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Product datasheet for CF501728

SMAD2 Mouse Monoclonal Antibody [Clone ID: OTI2C10]

Product data:

Product Type:	Primary Antibodies
Clone Name:	OTI2C10
Applications:	FC, IF, WB
Recommended Dilution:	WB 1:2000, IF 1:100, Flow: 1:100
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	Full length human recombinant protein of human SMAD2 (NP_005892) produced in HEK293T cell.
Formulation:	Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)
Reconstitution Method:	For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific)
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	52.1 kDa
Gene Name:	SMAD family member 2
Database Link:	NP_005892 Entrez Gene 17126 MouseEntrez Gene 29357 RatEntrez Gene 4087 Human Q15796

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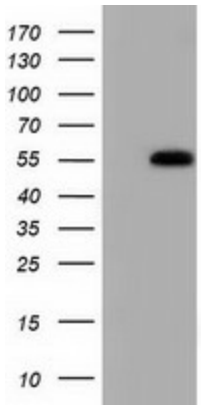
Background: The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation of this protein into the nucleus, where it binds to target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq]

Synonyms: hMAD-2; hSMAD2; JV18; JV18-1; MADH2; MADR2

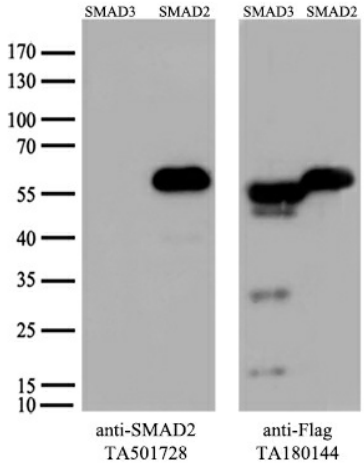
Protein Families: Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors

Protein Pathways: Adherens junction, Cell cycle, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway

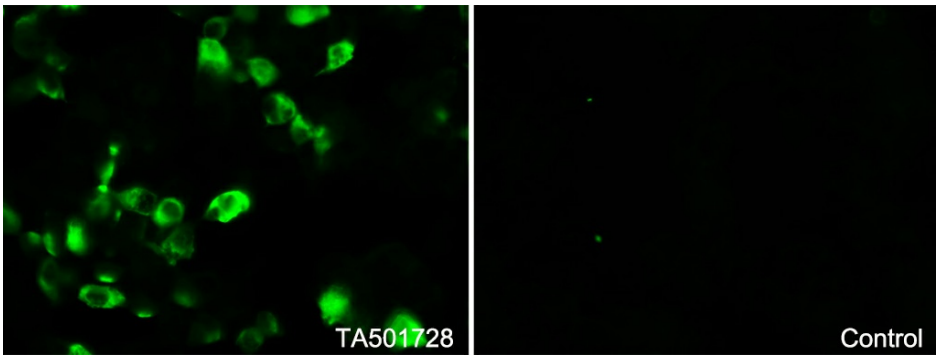
Product images:



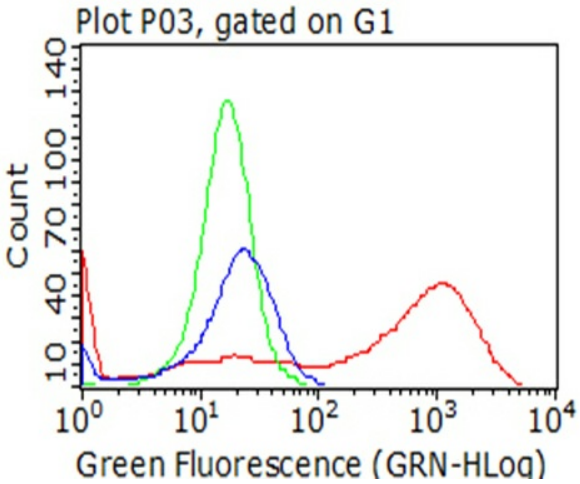
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SMAD2 (Cat# [RC204604], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SMAD2(Cat# [TA501728]). Positive lysates [LY401783] (100ug) and [LC401783] (20ug) can be purchased separately from OriGene.



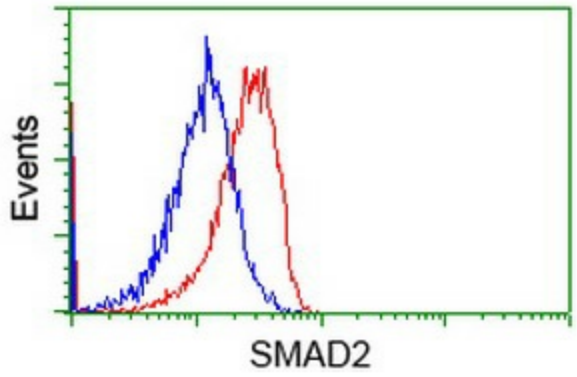
HEK293T cells were transfected with the 2 different overexpression plasmids (SMAD3, Cat# [RC208749];SMAD2, Cat# [RC204604]) for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SMAD2 mouse monoclonal antibody (Cat# [TA501728], 1:500) or anti-flag antibody (Cat# [TA180144], 1:1000).



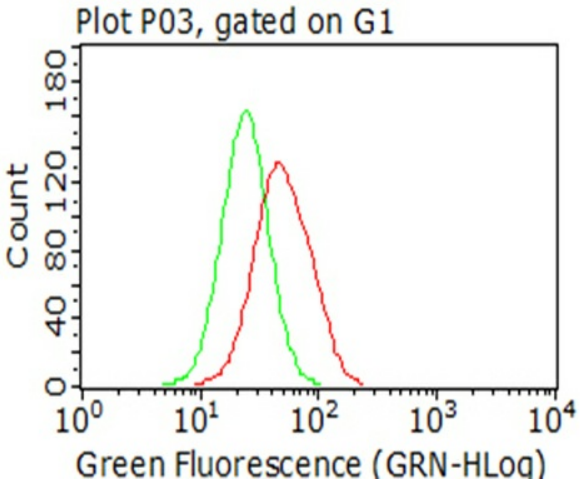
Immunofluorescent staining of 293T cells transfected by pCMV6-ENTRY SMAD2 ([RC204604]) using anti-SMAD2 antibody ([TA501728]/green, left). 293T cells transfected with empty vector served as a negative control (right) (1:100).



Flow cytometric analysis of living 293T cells transfected with SMAD2 overexpression plasmid ([RC204604]), Red)/empty vector ([PS100001], Blue) using anti-SMAD2 antibody ([TA501728]). Cells incubated with a non-specific antibody (Green) were used as isotype control (1:100).



Flow cytometric Analysis of Jurkat cells, using anti-SMAD2 antibody ([TA501728]), (Red), compared to a nonspecific negative control antibody, (Blue).



Flow cytometric Analysis of permeabilized HUVEC cells, using anti-SMAD2 antibody ([TA501728]), (Red), compared to an IgG isotype control, (green) (1:100).