GENE BIO SOLUTION

P63
Concentrated Monoclonal Antibody

Format	Catalog No.	Pack size	Dilution
Concentrated	GB163A,B,C	0.1, 0.5, 1.0 mL	1 : 100
Prediluted	GB163AA,H	6.0, 25 mL	Ready to use

PRODUCT DESCRIPTION -

P63, a homolog of the tumor suppressor p53, has been discovered in basal cells inside the epithelial layers of several tissues, including the epidermis, cervix, urothelium, breast, and prostate. p63 was identified in the nuclei of the basal epithelium in normal prostate glands; however, it was absent in malignant prostate tumors. The p63 antibody is recognized as an effective marker for distinguishing benign from malignant prostate lesions, especially when utilized alongside high molecular weight cytokeratin markers and the prostate-specific marker AMACR (P504S). p63 has been demonstrated to be a sensitive biomarker for lung squamous cell carcinomas (SqCC), exhibiting claimed sensitivities ranging from 80% to 100% . The specificity for lung squamous cell carcinoma (SqCC) compared to lung adenocarcinoma (LADC) is reported to be roughly 70-90%, with positive p63 staining being detected in 10-30% of LADC patients. p63 has been detected in the myoepithelial cells of normal breast duct tissue. Studies have highlighted the use of p63 in a panel of immunohistochemical markers for evaluating breast lesions, owing to the distinct expression patterns of luminal compared to basal and myoepithelial markers.

INTENDED USE -

p63 [4A4] is a mouse monoclonal antibody designed for laboratory applications in the qualitative detection of p63 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 -

P63, a homolog of the tumor suppressor p53, has been discovered in basal cells inside the epithelial layers of several tissues, including the epidermis, cervix, urothelium, breast, and prostate. p63 was identified in the nuclei of the basal epithelium in normal prostate glands; however, it was absent in malignant prostate tumors. Consequently, p63 has been identified as an effective marker for

distinguishing benign from malignant prostate lesions, especially when utilized alongside high molecular weight cytokeratin markers and the prostate-specific marker AMACR (P504S). P63 has been demonstrated to be a sensitive biomarker for lung squamous cell carcinomas (SqCC), exhibiting claimed sensitivities ranging from 80% to 100% . The specificity for lung squamous cell carcinoma (SqCC) compared to lung adenocarcinoma (LADC) is reported to be roughly 70-90%, with positive p63 staining being detected in 10-30% of LADC patients. p63 has been detected in the myoepithelial cells of normal breast duct tissue. Studies have highlighted the efficacy of p63 in a panel of immunohistochemical markers for evaluating breast tumors, owing to the distinct expression of luminal compared to basal and myoepithelial markers.

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 attach 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 linkerantibody.Thepresenceofboundantibodiesisdemonstratedbyacolorimetric response.

SOURCE - Monoclonal mouse

SPECIES REACTIVITY - Human, mouse and rat

CLONE - 4A4

ISOTYPE - IgG2a/kappa

PROTEIN CONCENTRATION - Request lot-specific immunoglobulin concentration.

EPITOPE/ANTIGEN- p63

CELLULAR LOCALISATION - Nuclear

POSITIVE TISSUE CONTROL - Normal prostate

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 a 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) Positivetissuecontrol-Normalprostate
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.