Oct-3/4
Prediluted Monoclonal Antibody
Control Number: 901-313-083117

Catalog Number: PM 313 AA
Description: 6.0 ml, prediluted
Dilution: Ready-to-use
Diluent: N/A

Intended Use:
For In Vitro Diagnostic Use
Oct-3/4 [SEMGC] is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of Oct-3/4 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-3/4 is an 18 kDa POU-domain transcription factor encoded by the POU5F1 gene. The gene which encodes Oct-3/4 maps to human chromosome 6p21.31. Oct-3/4 is involved in regulation of pluripotency during normal development and is detectable in embryonic stem and germ cells. Transcription factors containing the POU homeodomain have been shown to be important regulators of tissue-specific gene expression in lymphoid and pituitary differentiation and in early mammalian development. Oct-3 (also known as Oct-4) is a mammalian POU transcription factor expressed by early embryo cells and germ cells. Oct-3/4 is essential for the identity of the pluripotential founder cell population in the mammalian embryo. Studies have shown Oct-3/4 immunohistochemistry is an informative diagnostic tool for pluripotent germ-cell tumors and offers new insights into the histological heterogeneity of this cancer. Studies have demonstrated that Oct-3/4 is a highly specific and sensitive immunohistochemical marker for primary intracranial germinomas and is a sensitive and specific marker for intratubular germ cell neoplasia. The intensity of Oct-3/4 immunostaining has been shown to be significantly better than that of PLAP.

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: SEMGC
Isotype: IgG2b
Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.
Epitope/Antigen: Oct-3/4
Cellular Localization: Nuclear
Positive Control: Seminoma
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.

Protocol Recommendations:
Protocol Recommendations Cont’d:

Peroxide Block: Block for 5 minutes with Biocare's Peroxidazed 1.
Pretreatment Solution: 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.

Technical Note:
This antibody has been standardized with Biocare's MACH 4 detection system. 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:

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 (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) (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 in 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.
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References:

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.