

# SMAD2 antibody - N-terminal region

Rabbit Polyclonal Antibody Catalog # AI11445

### **Product Information**

Application WB Primary Accession Q15796

Other Accession <u>NM 005901</u>, <u>NP 005892</u>

**Reactivity** Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Horse, Bovine, Sheep

**Predicted** Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Chicken, Bovine

Host Rabbit
Clonality Polyclonal
Calculated MW 52306

## **Additional Information**

**Gene ID** 4087

Alias Symbol JV18, MADH2, MADR2, JV18-1, hMAD-2, hSMAD2

Other Names Mothers against decapentaplegic homolog 2, MAD homolog 2, Mothers

against DPP homolog 2, JV18-1, Mad-related protein 2, hMAD-2, SMAD family

member 2, SMAD 2, Smad2, hSMAD2, SMAD2, MADH2, MADR2

Format Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium

azide and 2% sucrose.

**Reconstitution & Storage** Add 100 ul of distilled water. Final anti-SMAD2 antibody concentration is 1

mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at

20°C. Avoid repeat freeze-thaw cycles.

**Precautions** SMAD2 antibody - N-terminal region is for research use only and not for use

in diagnostic or therapeutic procedures.

## **Protein Information**

Name SMAD2

Synonyms MADH2, MADR2

**Function** Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer

and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD2/SMAD4 complex, activates transcription. Promotes TGFB1-mediated transcription of odontoblastic differentiation genes in dental papilla cells (By similarity). Positively regulates PDPK1 kinase activity by

stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator. May act as a tumor suppressor in colorectal carcinoma (PubMed:8752209).

#### **Cellular Location**

Cytoplasm. Nucleus. Note=Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 or with IPO7 (PubMed:21145499, PubMed:9865696). On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (By similarity). {ECO:0000250 | UniProtKB:Q62432, ECO:0000269 | PubMed:16751101, ECO:0000269 | PubMed:19289081, ECO:0000269 | PubMed:21145499, ECO:0000269 | PubMed:9865696}

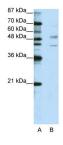
#### **Tissue Location**

Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

## References

Zheng,X., (2006) EMBO J. 25 (3), 615-627Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.

## **Images**



WB Suggested Anti-SMAD2 Antibody Titration:  $2.5 \mu g/ml$ 

ELISA Titer: 1:1562500

Positive Control: HepG2 cell lysate

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.