Epithelial Membrane Antigen (EMA [Mc-5])

Format	Catalog no.	Pack size	Dilution
Concentrated	GB143A,B,C	0.1, 1.0 mL	1:200
Prediluted	GB143AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

It has been demonstrated that this Epithelial Membrane Antigen antibody reacts with many forms of adenocarcinoma. There is significant positive evidence for malignancies in the skin and breasts. Studies have shown that endometrial, kidney, thyroid, stomach, pancreatic, lung, colon, ovarian, prostate, and cervical carcinomas stain less strongly than other types of cancers. Embryonal carcinomas, thyroid medullary carcinomas, squamous carcinomas, lymphomas, and melanomas are all characterized by a lack of reactivity or an extremely small number of positive cells, according to studies. There may be a lack of reactivity in transitional cell carcinomas. Anaplastic large cell lymphoma cells can be found to be positive for EMA in a small percentage of patients.

INTENDED USE -

In Vitro Diagnostics This mouse monoclonal antibody, designated as Epithelial Membrane Antigen (EMA [Mc-5]), is designed for use in immunohistochemistry (IHC) as a qualitative marker for EMA protein in human tissues that have been fixed and embedded in formalin. Morphological examinations with appropriate controls should supplement the clinical interpretation of staining or lack thereof. A competent pathologist should assess these findings in light of the patient's medical history and other diagnostic procedures.

SUMMARY AND EXPLANATION -

Among the many diverse families of transmembrane proteins found in human milk fatty globules (HMFGs) is epithelial membrane antigen (EMA). Nope. This particular family of antigens isn't exclusive to the breast; secretory epithelial cells, nonsecretory epithelium (like squamous epithelium), and even nonepithelial cells can have them, but to a lesser extent. Because of its reactiveness against a wide variety of adenocarcinomas, EMA is more accurately described as a broad-spectrum antibody. When it comes to glandular organs, EMA can tell them apart. There is significant positive evidence for malignancies in the skin and breasts. Endometrial, renal,

thyroid, gastric, pancreatic, lung, colon, ovarian, prostate, and cervix carcinomas show less staining. The majority of embryonic carcinomas, thyroid medullary carcinomas, squamous carcinomas, lymphomas, and melanomas either do not react or exhibit very few positive cells. A lack of response is possible in transitional cell carcinomas. Keep in mind that only a small percentage of anaplastic large cell lymphomas test positive for EMA in their cells. Liver metastases is quite likely when CEA positivity is present in conjunction with EMA or Leu-M1 positivity.

PRINCIPLE OF PROCEDURE -

Immunohistochemistry is a multi-step method that can be used to detect antigens in cells and tissues. The primary antibody is bound to its specific epitope in the initial stage. A secondary antibody is introduced to attach to the primary antibody after the antigen has been labeled with the primary antibody. Afterwards, an enzyme label is introduced to attach to the secondary antibody; a colorimetric reaction is used to detect the bound antibody.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - Mc-5

ISOTYPE - IgG1

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - EMA

CELLULAR LOCALISATION - Cytoplasmic and cell membrane

POSITIVE TISSUE CONTROL - Breast carcinoma

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 2ºC to 8ºC.

Materials required but not provided -

1) Positivetissuecontrol-Breastcarcinoma
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.