



## Anti-SMAD3 (RABBIT) Antibody - 600-401-E70

**Code:** 600-401-E70

**Size:** 100 µg

**Product Description:** Anti-SMAD3 (RABBIT) Antibody - 600-401-E70

**Concentration:** 0.86 mg/mL by UV absorbance at 280 nm

**PhysicalState:** Liquid (sterile filtered)

<b>Label</b>	Unconjugated
<b>Host</b>	Rabbit
<b>Gene Name</b>	SMAD3
<b>Species Reactivity</b>	human
<b>Buffer</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Stabilizer</b>	None
<b>Preservative</b>	0.01% (w/v) Sodium Azide
<b>Storage Condition</b>	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.
<b>Synonyms</b>	hMAD 3 antibody, hSMAD3 antibody, MADH3 antibody, MGC60396 antibody, Mothers against decapentaplegic homolog 3 antibody, Mothers against DPP homolog 3 antibody, Smad-3
<b>Application Note</b>	SMAD3 Antibody has been tested for use in ELISA, immunohistochemistry and by western blot. 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.
<b>Background</b>	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-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.
<b>Purity And Specificity</b>	SMAD3 Antibody is directed against human Smad3 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Reactivity occurs against human Smad3 protein corresponding to an internal region surrounding amino acid residue 179. A BLAST analysis was used to suggest cross reactivity with Smad3 from human, mouse, rat, pig, dog, and marmoset based on 100% sequence homology with the immunogen. Reactivity against homologues from other sources is not known.
<b>Assay Dilutions</b>	User Optimized
<b>ELISA</b>	1:15,000-1:75,000
<b>WESTERN BLOT</b>	1:1,000
<b>OTHER ASSAYS</b>	User Optimized
<b>Expiration</b>	Expiration date is one (1) year from date of opening.
<b>Immunogen</b>	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.
<b>General Reference</b>	Wang G, Matsuura I, He D, Liu F. 2009 Transforming growth factor-β-inducible phosphorylation of Smad3. J Biol Chem. Apr 10; 284(15):9663-73.
<b>Related Products</b>	

100-401-218      Anti-Erk2 (RABBIT) Antibody - 100-401-218

600-401-432      Anti-TGF beta 1 (RABBIT) Antibody - 600-401-432

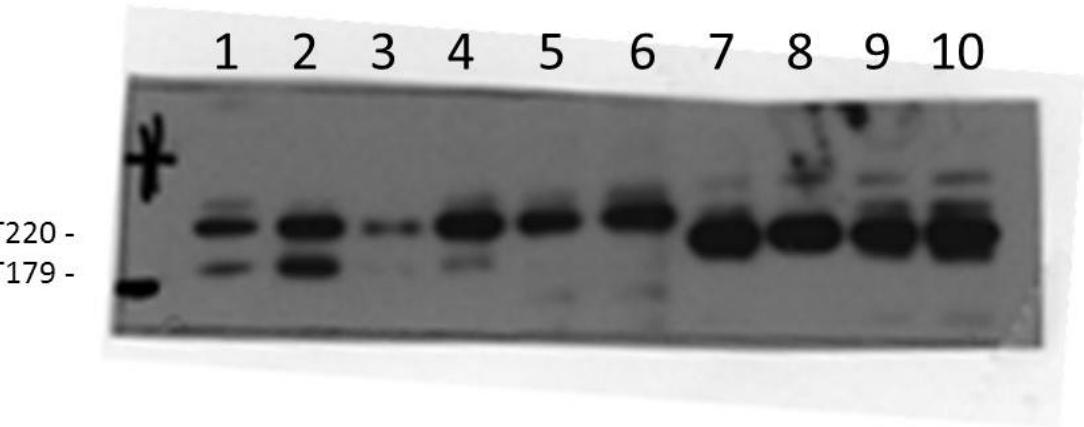
600-401-919	Anti-SMAD3 pS423 pS425 (RABBIT) Antibody - 600-401-919
600-401-920	Anti-SMAD3 (C terminal) (RABBIT) Antibody - 600-401-920

Related Links

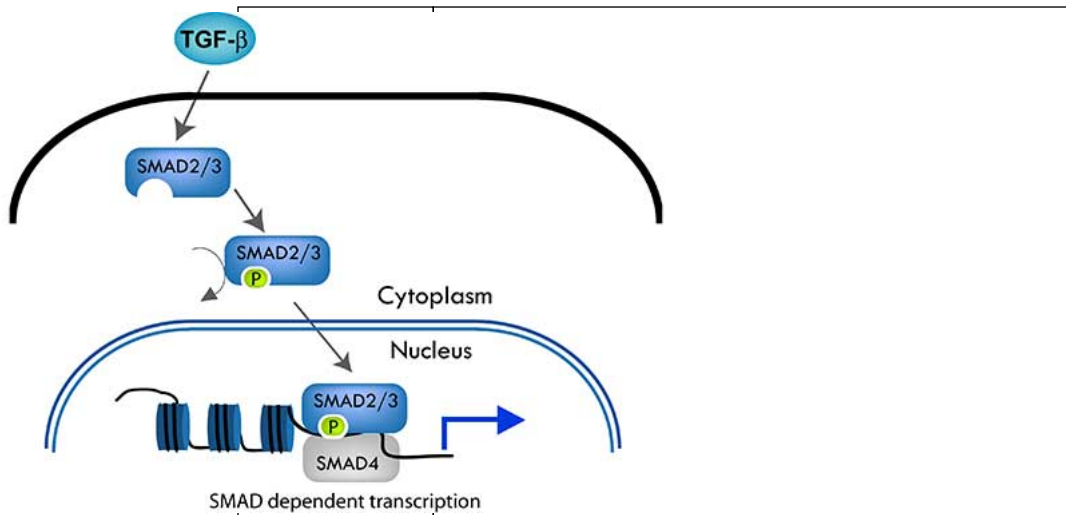
Gene ID	<a href="http://www.ncbi.nlm.nih.gov/sites/entrez?db=gene&amp;term=4088">http://www.ncbi.nlm.nih.gov/sites/entrez?db=gene&amp;term=4088</a>
NCBI	<a href="http://www.ncbi.nlm.nih.gov/protein/NP_005893">http://www.ncbi.nlm.nih.gov/protein/NP_005893</a>
UniProtKB	<a href="http://www.uniprot.org/uniprot/P84022">http://www.uniprot.org/uniprot/P84022</a>

Images

1 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: IRDye800™ 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.



2 Rabbit anti-SMAD antibody follows the canonical TGF-β signaling pathway. TGF-β dimers bind to a receptor thereby activating the pathway. The type I receptor then recruits and phosphorylates a receptor regulated SMAD (R-SMAD) .i.e. SMAD2 or SMAD3. The R- SMAD then binds to the common SMAD (coSMAD) i.e. SMAD4, and forms a heterodimeric complex. This complex then enters the cell nucleus and acts as a transcription factor.



### Disclaimer

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