

# Smad2 (phospho-Ser465/467) rabbit pAb

Catalog # AP63018

### **Product Information**

**Application** WB, IHC-P, E **Primary Accession** 015796

**Reactivity** Human, Mouse, Rat

HostRabbitClonalityPolyclonalCalculated MW52306

#### **Additional Information**

**Gene ID** 4087

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)

**Dilution** WB~~1:1000 IHC-P~~N/A E~~N/A

Format Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium

azide.

Storage Conditions -20°C

#### **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:<u>8752209</u>).

**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

WITH SMAD4 OF WITH IPO7 (PUDMEd:21145499, PUDMEd: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.

## **Background**

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. May act as a tumor suppressor in colorectal carcinoma. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.

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