

Anti-Smad4 antibody [SP306] - C-terminal ab217267

重组 RabMAb

1 References **16 图像**

概述

产品名称	Anti-Smad4抗体[SP306] - C-terminal
描述	兔单克隆抗体[SP306] to Smad4 - C-terminal
宿主	Rabbit
经测试应用	适用于: IHC-P, Flow Cyt (Intra), ICC/IF
种属反应性	与反应: Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	Flow Cyt (intra): NIH/3T3, HepG2, HAP1 cells and C6 cells. ICC/IF: NIH/3T3, HepG2, and C6 cells. IHC-P: Human placenta, pancreas, pancreatic adenocarcinoma, kidney, renal cell carcinoma, colon and colon adenocarcinoma tissues.
常规说明	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>This product is FOR RESEARCH USE ONLY. For commercial use, please contact partnerships@abcam.com.</p>

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
存储溶液	<p>pH: 7.20</p> <p>Preservative: 0.1% Sodium azide</p> <p>Constituents: 1% BSA, PBS</p>
纯度	Protein A purified

克隆	单克隆
克隆编号	SP306
同种型	IgG

应用

The Abpromise guarantee **Abpromise™**承诺保证使用ab217267于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IHC-P		1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
Flow Cyt (Intra)		1/450.
ICC/IF		1/50.

靶标

功能

Common SMAD (co-SMAD) is the coactivator and mediator of signal transduction by TGF-beta (transforming growth factor). Component of the heterotrimeric SMAD2/SMAD3-SMAD4 complex that forms in the nucleus and is required for the TGF-mediated signaling. Promotes binding of the SMAD2/SMAD4/FAST-1 complex to DNA and provides an activation function required for SMAD1 or SMAD2 to stimulate transcription. Component of the multimeric SMAD3/SMAD4/JUN/FOS complex which forms at the AP1 promoter site; required for syngernistic transcriptional activity in response to TGF-beta. May act as a tumor suppressor.

疾病相关

Defects in SMAD4 are a cause of pancreatic cancer (PNCA) [MIM:260350].

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.

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 etiology of this association is unknown.

Defects in SMAD4 may be a cause of colorectal cancer (CRC) [MIM:114500].

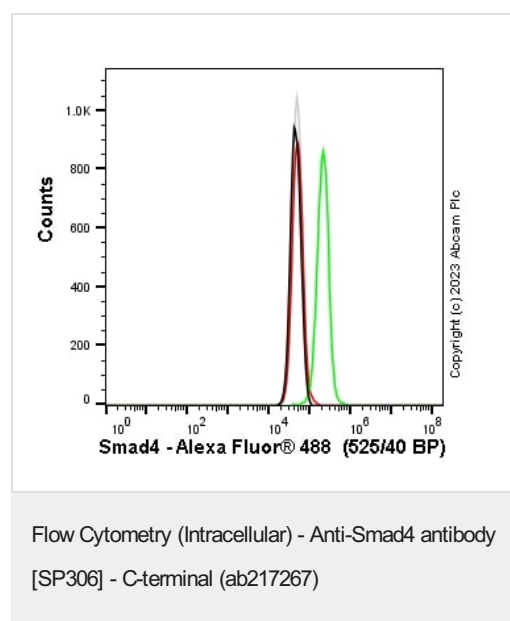
序列相似性

Belongs to the dwarfin/SMAD family.

Contains 1 MH1 (MAD homology 1) domain.

<p>结构域</p>	<p>Contains 1 MH2 (MAD homology 2) domain.</p> <p>The MH1 domain is required for DNA binding.</p> <p>The MH2 domain is required for both homomeric and heteromeric interactions and for transcriptional regulation. Sufficient for nuclear import.</p>
<p>翻译后修饰</p>	<p>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. Deubiquitination by USP9X restores its competence to mediate TGF-beta signaling.</p>
<p>细胞定位</p>	<p>Cytoplasm. Nucleus. Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with R-SMAD.</p>

图片



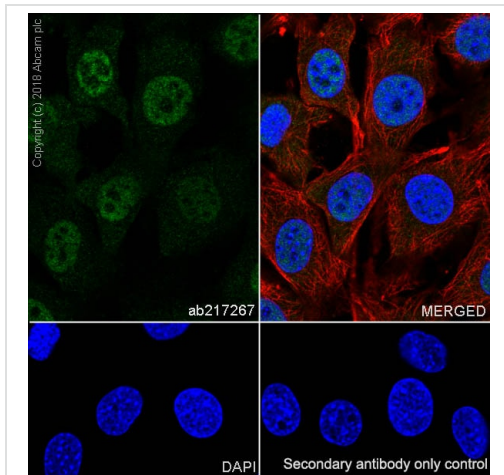
Flow cytometry overlay histogram showing wild-type Hap1 (green line) and SMAD4 knockout Hap1 stained with ab217267 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab217267) (1×10^6 in 100 μ l at 0.008 μ g/ml (1/265000)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Isotype control antibody Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control was used at the same concentration and conditions as the primary antibody (wild-type Hap1 - black line, SMAD4 knockout Hap1 - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity).

