ß-Catenin

Concentrated and Prediluted Monoclonal Antibody
902-406-101917

BIOCARE MEDICAL

Catalog Number:	**ACR 406 A, C**	**APR 406 AA**
Description:	0.1, 1.0 ml, concentrated	6.0 ml, prediluted
Dilution:	1:200	Ready-to-use
Diluent:	Da Vinci Green	N/A

Intended Use:
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:
Beta-catenin is involved in cell adhesion through catenin-cadherin complexes and as a transcriptional regulator in the Wnt signaling pathway. Its deregulation is important in the genesis of a number of human malignancies, particularly colorectal cancer. The β-Catenin adhesion complex is crucial for intercellular adhesiveness and maintenance of tissue architecture. Its impairment is associated with poorly differentiated phenotype and increased invasiveness of carcinomas. Dysregulation of these pathways allow β-Catenin to accumulate and translocate to the nucleus, where it may activate oncogenes. Such nuclear accumulation can be detected by immunohistochemistry, which may be useful in diagnosis. Catenins link E-cadherin to other integral membrane or cytoplasmic proteins and are modulated by Wnt1 proto-oncogene. The central core region of β-Catenin is involved in mediation of cadherin complex interaction with EGFR. β-Catenin signaling has been shown to have a role in the regulation of angiogenesis and cytoplasmic localization of β-Catenin has been demonstrated as a marker of poor outcome in breast cancer patients.

Principle of Procedure:
Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse monoclonal
Species Reactivity: Human
Clone: 14
Isotype: IgG1
Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.
Epitope/Antigen: Mouse ß-Catenin aa. 571-781
Cellular Localization: Cytoplasm, membrane and nucleus
Positive Tissue Control: Colon or breast carcinoma

Known Applications:
Immunohistochemistry (formalin-fixed paraffin-embedded tissues)
Supplied As: Buffer with protein carrier and preservative

Storage and Stability:
Store at 2ºC to 8ºC. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2ºC to 8ºC.

Staining Protocol Recommendations:
Peroxide Block: Block for 5 minutes with Biocare's Peroxidazed 1.
Pretreatment: Perform heat retrieval using Biocare's Diva Decloaker. Refer to the Diva Decloaker data sheet for specific instructions.
Protein Block (Optional): Incubate for 5-10 minutes at RT with Biocare's Background Punisher.
Primary Antibody: Incubate for 30 minutes at RT.
Probe: Incubate for 10 minutes at RT with a secondary probe.
Polymer: Incubate for 10-20 minutes at RT with a tertiary polymer.

Staining Protocol Recommendations Cont'd:
Chromogen: Incubate for 5 minutes at RT with Biocare's DAB – OR – Incubate for 5-7 minutes at RT with Biocare's Warp Red.

Counterstain:
Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

Technical Note:
This antibody has been standardized with Biocare's MACH 4 detection system. Use TBS buffer for washing steps.

Limitations:
This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

Precautions:
1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN_3) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (5)
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (6)
3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. The SDS is available upon request and is located at http://biocare.net.

Technical Support:
Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

References:

1. Kikuchi A. Regulation of beta-catenin signaling in the Wnt pathway. Biochem Biophys Res Commun. 2000 Feb 16; 268(2):243-8.
2. Blaker H, *et al.* Beta-catenin accumulation and mutation of the CTNNB1 gene in hepatoblastoma. Genes Chromosomes Cancer. 1999 Aug; 25(4):399-402.
3. Montgomery E, Folpe AL. The diagnostic value of beta-catenin immunohistochemistry. Adv Anat Pathol. 2005 Nov; 12(6):350-6.
4. Burford H, *et al.* E-cadherin/beta-catenin and CD10: a limited immunohistochemical panel to distinguish pancreatic endocrine neoplasm from solid pseudopapillary neoplasm of the pancreas on endoscopic ultrasound-guided fine-needle aspirates of the pancreas. Am J Clin Pathol. 2009 Dec; 132(6):831-9.
5. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."
6. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.

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