\beta$ -Catenin is a 92 kDa protein that binds to the cytoplasmic tail of E-Cadherin. The cadherins, transmembrane adhesion molecules, are found with catenins at adherens junctions. Deletions in the cytoplasmic domain of E-Cadherin eliminate catenin binding and result in a loss of cell adhesion. Tyrosine phosphorylation of  $\beta$ -Catenin can regulate its interaction with critical components of adherens junctions. Both Fer and Fyn kinases phosphorylate tyrosine 142 in vitro. Overexpression of these kinases in epithelial cells disrupts interactions between  $\alpha$ - and  $\beta$ -Catenins. The phosphorylation of tyrosine 142 may act as a switch from the transcriptional to the adhesive role of  $\beta$ -Catenin. Src family kinases can also phosphorylate tyrosine 86 and 654 in  $\beta$ -Catenin. The Tyr-654 phosphorylation regulates  $\beta$ -Catenin binding to E-cadherin. Thus, site-specific tyrosine phosphorylation of  $\beta$ -Catenin may regulate protein-protein interactions leading to changes in cell adhesion.