

DATASHEET

SMAD1 Mouse Monoclonal Antibody(C3909)

CAT. NO. AMA03521

KEY FEATURES

Target	SMAD1	Source / Host	Mouse
Reactivity	Human	Clonality	Monoclonal
Applications	WB, IHC, IF/ICC	Conjugation	Unconjugated
Form / Buffer	Mouse IgG1 kappa. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.	Storage	at-20°C

BACKGROUND

Transcriptional modulator that plays a role in various cellular processes, including embryonic development, cell differentiation, and tissue homeostasis . Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRI) and associates with SMAD4 to form a heteromeric complex which translocates into the nucleus acting as transcription factor . In turn, the hetero-trimeric complex recognizes cis-regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network . SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1. Positively regulates BMP4-induced expression of odontogenic development regulator MSX1 following IPO7-mediated nuclear import .

APPLICATION

To ensure optimal assay performance, AREX recommends conducting reagent titration tailored to each testing system for optimal detection results.

WB	1:500 - 1:1000
IHC	1:50 - 1:200
IF/ICC	1:10 - 1:50

*Results are sample-specific. Please refer to your local assay conditions and test parameters for reference.

PRODUCT OVERVIEW

Description	Mouse monoclonal antibody to SMAD1
Specificity	Recognizes endogenous levels of SMAD1 protein.
Antibody Type	Primary antibody
Immunogen	Recombinant fusion protein of human SMAD1. The exact sequence is proprietary.
Purification	This antibody is purified through a protein G column.
Molecular Weight	Predicted: 52 kD; Observed: 60 kD
Form/Buffer	Mouse IgG1 kappa. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Alternative Names	BSP1; MADH1; MADR1; Mothers against decapentaplegic homolog 1; MAD homolog 1; Mothers against DPP homolog 1; JV4-1; Mad-related protein 1; SMAD family member 1; SMAD 1; Smad1; hSMAD1; Transforming growth factor-beta-signaling protein 1; BSP-1
Gene Symbol	SMAD1
Entrez Gene	4086(Human)
SwissProt	Q15797(Human)

*AREX continuously optimizes our products. Webpage content may not reflect the latest updates. For inquiries, please contact info@arexbio.com or your local distributor.

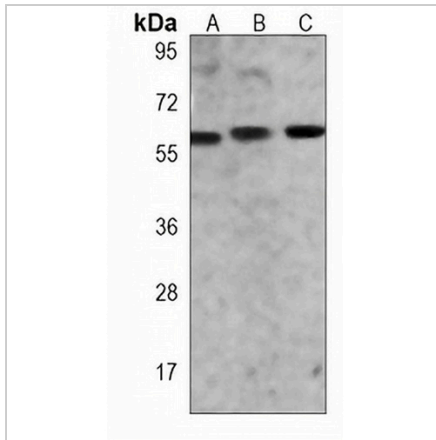
*Clone Number, Reactivity, Source/Host and Clonality can be found in the product name and Key Features section above.

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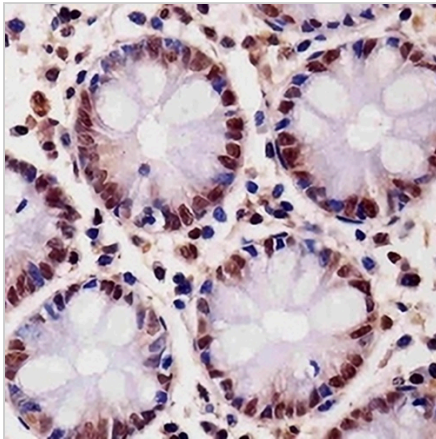
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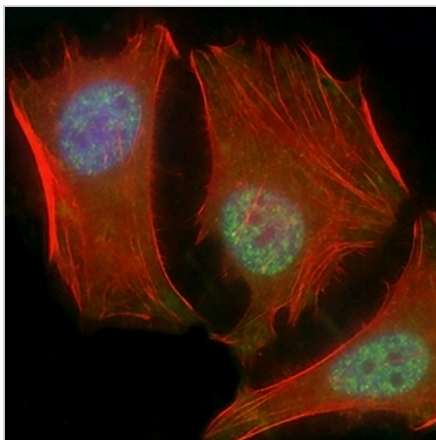
DATA



Western blot analysis of SMAD1 expression in HT1080 (A), HeLa (B), 293 (C) whole cell lysates. (Predicted band size: 52 kD; Observed band size: 60 kD)



Immunohistochemical analysis of SMAD1 staining in human colon formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of SMAD1 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AREX® Fluor 488 -conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AREX® Fluor 555 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

STORAGE

Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.