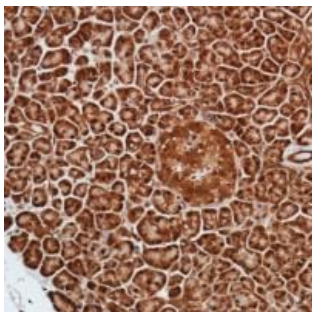
Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

This antibody gave a positive signal in Hap1 Fixed with 4% formaldehyde (10 min) / permeabilised with 0.1% PBS-Triton X-100 for 15 min under the same conditions.



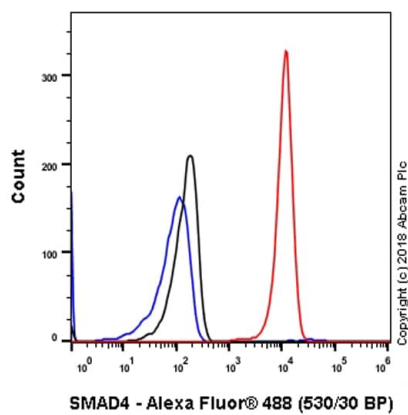
Immunocytochemistry/ Immunofluorescence - Anti-Smad4 antibody [SP306] - C-terminal (ab217267)

Immunocytochemistry/ Immunofluorescence analysis of NIH/3T3 (mouse embryonic fibroblast) cells labeling Smad4 with purified ab217267 at 1:50 (9 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



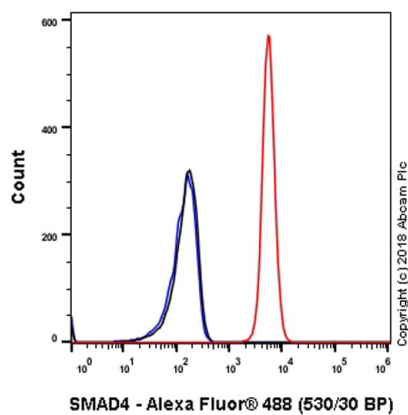
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad4 antibody [SP306] - C-terminal (ab217267)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded human pancreas tissue labeling Smad4 with ab217267 at 1/100 dilution.



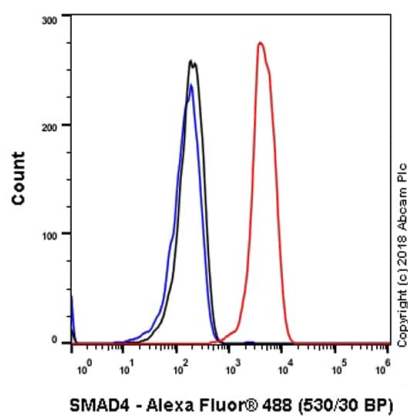
Flow Cytometry (Intracellular) - Anti-Smad4 antibody
[SP306] - C-terminal (ab217267)

Intracellular Flow Cytometry analysis of C6 (Rat glial tumor glial cell) cells labeling Smad4 with purified ab217267 at 1/450 dilution (1.01 µg/ml) Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG ([ab172730](#)) / Black. Unlabeled control - Unlabelled cells / Blue.



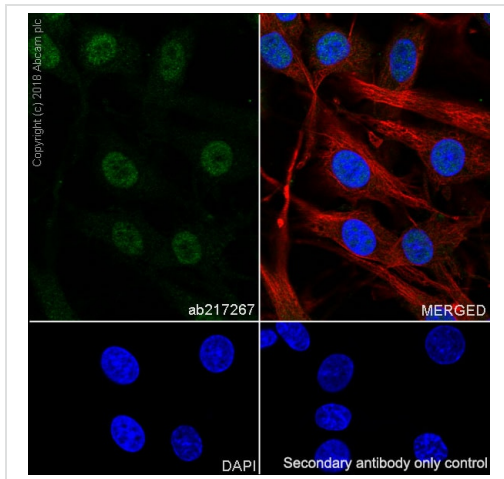
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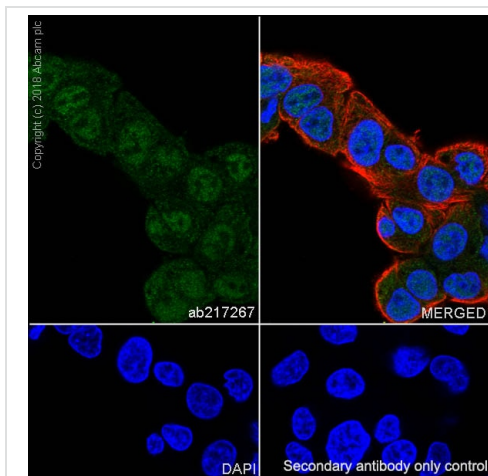
Flow Cytometry (Intracellular) - Anti-Smad4 antibody
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Intracellular Flow Cytometry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Smad4 with purified ab217267 at 1/450 dilution (1.01 µg/ml) Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG ([ab172730](#)) / Black. Unlabeled control - Unlabelled cells / Blue.



