Mouse Monoclonal Antibody Smad4 conjugated to Sepharose Beads

CatalogNo: ANT8370-M

Size 200ul

Storage Store at 4 °C for frequent use

Description

This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified beads. It is useful for immunoprecipitation.

Smad4 (ANT0050R) Rabbit mAb

Formulation: Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg ANaN3.

Host Species	Reactivity	Applications
• Rabbit	• Human,Mouse,Rat,	• WB,IHC,IF,IP,ELISA

MW	Isotype
• 60kD (Calculated) 60kD (Observed)	• IgG,Kappa

Recommended Dilution Ratios

IP

Basic Information

Clonality	Monoclonal
Clone Number	ANT0050R

Immunogen Information

Specificity Endogenous

Target Information

Gene name SMAD4

Protein Name Mothers against decapentaplegic homolog 4

Organism	Gene ID	UniProt ID
Human	4089;	Q13485;
Mouse	17128;	P97471;
Rat	50554;	O70437;

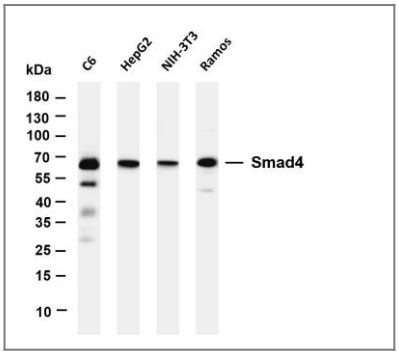
Cellular Localization Cytoplasm

Tissue specificity Fetal brain,Muscle,Placenta,

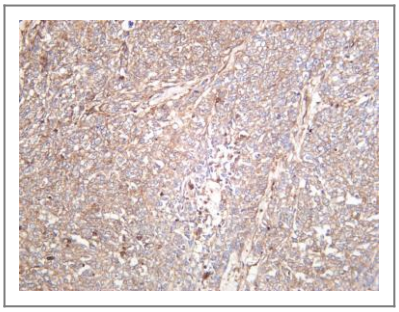
Function	Disease:Defects in SMAD4 are a cause of juvenile polyposis syndrome (JPS) [MIM:174900]; also known as juvenile intestinal polyposis (JIP). JPS is an autosomal dominant gastrointestinal hamartomatous polyposis syndrome in which patients are at risk for developing gastrointestinal cancers. The lesions are typified by a smooth histological appearance, predominant stroma, cystic spaces and lack of a smooth muscle core. Multiple juvenile polyps usually occur in a number of Mendelian disorders. Sometimes, these polyps occur without associated features as in JPS; here, polyps tend to occur in the large bowel and are associated with an increased risk of colon and other gastrointestinal cancers.,disease:Defects in SMAD4 are a cause of juvenile polyposis/hereditary hemorrhagic telangiectasia syndrome (JP/HHT) [MIM:175050]. JP/HHT syndrome phenotype consists of the coexistence of juvenile polyposis (JIP) and hereditary hemorrhagic telangiectasia (HHT) [MIM:187300] in a single individual. JIP and HHT are autosomal dominant disorders with distinct and non-overlapping clinical features. The former, an inherited gastrointestinal malignancy predisposition, is caused by mutations in SMAD4 or BMPR1A, and the latter is a vascular malformation disorder caused by mutations in ENG or ACVRL1. All four genes encode proteins involved in the transforming-growth-factor-signaling pathway. Although there are reports of patients and families with phenotypes of both disorders combined, the genetic aetiology of this association is unknown.,disease:Defects in SMAD4 are a cause of pancreatic carcinoma [MIM:260350].,disease:Defects in SMAD4 may be a cause of colorectal cancer (CRC) [MIM:114500].,Function:Common mediator of signal transduction by TGF-beta (transforming growth factor) superfamily; SMAD4 is the common SMAD (co-SMAD). Promotes binding of the SMAD2/SMAD4/FAST-1 complex to DNA and provides an activation function required for SMAD1 or SMAD2 to stimulate transcription. May act as a tumor suppressor.,ANTM:Monoubiquitinated on Lys-519 by E3 ubiquitin-protein ligase TRIM33. Monoubiquitination hampers its ability to form a stable complex with activated SMAD2/3 resulting in inhibition of TGF-beta/BMP signaling cascade.,similarity:Belongs to the dwarfin/SMAD family.,similarity:Contains 1 MH1 (MAD homology 1) domain.,similarity:Contains 1 MH2 (MAD homology 2) domain.,subcellular location:Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with R-SMAD.,subunit:May form trimers with receptor-regulated SMAD (R-SMAD). Found in a ternary complex composed of SMAD4, STK11 and STK11IP. Interacts with ATF2, COPS5, DACH1, MSG1, SKI, STK11, STK11IP and TRIM33. Associates with ZNF423 or ZNF521 in response to BMP2 leading to activate transcription of BMP target genes. Interacts with USP9X.,

Validation

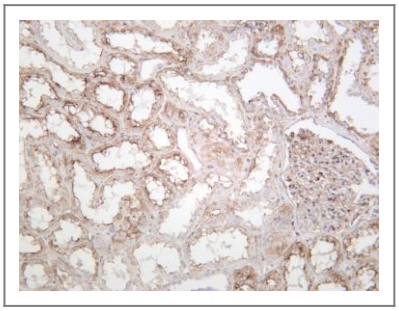
Data



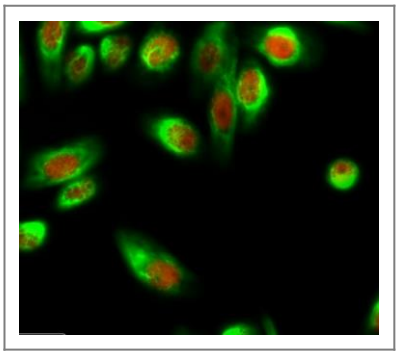
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Smad4 (ANT0050R) antibody. The HRPconjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: C6 Lane 2: HepG2 Lane 3: NIH-3T3 Lane 4: Ramos
Predicted band size: 60kDa Observed band size: 60kDa



Human breast carcinoma was stained with anti-Smad4 (ANT0050R) rabbit antibody



Human kidney was stained with anti-Smad4 (ANT0050R) rabbit antibody



Immunofluorescence analysis of Hela cell. 1,Smad4 Antibody(red) was diluted at 1:200(4° overnight). GAPDH Monoclonal Antibody(2B8)(green) was diluted at 1:200(4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594
Catalog:RS3611 was diluted at 1:1000(room temperature, 50min). Goat Anti Mouse Alexa Fluor 488 Catalog:RS3208 was diluted at 1:1000(room temperature, 50min).