

PRODUCT INFORMATION



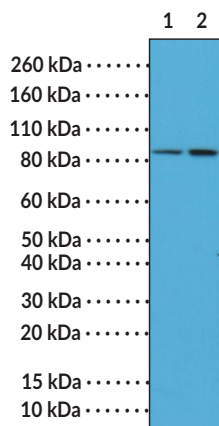
β-Catenin Rabbit Monoclonal Antibody (Clone RM276)

Item No. 32226

Overview and Properties

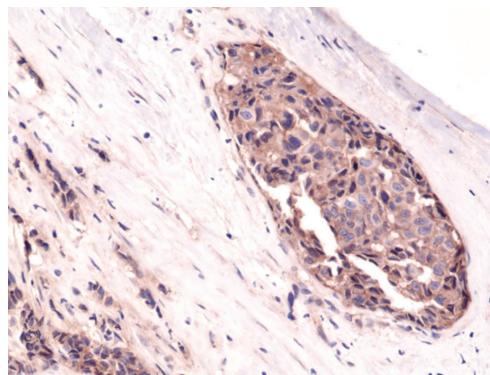
Contents:	This vial contains 100 μl of protein A-affinity purified monoclonal antibody.
Synonyms:	Catenin β-1, Catenin (Cadherin-associated Protein), β1, CTNNB1, EVR7, MRD19, NEDSDV
Immunogen:	Peptide corresponding to human β-Catenin
Cross Reactivity:	(+) β-Catenin
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM276
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:500-1:1,000 for IHC and 1:400-1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: HeLa cell lysates
Lane 2: 293 cell lysates

WB of HeLa and 293 cell lysates using β-Catenin Rabbit Monoclonal Antibody (Clone RM276) at a dilution of 1:400.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human breast cancer tissue using β-Catenin Rabbit Monoclonal Antibody (Clone RM276) at a dilution of 1:1,000.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

β -Catenin is a transcriptional coactivator that is encoded by the *CTNNB1* gene in humans.^{1,2} It is a 781 amino acid protein comprised of an N-terminal domain containing glycogen synthase kinase 3 β (GSK3 β) phosphorylation sites, a C-terminal transactivation domain, and a central domain spanning amino acid residues 138-664.^{3,4} The central domain consists of 12 armadillo repeats and is required for binding to cadherins, TCF/LEF transcription factors, and adenomatous polyposis coli (APC). β -Catenin has roles in cell adhesion, canonical Wnt signaling, regulation of stem cells, embryonic development, and adult tissue homeostasis, among others.^{1,3} In the absence of Wnt, a complex consisting of axin, APC, GSK3 β , and casein kinase 1 (CK1), binds to and phosphorylates β -catenin, targeting it for ubiquitination and proteosomal degradation.¹ In the presence of Wnt, phosphorylation of β -catenin is inhibited, allowing β -catenin to translocate into the nucleus, where it interacts with TCF/LEF to activate expression of Wnt target genes. Activating mutations in *CTNNB1* that stabilize β -catenin have been associated with a variety of cancers, including hepatocellular and adrenocortical carcinomas, colorectal cancer, and pilomatricomas.⁴⁻⁷ Cayman's β -Catenin Rabbit Monoclonal Antibody (Clone RM276) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. MacDonald, B.T., Tamai, K., and He, X. Wnt/ β -catenin Signaling: Components, mechanisms, and diseases. *Dev. Cell.* **17(1)**, 9-26 (2009).
2. Nollet, F., Berx, G., Molemans, F., *et al.* Genomic organization of the human β -catenin gene (*CTNNB1*). *Genomics* **32(3)**, 413-424 (1996).
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4. Akiyama, T. Wnt/ β -catenin signaling. *Cytokine Growth Factor Rev.* **11(4)**, 273-282 (2000).
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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
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