

Datasheet for ABIN1043911  
**anti-SMAD3 antibody (Internal Region)**



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1 Publication

## Overview

Quantity:	100 µg
Target:	SMAD3
Binding Specificity:	Internal Region
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), ELISA

## Product Details

Purpose:	SMAD3 Antibody
Immunogen:	Immunogen: SMAD3 Antibody was prepared by repeated immunizations with a synthetic peptide corresponding to an internal region of human Smad3 protein surrounding amino acid residue 179. Immunogen Type: Conjugated Peptide
Isotype:	IgG
Cross-Reactivity (Details):	SMAD3 Antibody is directed against human Smad3 protein.
Characteristics:	Synonyms: rabbit anti-SMAD3 antibody, SMAD-3, SMAD 3, mothers against decapentaplegic homolog 3 antibody, MAD homolog 3, Mothers against DPP homolog 3, SMAD family member 3, MADH3, MADH 3, JV15-2
Purification:	The product was affinity purified from monospecific antiserum by immunoaffinity purification.
Sterility:	Sterile filtered

## Target Details

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Target:	SMAD3
Alternative Name:	SMAD3 ( <a href="#">SMAD3 Products</a> )
Background:	<p>Background: This antibody is designed, produced, and validated as part of a collaboration with the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. Smad3 (also known as Mothers against decapentaplegic homolog 3, Mothers against DPP homolog 3, Mad3, hMAD-3, JV15-2 or hSMAD3) is a transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinase. These activators exert diverse effects on a wide array of cellular processes. The Smad proteins mediate much of the signaling responses induced by the TGF-beta superfamily. Activated type I receptor phosphorylates receptor-activated Smads (R-Smads) at their c-terminal two extreme serines in the S-S-X-S motif, e.g. Smad2 and Smad3 proteins in the TGF-b pathway, or Smad1, Smad5 or Smad8 in the bone morphogenic protein or BMP pathway. Upon phosphorylation R-Smads are translocated into nucleus, where they regulate transcription of target genes. Based on microarray and animal model experiments, Smad3 accounts for at least 80 % of all TGF-b-mediated response.</p>
Gene ID:	4088
NCBI Accession:	<a href="#">NP_005893</a>
UniProt:	<a href="#">P84022</a>
Pathways:	<a href="#">Cell Division Cycle</a> , <a href="#">Chromatin Binding</a> , <a href="#">Cell-Cell Junction Organization</a> , <a href="#">Positive Regulation of Endopeptidase Activity</a> , <a href="#">Autophagy</a>

## Application Details

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Application Notes:	<p>Application Note: SMAD3 Antibody has been tested for use in ELISA and by western blot. This antibody is suitable in immunohistochemistry. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 48.1 kDa in size corresponding to human Smad3 protein by western blotting in the appropriate tissue or cell lysate or extract.</p> <p>Western Blot Dilution: 1:1,000</p> <p>ELISA Dilution: 1:15,000-1:25,000</p> <p>Other: User Optimized</p>
Restrictions:	For Research Use only

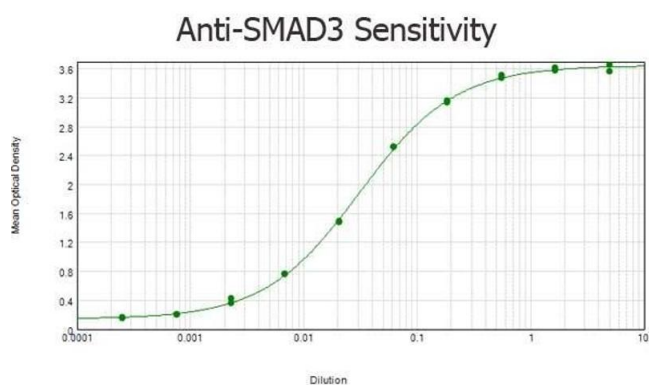
## Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

## Publications

Product cited in: Wang, Matsuura, He, Liu: "Transforming growth factor- $\beta$ -inducible phosphorylation of Smad3." in: **The Journal of biological chemistry**, Vol. 284, Issue 15, pp. 9663-73, (2009) ([PubMed](#)).

## Images



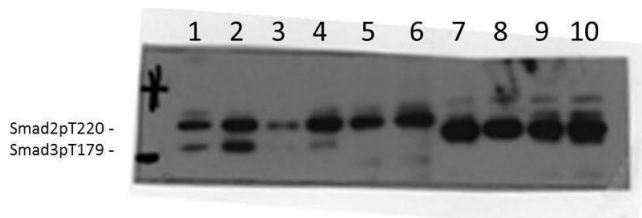
### ELISA

**Image 1.** ELISA results of purified Rabbit anti-SMAD3 Antibody tested against BSA-conjugated peptide of immunizing peptide. Each well was coated in duplicate with 0.1  $\mu$ g of conjugate. The starting dilution of antibody was 5  $\mu$ g/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Goat anti-Rabbit IgG Antibody Peroxidase

Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rt & Sh Serum Proteins) and TMB ELISA Peroxidase Substrate .

### Western Blotting

**Image 2.** Western Blot of Rabbit Anti-SMAD3 antibody. Lane 1: AML12 unstimulated. Lane 2: AML12 stimulated with TGFB. Lane 3: MEFwt unstimulated. Lane 4: MEFwt stimulated with TGFB. Lane 5: MEF Smad3 KO unstimulated. Lane 6: MEF Smad3 KO stimulated with TGFB. Lane 7: HEK293 Smad3T179A mutant unstimulated. Lane 8: HEK293 Smad3T179A mutant stimulated with TGFB. Lane 9: HEK293 Smad3T179V mutant unstimulated. Lane 10: HEK293 Smad3T179V mutant stimulated with TGFB. Load: 35 µg per lane. Primary antibody: SMAD 3 antibody at 1:1000 for overnight at 4°C. Secondary antibody: rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 48.1kDa. Other band(s): Smad2pT220.



### Western Blotting

**Image 3.** Western Blot of Rabbit anti-SMAD3 antibody. Marker: Opal Pre-stained ladder . Lane 1: HEK293 lysate . Lane 2: HeLa Lysate . Lane 3: MCF-7 Lysate . Lane 4: Jurkat Lysate . Lane 5: A549 Lysate . Lane 6: HL-60 Lysate . Lane 7: Raji Lysate . Lane 8: NIH/3T3 Lysate . Load: 35 µg per lane. Primary antibody: SMAD3 antibody at 1:5,000 for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:30,000 for 60 min at RT. Blocking Buffer: 1% Casein-TTBS for 30 min at RT. Predicted/Observed size: 48 kDa for SMAD3.

