GENE BIO SOLUTION

MAMMAGLOBIN

Format	Catalog no. -	Pack size	Dilution
Concentrated	GB269AA,H	-	-
Prediluted		6.0, 25 mL	Ready to use

PRODUCT DESCRIPTION -

The mammaglobin antibody encodes a 10 kDa glycoprotein and is remotely associated with a family of epithelial secretory proteins, which include rat estramustine-binding protein, prostatein, and human Clara cell 10 kDa proteins (CC10)/uteroglobin. Mammaglobin, a mammary-specific member of the uteroglobin family, is known to be overexpressed in human breast carcinoma. Research indicates that mammaglobin is a marker that is both relatively specific to and sensitive for breast tissue. Mammaglobin may be significant in conjunction with GCDFP-15 and estrogen receptor in assessing cancers of unclear primary origin.

INTENDED USE -

Mammaglobin (M) [1A5] is a murine monoclonal antibody designed for laboratory applications to qualitatively identify mammaglobin protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence must be supplemented by morphological studies utilizing appropriate controls and assessed in conjunction with the patient's clinical history and other diagnostic tests by a skilled pathologist.

SUMMARY AND EXPLANATION -

The mammaglobin gene was initially found through a differential screening method aimed at isolating novel genes related with human breast cancer. Mammaglobin encodes a 10 kDa glycoprotein and is remotely associated with a family of epithelial secretory proteins, which include rat estramustine-binding protein/prostatein and human Clara cell 10 kDa protein (CC10)/uteroglobin. Mammaglobin, a mammary-specific member of the uteroglobin family, is recognized for its overexpression in human breast cancer. Research indicates that mammaglobin is among the initial markers that are relatively specific and sensitive to mammary tissue, with an accuracy of 85%. Mammaglobin may be beneficial when utilized in conjunction with GCDFP-15 and ER for the assessment of cancers with uncertain primary origins.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The initial step attaches the primary antibody to its designated epitope. Following the tagging of the antigen with a primary antibody, a one-, two-, or three-step detection protocol may be utilized. The one-step approach will utilize an enzyme-conjugated polymer that attaches to the main antibody. A two-step approach will involve the addition of a secondary antibody to bind to the primary antibody. An enzyme-conjugated polymer is subsequently introduced to engage with the secondary antibody. The three-step detection protocol will include the addition of a secondary antibody to bind to the main antibody, succeeded by a linker antibody step to enhance binding efficacy. An enzyme-conjugated polymer is subsequently introduced to attach to the linker antibody. The presence of bound antibodies is demonstrated by a colorimetric response.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human, mouse and rat

CLONE- 1A5

ISOTYPE - IgG1

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - Mammaglobin

CELLULAR LOCALISATION - Cytoplasm

POSITIVE TISSUE CONTROL - Normal breast

KNOWN APPLICATIONS - I mmunohistochemistry
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 95ºC followed by cooling at room temperature for 20 minutes.

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.

Materials required but not provided -

1) Positivetissuecontrol-Normalbreast
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.