



Cyclin D1

Concentrated and Prediluted Monoclonal Antibody

Control Number: 901-307-032808

ISO
9001:2000
CERTIFIED

Catalog Number: CRM 307 AK, BK, CK PRM 307 AA
Description: 0.1, 0.5, 1.0 ml, concentrated 6.0ml, prediluted
Dilution: 1:100-1:200 Ready-to-use
Diluent: Renoir Red N/A

Intended Use:
For In Vitro Diagnostic Use

Summary and Explanation:

This rabbit monoclonal antibody recognizes a protein of 36kDa, identified as cyclin D1 (also known as bcl-1 or PRAD-1). Cyclin D1 is a regulatory subunit of certain protein kinases thought to advance the G1 phase of the cell cycle. Cyclin D1 used in tandem with CD5, CD10 and CD23 is the most reliable immunohistochemical marker for the mantle cell lymphoma. Cyclin D1 is also expressed in invasive breast cancer. Due to the superior technology in the development of this antibody, its binding capacity is superior to mouse monoclonal antibodies and is virtually background free.

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 universal, affinity-purified, 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: Rabbit Monoclonal

Species Reactivity: Human, mouse and rat

Clone: SP4

Isotype: Rabbit IgG

Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig Concentration.

Epitope/Antigen: Cyclin D1

Cellular Localization: Nuclear

Positive Control: Mantle cell lymphoma and breast cancer

Normal Tissue: Tonsil

Abnormal Tissue: Mantle cell lymphoma and breast cancer

Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative.

Storage and Stability:

Store at 2°C to 8°C. 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 2°C to 8°C.

Protocol Recommendations

Peroxide Block:

If using an HRP system, block for 5 minutes with BIOCARE's PEROXIDAZED 1.

Pretreatment Solution (recommended): Reveal

Pretreatment Protocol:

Heat Retrieval Method:

Retrieve sections under pressure using BIOCARE's Decloaking Chamber followed by a wash in distilled water. Alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 20 minutes then wash in distilled water.

Protein Block:

Incubate for 10-15 minutes at RT with BIOCARE's Background Sniper.

Primary Antibody: Incubate for 30 minutes at RT.

Probe: N/A

Polymer: Incubate for 30 minutes at RT with a Polymer.

Chromogen:

Incubate for 5 minutes at RT when using BIOCARE's DAB. - OR - Incubate for 10 minutes at RT when using BIOCARE's Vulcan Fast Red.

Technical Note:

This antibody has been standardized with BIOCARE's MACH 2 Rabbit detection system. It can also be used on an automated staining system and with other BIOCARE polymer detection kits. Use TBS buffer for washing steps.

Performance Characteristics:

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to: fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of BIOCARE products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. These products are tools that can be used for interpretation of morphological findings in conjunction with other diagnostic tests and pertinent clinical data by a qualified pathologist.

Quality Control:

Refer to NCCLS Quality Assurance for Immunocytochemistry approved guidelines, December 1999 MM4-A Vol.19 No.26 for more information about Tissue Controls.

Precautions:

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 (NaN₃) 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)

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 in contact with sensitive areas, wash with copious amounts of water.

Microbial contamination of reagents may result in an increase in nonspecific staining. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change. The MSDS is available upon request.

Troubleshooting:

Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact BIOCARE's Technical Support at 1-800-542-2002.

Limitations and Warranty:

There are no warranties, expressed or implied, which extend beyond this description. BIOCARE is not liable for property damage, personal injury, or economic loss caused by this product.

References:

1. de Leon ED, Alkan S, Huang JC, Hsi ED. Usefulness of an immunohistochemical panel in paraffin-embedded tissues for the differentiation of B-cell non-Hodgkin's lymphomas of small lymphocytes. Mod Pathol 1998 Nov;11(11):1046-51.





