GENE BIO SOLUTION

D2-40 LYMPHATIC MARKER

Format	Catalog no.	Pack size	Dilution
Concentrated	GB 266 A, B, C	0.1, 0.5, 1.0 mL	1:100
Prediluted	GB 266 AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

In both healthy tissues and vascular diseases, the D2-40 antibody selectively binds to lymphatic endothelium. While research has demonstrated [D2-40] staining in lymphatic channel endothelium, no staining has been observed in the nearby capillary. Although hemangiomas, glomus tumors, angiolipomas, pyogenic granulomas, and vascular malformations did not show any staining, D2-40 did stain the endothelium of lymphangiomas in the same study. Some angiosarcomas and Kaposi's sarcomas have also been found to react with D2-40. D2-40 has the potential to be a highly specific marker for malignant mesothelioma, according to studies.

INTENDED USE -

This mouse monoclonal antibody, designated as D2-40 (Lymphatic Marker), is designed for in vitro diagnostic usage in human tissues preserved with formalin-fixed paraffin embedded (FFPE). Its primary function is to qualitatively identify O-linked sialoglycoprotein using immunohistochemistry (IHC). Morphological studies with appropriate controls should supplement clinical interpretation of staining or lack thereof; these studies should be reviewed by a trained pathologist in light of the patient's medical history and other diagnostic testing.

SUMMARY AND EXPLANATION -

Research has revealed that D2-40 interacts with an O-linked sialoglycoprotein (MW 40K) that can be detected on the surface of testicular germ-cell tumors, in fetal testicular tissue, and on the lymphatic endothelium. In both healthy tissues and vascular diseases, D2-40 is recognized as a specific marker of lymphatic endothelium. Some research has indicated that clone D2-40 stains the endothelium of lymphatic channels, but not the capillaries nearby. Endothelium from lymphangiomas has also been stained by clone D2-40, but no staining was observed in hemangiomas, glomus tumors, angiolipomas, pyogenic granulomas, or vascular malformations. Another group of angiosarcomas and Kaposi's sarcoma have demonstrated an interaction with D2-40. Early metastasis and prognosis may be

correlated with lymphatic vessel proliferation and distribution. Additionally, D2-40 has demonstrated to be an extremely specific indicator for malignant mesothelioma.

PRINCIPLE OF PROCEDURE -

The immunohistochemical identification of antigens in cells and tissues involves multiple steps. The primary antibody is bound to its specific epitope in the initial stage. Applying a one- or two-step detection technique follows antigen tagging with a primary antibody. An enzyme-labeled polymer will attach to the main antibody in the one-step method. Adding a linker antibody to bind to the primary antibody is the first step of a two-phase process. After that, the linker antibody is bound using an enzyme-labeled polymer. A colorimetric reaction is used to demonstrate the detection of the attached antibodies.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human, mouse, and rat

CLONE - D2-40

ISOTYPE - IgG1

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - O-linked sialoglycoprotein

CELLULAR LOCALISATION - Cytoplasm (lymphatic epithelium)

POSITIVE TISSUE CONTROL - Tonsil, breast cancer or colon cancer

KNOWN APPLICATIONS -Immunohistochemistry
30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

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.

Materials required but not provided -

1) Positive tissue control - Tonsil, breast cancer or colon cancer
2) Negativecontroltissue(internalorexternal)
3) Microscopeslidesandcoverslips
4) Stainingjarsorbaths
5) Timer
6) Xyleneorxylenesubstitute
7) Ethanolorreagentalcohol
8) Deionizedordistilledwater
9) Heatingequipmentorenzymefortissuepretreatmentstep
10) Detection system
11) Chromogen
12) Wash buffer
13) Hematoxylin
14) Antibody diluents
15) Peroxide block
16) Light microscope
17) Mounting medium

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 Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.