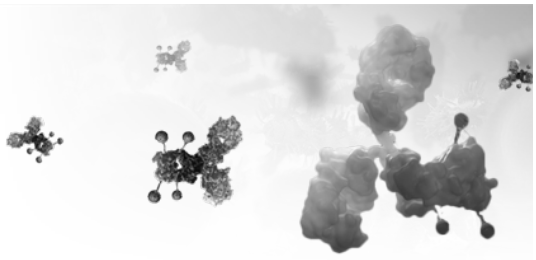

Rat Anti-CTNNB1 monoclonal antibody, clone nBc-Dbu2 (CABT-RM131)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Detects beta-catenin 1 unmodified and methylated or acetylated on lysine 49. It targets an epitope with in 19 amino acids from the N-terminal region.
Target	CTNNB1
Immunogen	BSA-conjugated linear peptide corresponding to 19 amino acids from the N-terminal region of human beta-catenin 1.
Isotype	IgG1, κ
Source/Host	Rat
Species Reactivity	Human
Clone	nBc-Dbu2
Purification	Protein G purified
Conjugate	unconjugated
Applications	ChIP, Dot, IP, WB
Molecular Weight	~100 kDa observed; 85.48 kDa calculated. Uncharacterized bands may be observed in some lysate(s).
Format	Liquid
Size	100 µl
Buffer	0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl

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Preservative	0.05% sodium azide
Storage	Stable for 1 year at 2-8°C from date of receipt.

BACKGROUND

Introduction	Catenin beta-1 is encoded by the CTNNB1 gene in human. Catenin beta-1 is a key downstream component of the canonical Wnt signaling pathway that participates in intercellular adhesion and Wnt-mediated transcriptional activation. In the absence of Wnt, it forms a complex with AXIN1, AXIN2, APC, CSNK1A1, and GSK-3 beta that promotes phosphorylation on N-terminal serine and threonine residues that leads to its subsequent degradation by the proteasome. In the presence of Wnt ligand, it is not ubiquitinated and accumulates in the nucleus, where it acts as a coactivator for transcription factors of the TCF/LEF family, which leads to activation of Wnt responsive genes. O-glycosylation at serine 23 is reported to decreases its nuclear localization and transcriptional activity. Wnt/beta-catenin signaling is shown to be essential for embryonic stem cell (ESC) pluripotency and differentiation. In ESC beta-catenin is trimethylated on Lysine 49 by Ezh2 methyltransferase and this trimethylated form represses neuronal differentiation genes Sox1 and Sox3. Mutations in CTNNB1 gene are shown to cause colorectal cancers, medulloblastoma, and ovarian cancers.
Keywords	CTNNB1; catenin (cadherin-associated protein), beta 1, 88kDa; CTNNB; MRD19; armadillo; catenin beta-1; CTNNB

GENE INFORMATION

Entrez Gene ID	1499
UniProt ID	P35222

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