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Datasheet for 600-401-973

SMAD3 Antibody

Overview

Description:	Anti-SMAD3 (RABBIT) Antibody - 600-401-973
Item No.:	600-401-973
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	This antibody is designed, produced, and validated as part of a collaboration between Rockland and 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-b (transforming growth factor) and activin type I 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-b superfamily. Briefly, activin type I receptor kinase phosphorylates receptor-activated Smads (R-Smads) at the two extreme serines in the C-terminal SSXS motif; e.g. Smad2 and Smad3 proteins in the TGF-b pathway, or Smad1, Smad5 or Smad8 in the Bone Morphogenetic Proteins (BMP) pathway. The phosphorylated R-Smad then translocates into the nucleus, where it regulates transcription of target genes. Based on microarray and animal model experiments, Smad3 accounts for at least 80% of all TGF-b-mediated responses.
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
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	SMAD3

Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region of human Smad3 protein.
Purity/Specificity:	This affinity purified antibody is directed against human Smad3 protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with Smad3 protein from human, mouse and rat based on 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known. Also, the antibody is Smad3 specific, and reactivity to other Smad proteins (specifically Smad1, Smad2, Smad4, and Smad7) is not detected in over-expressed cell lysates (Personal Communication, Kathleen Flanders, CCR-NCI, Bethesda, MD).
Relevant Links:	• UniProtKB - P84022 • NCBI - 5174513 • GeneID - 4088

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 50 kDa in size corresponding to Smad3 protein by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:15,000 - 1:50,000
WB:	1:500 - 1:10,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.06 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	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.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

Western Blot
Western blot using Rockland's affinity purified anti-Smad3 to detect over-expressed Smad3 in 231 cells (lane 2). Lane 1 shows mock infection of 231 cells with lentiviral vector alone. The membrane was probed with the primary antibody at a 1:5,000 dilution. Personal Communication, Allan Weissman, CCR-NCI, Bethesda, MD. Personal Communication

Disclaimer

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