

Catalog No. LF-PA0162

POLYCLONAL ANTIBODY



## Anti-beta Catenin

**Background :**  $\beta$ -Catenin was a cytosolic protein originally identified through its association with the cadherin class of cell-adhesion proteins.  $\beta$ -Catenin has two key cellular functions; one plays direct role in cell adhesion/migration, bridging between cadherins and actin cytoskeleton. The other plays as a transcription cofactor with T cell factor/lymphoid enhancer factor (TCF/LEF) in the Wnt pathway. Wnt are powerful regulators of cell proliferation and differentiation, and their signaling pathway involves proteins that directly participate in both gene transcription and cell adhesion. Activation of Wnt signaling leads to inhibition of Glycogen synthase-3 $\beta$  (GSK-3 $\beta$ ) activity, resulting in accumulation of cytoplasmic (signaling)  $\beta$ -Catenin, which becomes available to bind the TCF/LEF family of transcription factors and to induce target gene expression. In the absence of Wnt signaling, A complex of axin and casein kinase-I(CK-I) induces  $\beta$ -Catenin phosphorylation at a single site: serine 45(Ser45). This likely serves as a priming site for subsequent phosphorylation by GSK3 $\beta$ . And then  $\beta$ -Catenin is phosphorylated by GSK-3 $\beta$  at Ser33/37 and Thr41. These serine/threonine phosphorylation is required for the phosphorylation-dependant degradation of beta catenin via ubiquitin-proteasome pathway. Mutation of these phosphorylation sites in  $\beta$ -Catenin has been found in many tumor cell lines.

**Immunogen :** His-tagged recombinant Human  $\beta$ -Catenin (C-terminal fragment) protein purified from *E. coli*

**Host :** Rabbit

**Size :** 100  $\mu$ l

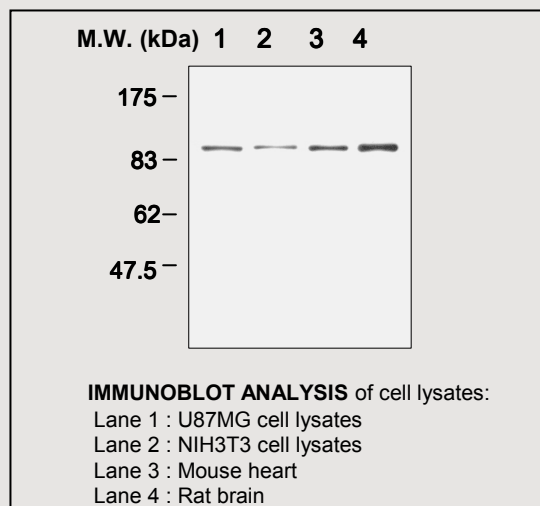
**Composition :** PBS containing 50% glycerol

**Positive control :** U87MG cell lysate

**Storage :** Store for 1 year at -20°C from date of shipment

### Species cross reactivity

Human	Mouse	Rat
+	+	+



### Applications :

Western Blotting (1:2,000)

Immunoprecipitation(1-2  $\mu$ l/ 400  $\mu$ l cell lysates)

### Background Reference :

- (1) Hinck L, et al. (1994) *Trends Biochem Sci.* **19**(12):538-42
- (2) Schneider SQ, et al. (2003) *J Exp Zool B Mol Dev Evol.* **295**(1):25-44
- (3) W. James Nelson et al. (2004) *Science* **303**:1483-7
- (4) Amit S, et al. (2002) *Genes Dev.* **16**(9):1066-76
- (5) Morin P.J., et al. (1997) *Science* **275**:1787-1790

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