GENE BIO SOLUTION

p53 Tumor Suppressor Protein

Format	Catalog no.	Pack size	Dilution
Concentrated	GB-c42A,B,C	0.1, 0.5, 1.0 mL	1 : 100
Prediluted	GB-p42AA	6.0mL	Ready to use

PRODUCT DESCRIPTION -

In addition to its role as a transcription factor, p53 has been found to prevent tumor growth. DNA damage or other stress signals are known to activate p53, which can then cause cell-cycle arrest, apoptosis, or DNA repair. Allele loss occurs often at the nuclear p53 gene on chromosome 17p, which is involved in 60% of malignancies, including breast, colon, and lung cancers. The evaluation of mutation and overexpression status using a mouse monoclonal antibody against the p53 tumor suppressor protein has also demonstrated prognostic usefulness for nasopharyngeal carcinoma and distal colorectal cancer.

INTENDED USE -

For In Vitro Diagnostic Applications. The p53 Tumor Suppressor Protein (M) [DO-7] is a mouse monoclonal antibody designed for laboratory application in the qualitative detection of p53 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 qualified pathologist.

SUMMARY AND EXPLANATION -

The p53 Tumor Suppressor Protein (M) [DO-7] denotes a 53 kDa phosphoprotein, which is the product of the p53 suppressor gene. It interacts with both mutant and wild-type p53. The epitope is located at the N-terminus (amino acids 37-45) of p53. p53 has been identified in various tumor types, including breast, colon, and prostate cancers.

PRINCIPLE OF PROCEDURE -

The identification of antigens in tissues and cells is a multi-step immunohistochemistry procedure. The first step attaches the primary antibody to its designated epitope. Following the antigen's labeling with a primary antibody, a one-, two-, or three-step detection method may be utilized. The one-step technique will

utilize an enzyme-conjugated polymer that attaches to the main antibody. A two-step technique involves the addition of a secondary antibody to bind to the primary antibody. A polymer conjugated with an enzyme is subsequently injected to bind to the secondary antibody. The three-stage detection methodology 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 administered to attach to the linker antibody. The presence of bound antibodies is demonstrated by a colorimetric response.

SOURCE - Monoclonal murine

SPECIES Reactivity: Human; other species unverified

CLONE - DO-7

ISOTYPE - IgG2b/kappa
Solicit the immunoglobulin concentration specific to the lot.

EPITOPE/ANTIGEN– p53

CELLULAR LOCALISATIONS - Nuclear

POSITIVE TISSUE CONTROL - Mammary and Colorectal Carcinomas

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- MammaryandColorectalCarcinomas
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.