


Anti-Smad4 antibody ab110175

KO 評価済

4 References 画像数 3

製品の概要

製品名	Anti-Smad4 antibody
製品の詳細	Rabbit polyclonal to Smad4
由来種	Rabbit
アプリケーション	適用あり: WB 適用なし: ICC/IF
種交差性	交差種: Human 交差が予測される動物種: Mouse, Rat, Sheep, Horse, Cow, Dog, Pig, Chimpanzee, Macaque monkey, Gorilla, Orangutan 
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: HeLa, A431, Jurkat, A549, HepG2, THP1 and Ramos whole cell lysates.
特記事項	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
バッファー	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
	Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

精製度	Immunogen affinity purified
ポリ/モノ	ポリクローナル
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab110175の使用に適用されます**
 アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 67 kDa (predicted molecular weight: 60 kDa).

追加情報 Is unsuitable for ICC/IF.

ターゲット情報

機能 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 synergistic transcriptional activity in response to TGF-beta. May act as a tumor suppressor.

関連疾患 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].

配列類似性 Belongs to the dwarfin/SMAD family.
 Contains 1 MH1 (MAD homology 1) domain.
 Contains 1 MH2 (MAD homology 2) domain.

ドメイン The MH1 domain is required for DNA binding.

翻訳後修飾

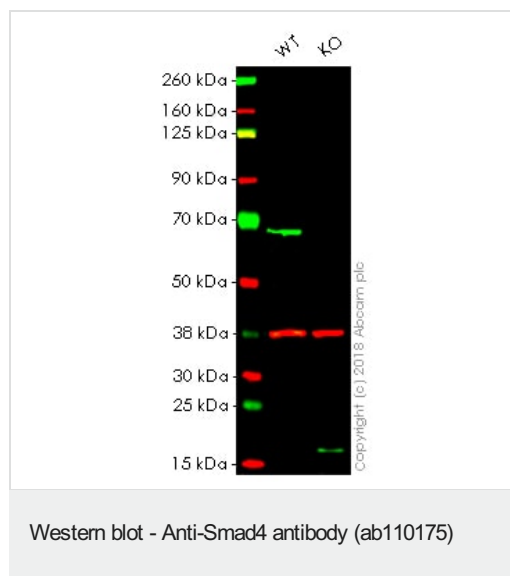
The MH2 domain is required for both homomeric and heteromeric interactions and for transcriptional regulation. Sufficient for nuclear import.

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.

細胞内局在

Cytoplasm. Nucleus. Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with R-SMAD.

画像



All lanes : Anti-Smad4 antibody (ab110175) at 1 µg

Lane 1 : Wild-type HAP1 whole cell lysate

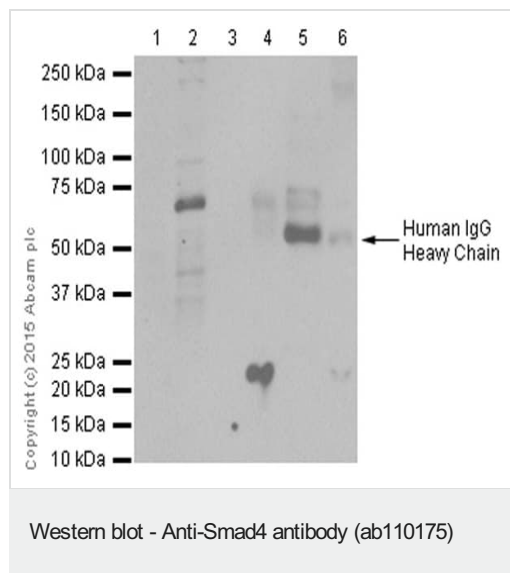
Lane 2 : SMAD4 knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 60 kDa

Lanes 1 - 2: Merged signal (red and green). Green - ab110175 observed at 60 kDa. Red - loading control, [ab9484](#), observed at 37 kDa.

ab110175 was shown to recognize Smad4 in wild-type HAP1 cells as signal was lost at the expected MW in SMAD4 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and SMAD4 knockout samples were subjected to SDS-PAGE. Ab110175 and [ab9484](#) (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1 µg/ml and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed [ab216776](#) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



All lanes : Anti-Smad4 antibody (ab110175) at 1/1000 dilution

Lane 1 : SW480 cell lysate

Lane 2 : HepG2 cell lysate

Lane 3 : Jurkat cell lysate

Lane 4 : Human skin tissue lysate

Lane 5 : Human lung tissue lysate

Lane 6 : Human artery tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

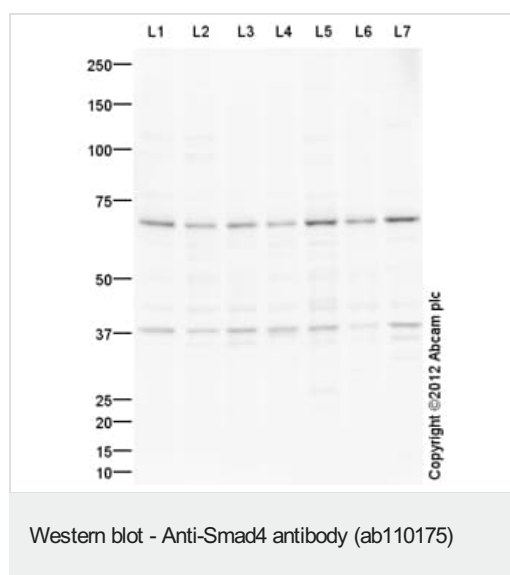
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 60 kDa

Observed band size: 60 kDa

Exposure time: 3 minutes

Blocking and dilution buffer: 5% NFDM/TBST.



All lanes : Anti-Smad4 antibody (ab110175) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : A431 (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 3 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate

Lane 4 : A549 (Human lung adenocarcinoma epithelial cell line) Whole Cell Lysate

Lane 5 : HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

Lane 6 : THP1 (Human acute monocytic leukemia cell line) Whole

Cell Lysate

Lane 7 : Ramos (Human Burkitt's lymphoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (**ab97080**) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 60 kDa

Observed band size: 67 kDa

Additional bands at: 37 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 4 minutes

The predicted molecular weight of Smad4 is 60 kDa (SwissProt), however we expect to observe a banding pattern around 70 kDa. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.

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