GENE BIO SOLUTION

IMP3 (RM)

Format	Catalog No.	Pack size	Dilution
Concentrated	GB3180A,B	0.1, 0.5 mL	1:100
Prediluted	GB3180AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

IMP3 (insulin-like growth factor II mRNA-binding protein 3) is a 580 amino acid oncofetal RNA-binding protein featuring four K homology domains, encoded by a 4350 bp mRNA transcript derived from the IGF2BP3 gene located on chromosome 7p11.5 .Recent publications highlight its significance as a novel biomarker in several cancer types, with results indicating that IMP3 may be integral to malignant transformation. The cytoplasmic expression of IMP3 is correlated with a more aggressive phenotype in various malignancies, including triple-negative (basal-like) breast cancer, colon cancer, lung cancer, and prostate cancer. IMP3 has been utilized to differentiate between benign and malignant malignancies and has been identified as a marker of high-grade dysplasia in esophageal adenocarcinoma.

INTENDED USE -

Intended for In Vitro Diagnostic Applications IMP3 (RM) [EP286] is a rabbit monoclonal antibody designed for laboratory applications to qualitatively identify the IMP3 protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical assessment of any staining or its absence must be supplemented by morphological analyses with appropriate controls and should be considered in conjunction with the patient's clinical history and other diagnostic evaluations by a certified pathologist.

SUMMARY AND EXPLANATION -

IMP3 (insulin-like growth factor II mRNA-binding protein 3) is a 580-amino acid oncofetal RNA-binding protein featuring four K homology domains, encoded by a 4350 bp mRNA transcript derived from the IGF2BP3 gene located on chromosome 7p11.5. Recent publications highlight its significance as a novel biomarker across several cancer types, with results indicating that IMP3 may be instrumental in malignant transformation. The cytoplasmic expression of IMP3 is correlated with a more aggressive phenotype in various malignancies, including triple-negative (basal-like) breast cancer, colon cancer, lung cancer, and prostate cancer. IMP3 has been utilized to differentiate between benign and malignant malignancies and has been identified as a marker of high-grade dysplasia in esophageal adenocarcinoma.

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, an enzyme-conjugated polymer is introduced to bind to the primary antibody. The presence of the bound antibody is indicated by a colorimetric response.

SOURCE - Rabbit monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE- EP286

ISOTYPE - IgG

PROTEIN CONCENTRATION - ~10 mg/ml. Call for lot specific Ig concentration.

EPITOPE/ANTIGEN -A synthetic peptide corresponding to the human IMP3 protein

CELLULAR LOCALISATION - Cytoplasmic/nuclear

POSITIVE TISSUE CONTROL - Lung squamous carcinoma and normal placenta

KNOWN APPLICATIONSImmunohistochemistry
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- Lungsquamouscarcinomaandnormalplacenta
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.