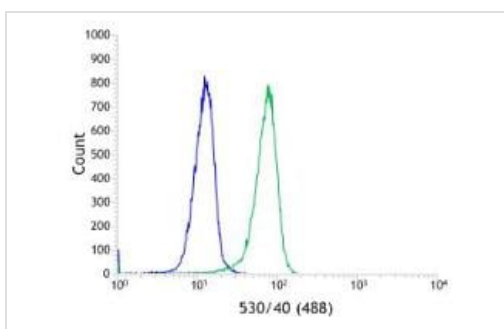
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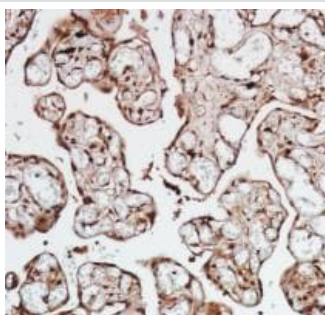
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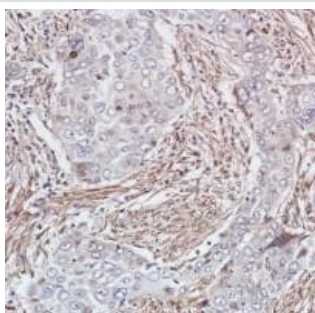
Flow Cytometry (Intracellular) - Anti-Smad4 antibody [SP306] - C-terminal (ab217267)

Intracellular flow cytometric analysis of NIH/3T3 (Mouse embryo fibroblast cell line) cells labeling Smad4 with ab217267 at 1/400 dilution for 30 minutes at 4° C (green), compared to a negative control cell of rabbit IgG (blue).



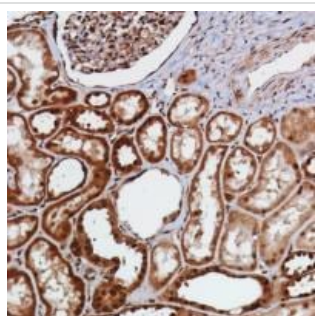
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad4 antibody [SP306]
- C-terminal (ab217267)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded human placenta tissue labeling Smad4 with ab217267 at 1/100 dilution.



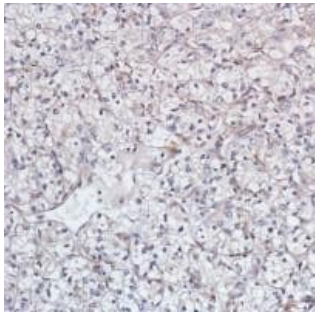
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad4 antibody [SP306]
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Immunohistochemical analysis of formalin-fixed, paraffin-embedded human pancreatic adenocarcinoma tissue labeling Smad4 with ab217267 at 1/100 dilution.



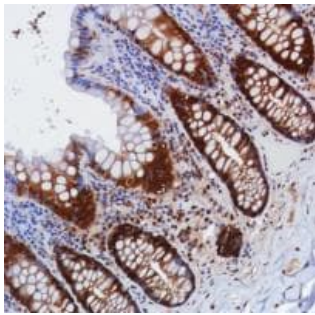
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad4 antibody [SP306]
- C-terminal (ab217267)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded human kidney tissue labeling Smad4 with ab217267 at 1/100 dilution.



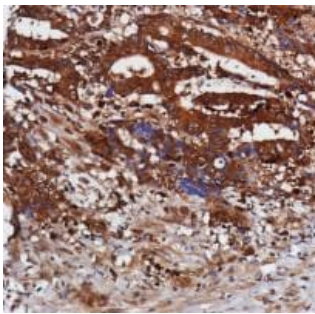
Immunohistochemical analysis of formalin-fixed, paraffin-embedded human renal cell carcinoma tissue labeling Smad4 with ab217267 at 1/100 dilution.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad4 antibody [SP306]
- C-terminal (ab217267)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded human colon tissue labeling Smad4 with ab217267 at 1/100 dilution.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad4 antibody [SP306]
- C-terminal (ab217267)



Immunohistochemical analysis of formalin-fixed, paraffin-embedded human colon adenocarcinoma tissue labeling Smad4 with ab217267 at 1/100 dilution.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Smad4 antibody [SP306]
- C-terminal (ab217267)

Why choose a recombinant antibody?



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Consistent and reproducible results



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Recombinant technology



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Confirmed specificity



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Animal-free production

Anti-Smad4 antibody [SP306] - C-terminal
(ab217267)

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