

# Polyclonal Anti-Smad4 Picoband™ Antibody

Catalog Number: PB9397

## Description

<b>Gene Name</b>	SMAD family member 4
<b>Recommended Protein Name</b>	Mothers against decapentaplegic homolog 4
<b>Lot No.</b>	0931512Da869747
<b>Size</b>	100µg/vial
<b>Form</b>	lyophilized
<b>Ig type</b>	Rabbit IgG
<b>Specificity</b>	No cross reactivity with other proteins.
<b>Purification</b>	Immunogen affinity purified.
<b>Species</b>	<b>Reacts with:</b> human, mouse, rat
<b>Immunogen</b>	A synthetic peptide corresponding to a sequence at the C-terminus of human Smad4 (526-552aa EIHLHRALQLLDEVLHTMPIADPQPLD), identical to the related mouse and rat sequences.
<b>Contents</b>	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .

## Application

	Concentration	Tested Species	Antigen Retrieval
Western blot	0.1-0.5µg/ml	Hu, Ms, Rat	-

**WB: The detection limit for Smad4 is approximately 0.1ng/lane under reducing conditions.**

**Tested Species:** In-house tested species with positive results.

*Other applications have not been tested.*

*Optimal dilutions should be determined by end users.*

## Preparation and storage

**Reconstitution:** 0.2ml of distilled water will yield a concentration of 500µg/ml.

**Storage:** At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time.

Avoid repeated freezing and thawing.

## Relevant detection systems

Boster provides a series of assays reacted with primary antibodies. Antibody can be supported by chemiluminescence kit EK1002 in WB.

## Background

SMAD4 (Mothers Against Decapentaplegic Drosophila Homolog of 4), also known as MADH4 or DPC4, is a protein that in humans is encoded by the SMAD4 gene. It belongs to the Darwin family of proteins that modulate members of the TGF $\beta$  protein superfamily. Hahn et al. (1996) identified the SMAD4 gene on chromosome 18q21.1. Howe et al. (1998) identified the SMAD4 gene within a region on 18q21.1 defined by linkage analysis in kindred with juvenile polyposis syndrome. To test directly the hypothesis that the SMAD4 gene is a tumor suppressor that is critical for transmitting signals from transforming growth factor-beta and related ligands. SMAD4 plays a pivotal role in signal transduction of the transforming growth factor beta superfamily cytokines by mediating transcriptional activation of target genes.

## Reference

1. Hein, L.; Altman, J. D.; Kobilka, B. K. :Two functionally distinct alpha-2-adrenergic receptors regulate sympathetic neurotransmission. *Nature* 402: 181-184, 1999.
2. Hoehe, M. R.; Berrettini, W. H.; Lentz, K.-U.:Dra I identifies a two allele DNA polymorphism in the human alpha-2-adrenergic receptor gene (ADRAR), using a 5.5 kb probe (p ADRAR). *Nucleic Acids Res.* 16: 9070 only, 1988.
3. Yang-Feng, T. L.; Kobilka, B. K.; Caron, M. G.; Lefkowitz, R. J.; Francke, U.:Chromosomal assignment of genes for an alpha-adrenergic receptor (ADRAR) and for another member of this receptor family coupled to guanine nucleotide regulatory proteins (RG21). (Abstract) *Cytogenet. Cell Genet.* 46: 722-723, 1987.