Datasheet for ABIN968209

anti-Smad2/3 antibody (AA 142-263)

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Overview

Quantity:	150 µg
Target:	Smad2/3 (SMAD2/3)
Binding Specificity:	AA 142-263
Reactivity:	Human, Rat, Mouse, Dog
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Smad2/3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Immunofluorescence (IF)

Product Details

Immunogen:	Mouse Smad2 aa. 142-263
Clone:	18-Smad2-3
Isotype:	IgG1 kappa
Cross-Reactivity:	Human, Dog (Canine), Rat (Rattus)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 5. For fluorochrome spectra and suitable instrument settings, please refer to us.

Product Details

Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	Smad2/3 (SMAD2/3)
Alternative Name:	Smad2/3 (SMAD2/3 Products)
Background:	The transforming growth factor beta (TGFbeta)/activin/BMP family of growth factors plays a diverse and important role in growth, development, and differentiation. These growth factors act through their binding to heteromeric plasma membrane receptor protein kinases which, upon ligand binding, become activated and trigger an intracellular signaling cascade. Specifically, receptor activation induces the translocation of a set of conserved proteins named Smads (Sma- and Mad-related proteins) to the nucleus, resulting in gene activation. Smad2 is a ubiquitously expressed protein of 58 kDa that is phosphorylated and translocated to the nucleus in response to TGFbeta, but not BMP. The overall response to TGFbeta is growth inhibition. The Smad2 gene is located in chromosome 18q21.1 which is often absent in several human cancers. Furthermore, some missense mutations on the Smad2 gene were identified in colorectal carcinomas, suggesting Smad2 may function as a tumor suppressor in normal cells. Investigators should note that potential crossreactivity to Smad3 is predicted based on sequence homology of the immunogen, Mouse Smad2 aa. 142-263. In addition, reactivity to mouse Smad2, using siRNA knockdown, has recently been described (Dzwonek et al.). Reactivity to canine Smad3 has also been reported using nuclear extracts (Lehman et al.).
Molecular Weight:	58 kDa

Application Details

Comment:	Related Products: ABIN968537, ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide

Handling

Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:

Dzwonek, Preobrazhenska, Cazzola, Conidi, Schellens, van Dinther, Stubbs, Klippel, Huylebroeck, ten Dijke, Verschueren: "Smad3 is a key nonredundant mediator of transforming growth factor beta signaling in Nme mouse mammary epithelial cells." in: **Molecular cancer research : MCR**, Vol. 7, Issue 8, pp. 1342-53, (2009) (PubMed).

Luo, Nieves, Kzhyshkowska, Angeletti: "Endogenous transforming growth factor-beta receptor-mediated Smad signaling complexes analyzed by mass spectrometry." in: **Molecular & cellular proteomics : MCP**, Vol. 5, Issue 7, pp. 1245-60, (2006) (PubMed).

Hayes, Chawla, Corvera: "TGF beta receptor internalization into EEA1-enriched early endosomes: role in signaling to Smad2." in: **The Journal of cell biology**, Vol. 158, Issue 7, pp. 1239-49, (2002) (PubMed).

Hocevar, Smine, Xu, Howe: "The adaptor molecule Disabled-2 links the transforming growth factor beta receptors to the Smad pathway." in: **The EMBO journal**, Vol. 20, Issue 11, pp. 2789-801, (2001) (PubMed).

Lehmann, Janda, Pierreux, Rytömaa, Schulze, McMahon, Hill, Beug, Downward: "Raf induces TGFbeta production while blocking its apoptotic but not invasive responses: a mechanism leading to increased malignancy in epithelial cells." in: **Genes & development**, Vol. 14, Issue 20, pp. 2610-22, (2000) (PubMed).

There are more publications referencing this product on: Product page

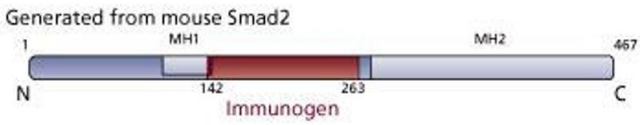
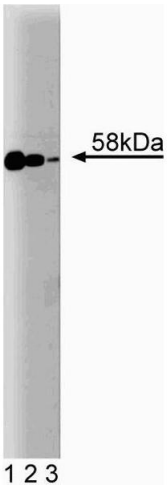


Image 1.

Western Blotting

Image 2.



Western Blotting

Image 3. Western blot analysis of Smad2/3 on Jurkat cell lysate. Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of anti-Smad2/3.

Please check the product details page for more images. Overall 4 images are available for ABIN968209.