

Localization – Cytoplasm, Nuclear

Host Species – Mouse

Ig Class – IgG1 / Kappa

Intended Use

This antibody is designed for the specific localization of SMAD4 in formalin-fixed, paraffin-embedded (FFPE) tissue sections.

Storage & Handling

Store RTU Vial at 2-8°C. Fresh dilutions for concentrated antibodies, if required, should be prepared prior to use and are stable for up to one day at room temperature (20-26°C).

Working Principle

IHC is a two-step process wherein the primary antibody binds to the antigen of interest and that binding is detected by a chromogen. The primary antibody may be used in IHC using manual techniques or any Automated Staining System. Positive and negative controls should always be run simultaneously with all patient specimens.

Product Description

Signaling from ligand-activated membrane receptor serine/threonine kinases to nuclear targets is mediated by a group of evolutionarily conserved proteins, including DPC4. When ligands bind to receptors of the TGF- β family, they phosphorylate SMAD proteins, specifically SMAD1 and SMAD2. These phosphorylated SMAD proteins then translocate to the nucleus, where they promote transcription. To fulfill this function, receptor-activated SMAD1 and SMAD2 require interaction with the product of deleted in pancreatic carcinoma, locus 4 (DPC4), also known as SMAD4. SMAD4/DPC4 functions as a tumor suppressor, as it is inactivated in over half of pancreatic carcinomas and, to a lesser extent, in other cancers. SMAD4 expression is lost in approximately 80% of pancreatic adenocarcinoma cases but is infrequently absent in other cancers, such as endometrial (0%), colorectal (0%), ovarian (3%), lung (0%), breast (2%) adenocarcinomas, and malignant melanoma (4%). SMAD4 serves as a key marker in confirming the diagnosis of pancreatic adenocarcinoma.

Material Supplied

SMAD4 antibody is affinity purified and diluted in PBS, pH 7.4, containing 1% BSA and 0.09% sodium azide.

Material required But Not Supplied

- Xylene
- DI Water
- Control Tissues
- Isopropyl alcohol
- Antigen retrieval buffers
- Hematoxylin
- Positive charged slides
- Blocking Reagents
- Mounting media
- Wash Buffer
- Detection System
- Cover glass

Working Reagent Procedure

- Ready-to-Use antibodies have been optimized for use with the recommended protocols and should not require further dilution.
- Concentrated antibodies must be diluted in accordance with the recommended protocol.

Recommended Protocol

Refer the following table for the details on specific recommended protocol for this antibody.

| | | | |
|------------------------|---------------------------------------------|---------------------------------|----------------------------------------------------|
| Control Tissue | Human Pancreatic Adenocarcinoma | Antibody Incubation Time | 30-60 Minutes at RT |
| Dilution factor | 1:20-50 (Antibody Diluent: DH144) | Retrieval Pre-treatment | Tris-EDTA based HIER (AR9 Buffer: DH020) |

Precautions

This product should be used by qualified and trained professional users only.

Avoid microbial contamination of reagents to minimize non-specific staining. Never pipette reagents by mouth. Avoid contact of reagents and specimens with skin. If reagents or specimens come into contact with sensitive area, wash with sufficient amounts of water. Dispose of the unused reagents. This kit contains sodium azide at concentrations of less than 0.1%. Sodium azide is not classified as a hazardous chemical at these concentrations, but proper handling protocols should be observed. For more information on product hazards, precautions and waste disposal, *Material Safety Data Sheets* are available upon request.










Limitations

Improper tissue handling and processing prior to immunostaining can lead to inconsistent results. Variations in embedding and fixation or the nature of the tissue may lead to variations in results. Endogenous peroxidase activity or pseudo peroxidase activity in erythrocytes and tissue biotin may result in non-specific staining based on the detection system employed. Tissues containing Hepatitis B Surface Antigen (HBsAg) may give false positive with horseradish peroxidase systems. Improper counterstaining and mounting may compromise the interpretation of results. Interpretation of the staining result is solely the responsibility of the user. Experimental results should be confirmed by a medically-established diagnostic product or procedure. Evaluation must be performed by a qualified pathologist.

Troubleshooting

For Technical Support contact us at +91 - 7506501122 or info@dygnova.com or your local distributor to report unusual staining.

Doc No: DH/DS/SMAD394Rev.00

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|-------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------|------------------------------------|
|  | Manufacturer Details |  | Use by Date |  | Lot/Batch Number |
|  | Manufacturing Date |  | Consult Instructions for Use |  | Catalogue Number |
|  | Temperature Limits |  | Sufficient for 'n' assays / tests |  | In-vitro Diagnostic Medical Device |