

Product datasheet for **AP21054PU-N**

SMAD2 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	Western blot: 1/500 - 1/1000. Immunohistochemistry on paraffin sections 1/50 - 1/200. Immunofluorescence: 1/50 - 1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of Smad2 protein. (region surrounding Tyr216)
Formulation:	Phosphate buffered saline (PBS), pH 7.2. State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.05% sodium azide
Concentration:	1.0 mg/ml
Purification:	Affinity chromatography (> 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 60 kDa
Gene Name:	SMAD family member 2
Database Link:	Entrez Gene 17126 Mouse Entrez Gene 29357 Rat Entrez Gene 4087 Human Q15796



[View online »](#)

Background:

Smad2 is a 58 kDa member of a family of proteins involved in cell proliferation, differentiation and development. The Smad family is divided into three subclasses: receptor-regulated Smad's, activin/TGF β receptor-regulated (Smad2 and 3) or BMP receptor regulated (Smad1, 5, and 8); the common partner, (Smad4) that functions via its interaction to the various Smad's; and the inhibitory Smad's, (Smad6 and Smad7). Smad2 consists of two highly conserved domains, the N terminal Mad homology (MH1) and the C-terminal Mad homology 2 (MH2) domains. The MH1 domain binds DNA and regulates nuclear import and transcription while the MH2 domain conserved among all the Smad's regulates Smad2 oligomerization and binding to cytoplasmic adaptors and transcription factors. Activated Smad2 associates with Smad4 and translocates as a complex into the nucleus, allowing its binding to DNA and transcription factors. This translocation of Smad2 (as well as Smad3) into the nucleus is a central event in TGF beta signaling.

Synonyms:

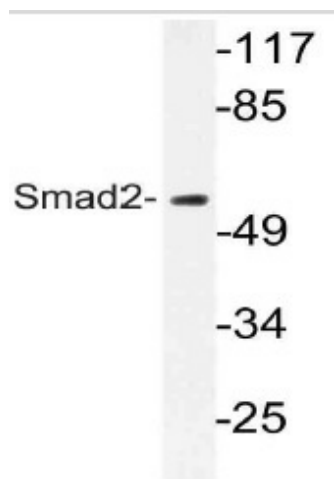
SMAD family member 2, SMAD-2, SMAD 2, MADH2, MAD homolog 2, MADR2, Mad-related protein 2, JV18-1

Protein Families:

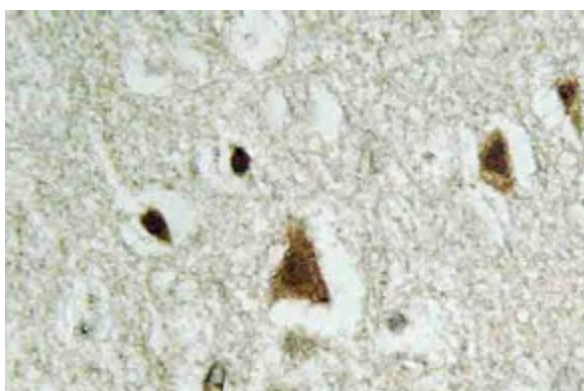
Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGF β /BMP signaling pathway, Transcription Factors

Protein Pathways:

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

Product images:

Western blot (WB) analysis of Smad2 antibody (Cat.-No.: AP21054PU-N) in extracts from RAW264.7 cells.



Immunohistochemistry (IHC) analyzes of Smad2 antibody (Cat.-No.: AP21054PU-N) in paraffin-embedded human brain tissue.