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Datasheet for ABIN2779412
anti-SMAD2 antibody (N-Term)

3 Images

Overview

Quantity:	100 µL
Target:	SMAD2
Binding Specificity:	N-Term
Reactivity:	Human, Mouse, Rat, Cow, Rabbit, Dog, Horse, Guinea Pig
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SMAD2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC)

Product Details

Immunogen:	The immunogen is a synthetic peptide directed towards the N terminal region of human SMAD2
Sequence:	MSSILPFTPP VVKRLLGWKK SAGGSGGAGG GEQNGQEEKW CEKAVKSLVK
Predicted Reactivity:	Cow: 100%, Dog: 100%, Guinea Pig: 100%, Horse: 100%, Human: 100%, Mouse: 100%, Rabbit: 100%, Rat: 100%
Characteristics:	This is a rabbit polyclonal antibody against SMAD2. It was validated on Western Blot using a cell lysate as a positive control.
Purification:	Affinity Purified

Target Details

Target:	SMAD2
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Target Details

Alternative Name: SMAD2 ([SMAD2 Products](#))

Background: SMAD2 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. SMAD2 mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. SMAD2 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, SMAD2 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. 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.

Alias Symbols: JV18, JV18-1, MADH2, MADR2, MGC22139, MGC34440, hMAD-2, hSMAD2

Protein Interaction Partner: HDAC2, UBC, SMAD4, SKIL, ANP32B, TUBA1B, SYT1, SOD1, ANP32E, PTMS, NEFM, JUN, ATP5I, RHOA, OTUB1, ZFYVE9, PPARG, TP53, TGFB1, TRIM33, HCVgp1, TSC2, FHL3, FHL2, FHL1, CSNK1D, KLF5, SH2D2A, SKI, LCK, IRF7, IRF3, RNF111, LEMD3, PIK3CA, ST13, ST5, SRI, SPTBN

Protein Size: 467

Molecular Weight: 52 kDa

Gene ID: 4087

Target Details

NCBI Accession: [NM_005901](#), [NP_005892](#)

UniProt: [Q15796](#)

Pathways: [Cell Division Cycle](#), [Hormone Transport](#), [Chromatin Binding](#), [Protein targeting to Nucleus](#)

Application Details

Application Notes: Optimal working dilutions should be determined experimentally by the investigator.

Comment: Antigen size: 467 AA

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: Lot specific

Buffer: Liquid. Purified antibody supplied in 1x PBS buffer with 0.09 % (w/v) sodium azide and 2 % sucrose.

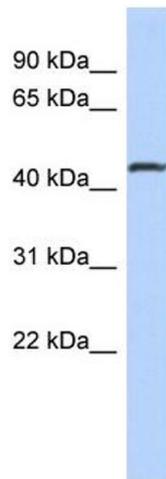
Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling Advice: Avoid repeated freeze-thaw cycles.

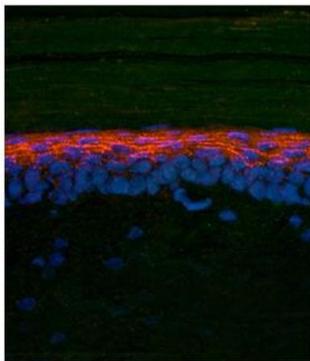
Storage: -20 °C

Storage Comment: For short term use, store at 2-8°C up to 1 week. For long term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles.



Western Blotting

Image 1. WB Suggested Anti-SMAD2 Antibody Titration: 0.2-1 ug/ml ELISA Titer: 1:2500 Positive Control: Jurkat cell lysate SMAD2 is strongly supported by BioGPS gene expression data to be expressed in Human Jurkat cells

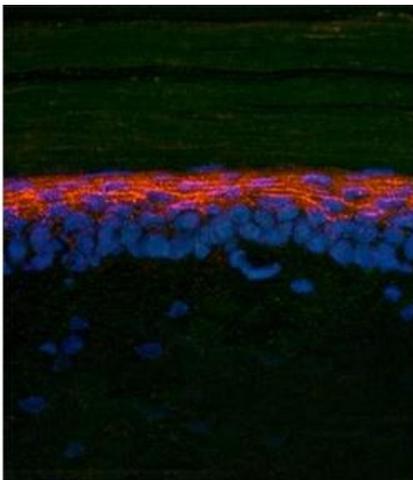


SMAD2 (ARP32004_P050)

Immunohistochemistry
Sample: rat and mouse
Tissue type: Brain Tissue
Dilution: 10ug/ml
Observed: staining in karatinocytes

Application in forum

Image 2.



Immunohistochemistry

Image 3. rat and mouse brain