

[KO Validated] Smad4 Rabbit mAb

Catalog No.: A19116

KO Validated

Recombinant

8 Publications

Basic Information

Observed MW

70kDa

Calculated MW

60kDa

Category

Primary antibody

Applications

ELISA, WB, IHC-P, IP, ChIP, CUT&Tag

Cross-Reactivity

Human, Mouse, Rat

CloneNo number

ARC5009-06

Background

This gene encodes a member of the Smad family of signal transduction proteins. Smad proteins are phosphorylated and activated by transmembrane serine-threonine receptor kinases in response to transforming growth factor (TGF)-beta signaling. The product of this gene forms homomeric complexes and heteromeric complexes with other activated Smad proteins, which then accumulate in the nucleus and regulate the transcription of target genes. This protein binds to DNA and recognizes an 8-bp palindromic sequence (GTCTAGAC) called the Smad-binding element (SBE). The protein acts as a tumor suppressor and inhibits epithelial cell proliferation. It may also have an inhibitory effect on tumors by reducing angiogenesis and increasing blood vessel hyperpermeability. The encoded protein is a crucial component of the bone morphogenetic protein signaling pathway. The Smad proteins are subject to complex regulation by post-translational modifications. Mutations or deletions in this gene have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome.

Recommended Dilutions

WB 1:500 - 1:2000

IHC-P 1:50 - 1:200

IP 0.5µg-4µg antibody for
200µg-400µg extracts of
whole cellsChIP 5µg antibody for
10µg-15µg of ChromatinCUT&Tag 10⁵ cells /1 µg

Immunogen Information

Gene ID

4089

Swiss Prot

Q13485

Immunogen

Recombinant fusion protein containing a sequence corresponding to amino acids 320-552 of human Smad4 (NP_005350.1).

Synonyms

JIP; DPC4; MADH4; MYHRS; d4

Contact

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Product Information

Source

Rabbit

Isotype

IgG

Purification

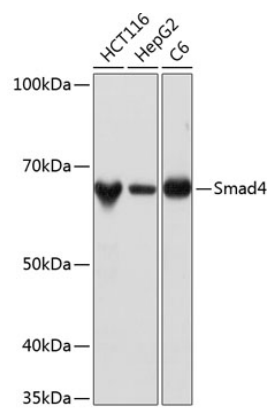
Affinity purification

Storage

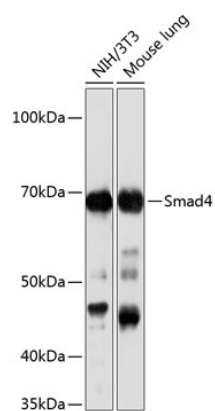
Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS with 0.01% thimerosal, 0.05% BSA, 50% glycerol, pH7.3.

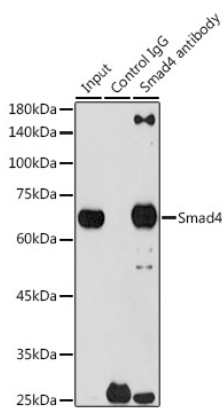
Validation Data



Western blot analysis of various lysates using [KO Validated] Smad4 Rabbit mAb (A19116) at 1:1000 dilution.
Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 10s.

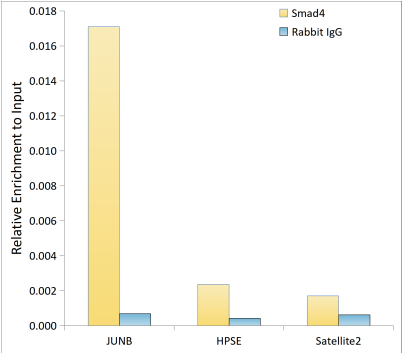


Western blot analysis of various lysates using [KO Validated] Smad4 Rabbit mAb (A19116) at 1:1000 dilution.
Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 3min.

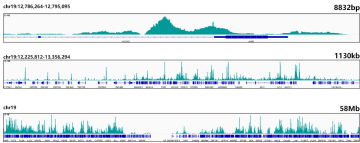


Immunoprecipitation analysis of 300 µg extracts of 293T cells using 3 µg Smad4 antibody (A19116).
Western blot was performed from the immunoprecipitate using Smad4 antibody (A19116) at a dilution of 1:1000.

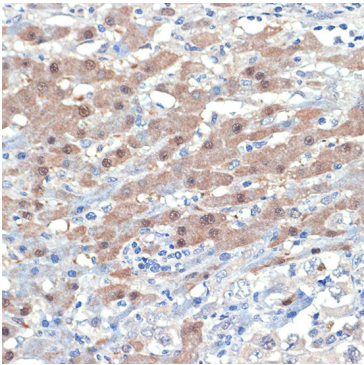
Validation Data



Chromatin immunoprecipitation analysis of extracts of HepG2 cells, using [KO Validated] Smad4 Rabbit mAb (A19116) and rabbit IgG. The amount of immunoprecipitated DNA was checked by quantitative PCR. Histogram was constructed by the ratios of the immunoprecipitated DNA to the input.



CUT&Tag was performed using the CUT&Tag Assay Kit (pAG-Tn5) for Illumina(RK20265) from 10⁵ K562 cells with 1µg Smad4 Rabbit mAb(A19116), along with a Goat Anti-Rabbit IgG(H+L). The CUT&Tag results indicate the enrichment pattern of Smad4 in representative gene loci (JUNB), as shown in figure.



Immunohistochemistry analysis of Smad4 in paraffin-embedded human liver cancer using [KO Validated] Smad4 Rabbit mAb (A19116) at dilution of 1:100 (40x lens). Perform microwave antigen retrieval with 10 mM Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.