

## Anti-SMAD4 Antibody (7P892)

## Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	7P892
Purification:	Affinity-chromatography

## Applications

	Western Blot
	-Positive WB detected in: Hela whole cell lysate, HEK293 whole cell lysate, MCF-7 whole cell lysate
Verified Activity:	-All lanes: SMAD4 antibody at 1:500
	-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution
	-Predicted band size: 61 kDa
	-Observed band size: 55-72 kDa
Application:	ELISA, WB
Recommended	WB:1:500-1:2000.

## Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

## Antigen Details

Immunogen:	A synthetic peptide: Human SMAD4
Antigen Species:	Human
Gene ID:	4089
Uniprot ID:	Q13485
	MADH4;SMAD Family Member 4;hSMAD4;Mothers Against DPP Homolog 4;SMAD4;MAD
Synonyms:	Homolog 4;SMAD 4;DPC4;Deletion Target in Pancreatic Carcinoma 4;Mothers Against Decapentaplegic Homolog 4
Biology Area:	Epigenetics and Nuclear Signaling, Cancer, Cardiovascular, Metabolism, Signal transduction, Stem cells

## Research Background

In muscle physiology, plays a central role in the balance between atrophy and hypertrophy. When recruited by MSTN, promotes atrophy response via phosphorylated SMAD2/4. MSTN decrease causes SMAD4 release and subsequent recruitment by the BMP pathway to promote hypertrophy via phosphorylated SMAD1/5/8. Acts synergistically with SMAD1 and YY1 in bone morphogenetic protein (BMP)-mediated cardiac-specific gene expression. Binds to SMAD binding elements (SBEs) (5'-GTCT/AGAC-3') within BMP response element (BMPRE) of cardiac activating regions. Common SMAD (co-SMAD) is the coactivator and mediator of signal transduction by TGF-

beta (transforming growth factor). Component of the heterotrimeric SMAD2/SMAD3-SMAD4 complex that forms in the nucleus and is required for the TGF-mediated signaling. Promotes binding of the SMAD2/SMAD4/FAST-1 complex to DNA and provides an activation function required for SMAD1 or SMAD2 to stimulate transcription. Component of the multimeric SMAD3/SMAD4/JUN/FOS complex which forms at the AP1 promoter site; required for synergistic transcriptional activity in response to TGF-beta. May act as a tumor suppressor. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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