



Smad4 Monoclonal Antibody

Catalog No	YP-Ab-01018
Isotype	IgG
Reactivity	Human
Applications	WB;IHC;IF;FCM;ELISA
Gene Name	SMAD4
Immunogen	Purified recombinant fragment of human Smad4 expressed in E. Coli.
Specificity	Smad4 Monoclonal Antibody detects endogenous levels of Smad4 protein.
Formulation	Ascitic fluid containing 0.03% sodium azide,0.5% BSA, 50%glycerol.
Source	Monoclonal, Mouse
Purification	Affinity purification
Dilution	Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/200 - 1/1000. Immunofluorescence: 1/200 - 1/1000. Flow cytometry: 1/200 - 1/400. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	DPC4;hSMAD4;JIP;MAD homolog 4;MADH4;Smad4;Mothers against decapentaplegic homolog 4;Mothers against DPP homolog 4;Deletion target in pancreatic carcinoma 4;SMAD family member 4;SMAD 4
Observed Band	
Calculated Molecular Weight	
Cell Pathway	Cytoplasm . Nucleus . Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with R-SMAD (PubMed:15799969). PDPK1 prevents its nuclear translocation in response to TGF-beta (PubMed:17327236). .
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

Background

This gene encodes a member of the Smad family of signal transduction proteins. Smad proteins are phosphorylated and activated by transmembrane serine-threonine receptor kinases in response to TGF-beta signaling. The product of this gene forms homomeric complexes and heteromeric complexes with other activated Smad proteins, which then accumulate in the nucleus and regulate the transcription of target genes. This protein binds to DNA and recognizes an 8-bp palindromic sequence (GTCTAGAC) called the Smad-binding element (SBE). The Smad proteins are subject to complex regulation by post-translational modifications. Mutations or deletions in this gene have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome. [provided by RefSeq, Oct 2009],

matters needing attention

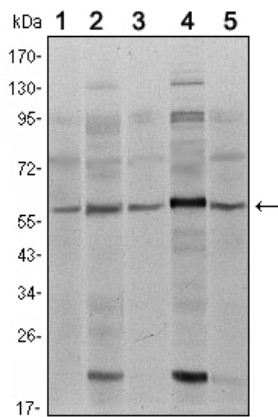
Avoid repeated freezing and thawing!

Usage suggestions

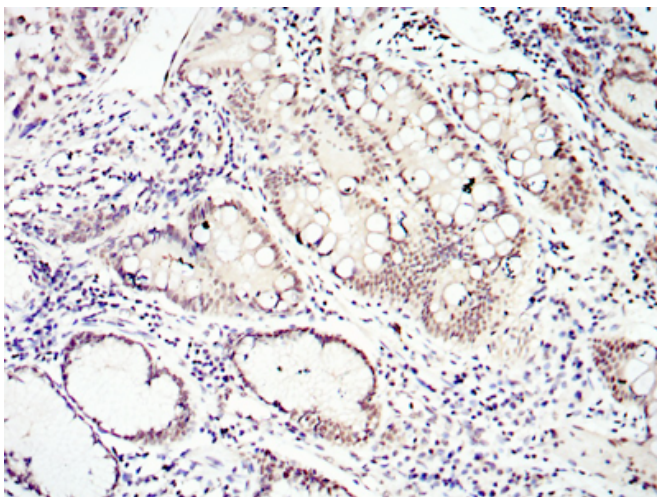
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



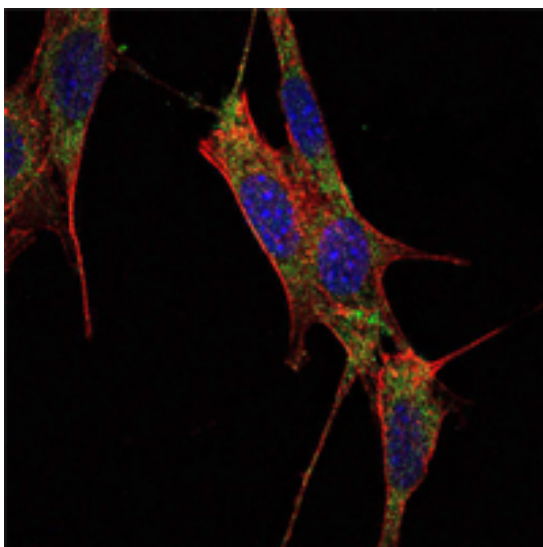
Products Images



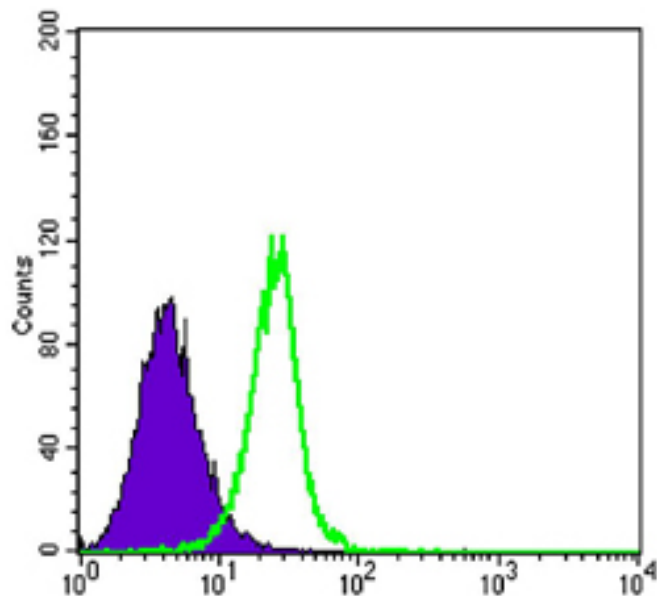
Western Blot analysis using Smad4 Monoclonal Antibody against A431 (1), SK-N-SH (2), K562 (3), HepG2 (4) and HUVE12 (5) cell lysate.



Immunohistochemistry analysis of paraffin-embedded lung cancer tissues with DAB staining using Smad4 Monoclonal Antibody.



Immunofluorescence analysis of NIH/3T3 cells using Smad4 Monoclonal Antibody (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow cytometric analysis of K562 cells using Smad4 Monoclonal Antibody (green) and negative control (purple).