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References cont'd:

2. Singh N, Wright DH. The value of immunohistochemistry on paraffin wax embedded tissue sections in the differentiation of small lymphocytic and mantle cell lymphomas. *J Clin Pathol* 1997 Jan;50(1):16-21.
3. Quintanilla-Martinez L et al. Mantle cell lymphomas lack expression of p27Kip1, a cyclin-dependent kinase inhibitor. *Am J Pathol* 1998 Jul;153(1):175-82.
4. Samaha H et al. Mantle cell lymphoma: a retrospective study of 121 cases. *Leukemia* 1998 Aug;12(8):1281-7.
5. Nakamura S, Yatabe Y, Seto M. Cyclin D1 overexpression in malignant lymphomas. *Pathol Int* 1997 Jul;47(7):421-9.
6. van Diest PJ et al. D1 expression in invasive breast cancer. Correlations and prognostic value. *Am J Pathol* 1997 Feb;150(2):705-11.
7. de Boer CJ, et al. Cyclin D1 protein analysis in the diagnosis of mantle cell lymphoma. *Blood* 1995 Oct 1;86(7):2715-23.
8. Bartkova J, Lukas J, Strauss M, Bartek J. Cell cycle-related variation and tissue-restricted expression of human cyclin D1 protein. *J Pathol* 1994 Mar;172(3):237-45.
9. 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."
10. National Committee for Clinical Laboratory Standards(NCCLS). Protection of laboratory workers from infectious diseases transmitted by blood and tissue; proposed guideline. Villanova, PA 1991;7(9). Order code M29-P.

This antibody was produced using EPITOMICS proprietary rabbit monoclonal antibody technology (U.S. Patent No. 5,675,063).



Cyclin D1

Prediluted Rabbit Monoclonal Antibody

Control Number: 901-307IP-051908

Catalog Number:
IP 307 G10
IP 307 G20

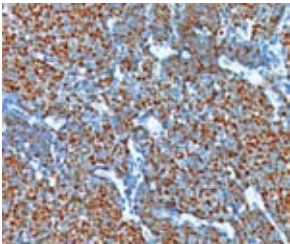
Description:
10 ml, predilute
20 ml, predilute

Intended Use:

For In Vitro Diagnostic Use

Summary and Explanation:

This rabbit monoclonal antibody recognizes a protein of 36kDa, identified as cyclin D1 (also known as bcl-1 or PRAD-1). Cyclin D1 is a regulatory subunit of certain protein kinases thought to advance the G1 phase of the cell cycle. Cyclin D1 used in tandem with CD5, CD10 and CD23 is the most reliable immunohistochemical marker for the mantle cell lymphoma. Cyclin D1 is also expressed in invasive breast cancer. Due to the superior technology in the development of this antibody, its binding capacity is superior to mouse monoclonal antibodies and is virtually background free.



Mantle cell lymphoma stained with Cyclin D1.

Principle of Procedure:

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Source: Rabbit Monoclonal**Species Reactivity:** Human, mouse and rat**Clone:** SP4**Isotype:** Rabbit IgG**Antibody Category:** Lymphoma**Epitope/Antigen:** Cyclin D1**Total Protein Concentration:** Call for lot specific Ig Concentration.**Cellular Localization:** Nuclear**Positive Control:** Mantle cell lymphoma and breast cancer**Normal Tissue:** Tonsil**Abnormal Tissue:** Mantle cell lymphoma and breast cancer**Known Applications:**

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative.**Storage and Stability:**

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Protocol Recommendations**Pretreatment Solution (recommended):** Diva**Pretreatment Protocol:****Heat Retrieval Method:**

Retrieve sections under pressure using BIOCARE's Decloaking Chamber, followed by a wash in distilled water. Alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 20 minutes then wash in distilled water.

Peroxide Block:

Block for 5 minutes at RT.

Primary Antibody: Incubate for 30 minutes at RT.**Secondary:** N/A**Tertiary:** Incubate for 30 minutes at RT.**Chromogen:**

Incubate for 5 minutes with DAB at RT.

Counterstain:

1. Rinse with deionized water. 2. Incubate for 5 minutes with automated Hematoxylin. 3. Rinse with TBS Buffer for 1 minute followed by a rinse with deionized water.

Quality Statement:

BIOCARE protocols have been standardized using in-house antibodies, detection and accessory reagents for use on the *intelliPATH* FLX automated stainer. Recommended staining protocols are specified in the datasheet of the antibody of interest. Pre-optimized *intelliPATH* FLX protocols with preset parameters can be displayed, printed and edited according to the procedure in the operator's manual. Refer to the operator's manual for additional instruction to navigate *intelliPATH* FLX software and stainer. Use TBS for washing steps unless otherwise specified.

Performance Characteristics:

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