

Anti-SMAD2

Rabbit Polyclonal Antibody

Catalog # S11-63R

Lot # M191-7

Cited Applications

- Western blot (1:1000)

Ideal working dilutions for each application should be empirically determined by the investigator.

Specificity

Recognizes the SMAD2 protein

Cross Reactivity

- Western blot human SMAD2

SMAD2 from other species may also be detectable

Host

Rabbit

Immunogen

Synthetic peptide corresponding to amino acids 218-222 of human SMAD2

Formulation

PBS, pH7.4, 0.02%NaN₃, 50% glycerol

Stability

Store at 4°C (add 0.1% NaN₃) for several months, and at -20°C for longer periods. For optimal storage, aliquot antibody into smaller quantities after centrifugation and store at recommended temperature. For optimal performance, avoid repeated handling and multiple freeze/thaw cycles.

Scientific Background

SMADs are essential intracellular components for the signal transduction of TGFβ family members. SMAD2 is an intracellular mediator of TGFβ family and activin type 1 receptor (1). SMAD2 mediate TGFβ signaling to regulate cell growth and differentiation. SMAD2 is released from cytoplasmic retention by TGFβ receptor-mediated phosphorylation. The phosphorylated SMAD2 then forms a heterodimeric complex with SMAD4, and this complex translocates from cytoplasm into nucleus. By interacting with DNA-binding proteins, SMAD2 complexes then positively or negatively regulate the transcription of target genes. Inactivating mutations in SMAD2 have been found in various cancers (2).

References

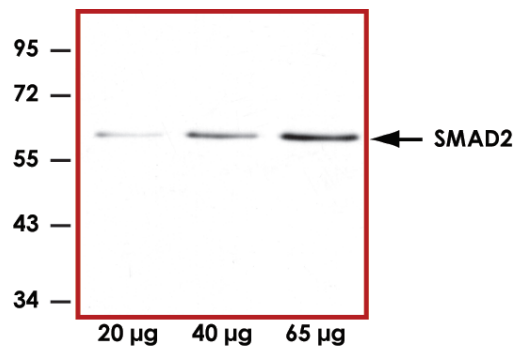
- Masayuki, F. et al: Identification and Characterization of Constitutively Active Smad2 Mutants: Evaluation of Formation of Smad Complex and Subcellular Distribution. *Molecular Endocrinol.* 2000; 14 (10): 1583-1591.
- Eppert, K. et al:MADR2 maps to 18q21 and encodes a TGF-beta-regulated MAD-related protein that is functionally mutated in colorectal carcinoma. *Cell.* 1996; 86: 543-552.

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Sample Data



Representative Western blot with Anti-SMAD2 (1:1000) using 15 ng of GST-tagged human recombinant SMAD1, SMAD2, SMAD3, SMAD4 and SMAD5.



Representative Western blot with Anti-SMAD2 (1:500) using 20 µg, 40 µg and 65 µg of Jurkat cell lysate.

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Specific Lot Number

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Purification

Affinity chromatography

Concentration

1.0 µg/µL

Stability

1yr at -20°C from date of shipment

Storage & Shipping

Store product at -20°C. For optimal storage, aliquot antibody into smaller quantities after centrifugation and store at recommended temperature. For optimal performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on ice packs.