GENE BIO SOLUTION

CALPONIN

Format	Catalog no.	Pack size	Dilution
Concentrated	GB172A,C	0.1, 1.0 mL	1:100
Prediluted	GB172AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

Calponin, a 34 kDa polypeptide, is an actin-binding protein involved with the cytoskeleton that also interacts with tropomyosin and calmodulin. The calponin antibody serves as an effective marker for myoepithelial and basal lamina, aiding in the differentiation between microinvasive and in situ ductal carcinomas of the breast. The calponin antibody may have potential applications in malignant myoepithelium and pleomorphic adenoma of the salivary gland, as well as serving as a valuable marker for fine needle aspirates of papillary breast tumors.

INTENDED USE -

Calponin [CALP] is a mouse monoclonal antibody designed for laboratory application in the qualitative detection of calponin 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 -

Calponin, a 34 kDa polypeptide, is an actin-binding protein involved with the cytoskeleton that interacts with tropomyosin and calmodulin. Calponin is recognized for its high specificity for both normal and neoplastic myoepithelium, serving as a significant diagnostic tool in differentiating polymorphous low-grade adenocarcinoma, adenoid cystic carcinoma, and pleomorphic adenoma of the salivary gland.

Myoepithelial markers assist in distinguishing papilloma from papillary cancer of the breast, particularly when utilizing a panel of CK5/6, p63, and neuroendocrine markers (chromogranin A and synaptophysin).

Calponin, in conjunction with basal lamina markers (laminin and type IV collagen), may aid in distinguishing microinvasive from ductal carcinoma in situ (DCIS) of the breast.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The first 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 bind to the secondary antibody. The three-step detection protocol will incorporate a secondary antibody to bind to the primary 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 detection of bound antibodies is demonstrated using a colorimetric response.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - CALP

ISOTYPE - IgG1/kappa

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - Calponin protein

CELLULAR LOCALISATION - Cytoplasmic

POSITIVE TISSUE CONTROL - Normal breast glands

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 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. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date. 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 - Normal breast glands
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.