Oct-2

Concentrated and Prediluted Monoclonal Antibody
901-417-071717

BIOCARE MEDICAL

Catalog Number:	**CM 417 A**	**PM 417 AA**
Description:	0.1 ml, concentrated	6.0 ml, prediluted
Dilution:	1:50-1:100	Read-to-use
Diluent:	Renoir Red	N/A

Intended Use:
For In Vitro Diagnostic Use
Oct-2 [Oct-207] is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of Oct-2 protein by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

Summary and Explanation:
Oct-2 is a transcription factor belonging to the POU homeo-domain family that binds to the immunoglobin (Ig) gene octamer sites regulating B-cell specific genes. Oct-2 protein expression is seen in germinal center B-cells and is significantly greater in germinal center derived B-cell lymphomas (5). Routine morphologic and immunohistochemical studies can distinguish most cases of classic Hodgkin's lymphoma (CHL) from its imitators; however, the differences in expression of BSAP, OCT-2, BOB.1 and the pan B-cell markers CD20, CD22, and CD79a may aid in distinguishing difficult cases of CHL from nodular lymphocyte predominant Hodgkin's lymphoma and diffuse large B-cell lymphomas (1-5).

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; others not tested
Clone: Oct-207
Isotype: IgG2b
Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.
Epitope/Antigen: Recombinant protein corresponding to 129 amino acids of the N-terminus of the human Oct-2 molecule.
Cellular Localization: Nuclear
Positive Control: Tonsil or lymph node

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.

Protocol Recommendations:
Peroxide Block: Block for 5 minutes with Biocare's Peroxidazed 1.
Pretreatment Solution (recommended): Borg

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 10 minutes then wash in distilled water.
Protein Block (Optional): Incubate for 5-10 minutes at RT with Biocare's Background Punisher.
Primary Antibody: Incubate for 30 minutes at RT.

Protocol Recommendations Cont'd:
Probe: Incubate for 10 minutes at RT with a secondary probe.
Polymer: Incubate for 10 minutes at RT with a tertiary polymer.
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. It can also be used on an automated staining system and with other Biocare polymer detection kits. Use TBS buffer for washing steps.

Limitations:
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. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria by a qualified pathologist. The clinical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests.

Quality Control:
Refer to CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-A2) CLSI Wayne, PA USA (www.clsi.org). 2011

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) (6)
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

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Precautions Cont'd:
and specimens. If reagents or specimens come in contact with sensitive areas, wash with copious amounts of water. (7)
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 MSDS is available upon request and is located at http://biocare.net/support/msds/.

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.

References:
1. Slack GW, *et al.* Lymphocyte depleted Hodgkin lymphoma: an evaluation with immunophenotyping and genetic analysis. Leuk Lymphoma. 2009 Jun;50(6):937-43.
2. McCune RC, *et al.* Expression profiling of transcription factors Pax-5, Oct-1, Oct-2, BOB.1 and PU.1 in Hodgkin's and non-Hodgkin's lymphomas: a comparative study using high throughput tissue microarrays. Mod Pathol. 2006 Jul; 19(7): 1010-8.
3. Garcia-Cosio M, *et al.* Analysis of transcription factor OCT.1, OCT.2 and BOB.1 expression using tissue arrays in classical Hodgkin's Lymphoma. Mod Pathol. 2004; 17(12):1531-8.
4. Browne P, *et al.* The B-cell transcription factors BSAP, Oct-2, and BOB.1 and the pan-B-cell markers CD20, CD22, and CD79a are useful in the differential diagnosis of classic Hodgkin lymphoma. Am J. Clin Pathol. 2003; 120(5):767-77.
5. Re D, *et al.* Oct-2 and Bob-1 deficiency in Hodgkin and Reed Sternberg cells. Cancer Res. 2001 Mar; 61(5):2080-4.
6. 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."
7. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory workers from occupationally Acquired Infections; Approved guideline-Third Edition CLSI document M29-A3 Wayne, PA 2005.

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