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[KO Validated] Smad4 Rabbit mAb

Catalog No.: A19116

Recombinant | 13 Publications

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Basic Information

Observed MW
70 kDa

Calculated MW
60 kDa

Category
Monoclonal Antibodies

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

Cross Reactivity
Human, Mouse, Rat

Clone No.
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 1:5000 - 1:20000

IP
0.5μg-4μg antibody for 200μg-400μg extracts of whole cells

IHC-P 1:500 - 1:2000

ChIP
5μg antibody for 10μg-15μg of Chromatin

CUT&Tag 10^5 cells /1 μg

ELISA
Recommended starting concentration is 1 μg/mL. Please optimize the concentration based on your specific assay requirements.

Immunogen Information

Gene ID
4089

Swiss-Prot
Q13485

Immunogen
Recombinant protein (or fragment).This information is considered to be commercially sensitive.

Synonyms
JIP; DPC4; MADH4; MYHRS; d4

Contact

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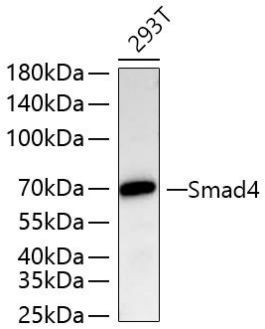
Product Information

Source	Isotype	Purity
Rabbit	IgG	Affinity purification

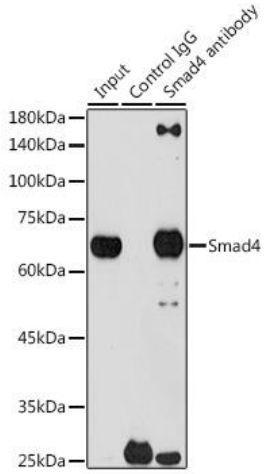
Storage

Store at -20℃. Avoid freeze / thaw cycles.
Buffer: PBS containing 50% glycerol and 0.05% BSA, preserved with proclin300 or sodium azide (as specified on the Certificate of Analysis), pH 7.3.

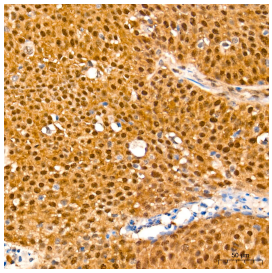
Validation Data



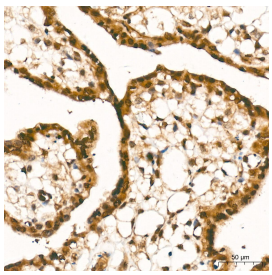
Western blot analysis of lysates from 293T cells using [KO Validated] Smad4 Rabbit mAb (A19116) at 1:10000 dilution incubated overnight at 4°C.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1: 10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 45 s.



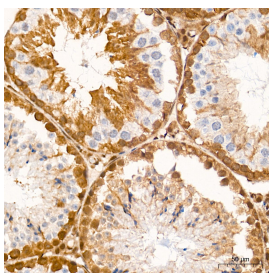
Immunoprecipitation analysis of 300 µg extracts of 293T cells using 3 µg Smad4 antibody (A19116). Western blot was performed from the immunoprecipitate using Smad4 antibody (A19116) at a dilution of1:1000.



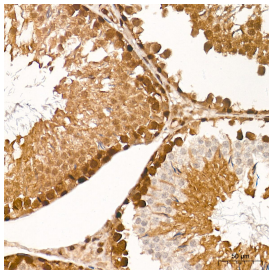
Immunohistochemistry analysis of paraffin-embedded Human cervix cancer tissue using [KO Validated] Smad4 Rabbit mAb (A19116) at a dilution of 1:500 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



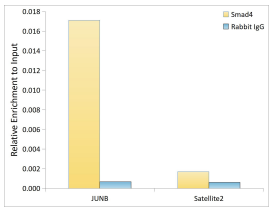
Immunohistochemistry analysis of paraffin-embedded Human placenta tissue using [KO Validated] Smad4 Rabbit mAb (A19116) at a dilution of 1:500 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Mouse testis tissue using [KO Validated] Smad4 Rabbit mAb (A19116) at a dilution of 1:500 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



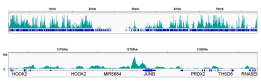
Immunohistochemistry analysis of paraffin-embedded Rat testis tissue using [KO Validated] Smad4 Rabbit mAb (A19116) at a dilution of 1:500 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



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) from10^5 K562 with 1 μg of [KO Validated] Smad4 Rabbit mAb (A19116), followed by incubation with Goat Anti-Rabbit IgG(H+L)(AS070).The results denote the enrichment pattern of Smad4 around JUNB gene.



CUT&Tag was performed using the CUT&Tag Assay Kit (pAG-Tn5) for illumina (RK20265) from 10^5 K562 cells with 1ug μg of [KO Validated] Smad4 Rabbit mAb (A19116), followed by incubation with Goat Anti-Rabbit IgG(H+L)(AS070). The CUT&Tag results denote the enrichment pattern of [KO Validated] Smad4 Rabbit mAb across chromosome 19 (upper panel) and the genomic region encompassing JUNB, a representative gene enriched in [KO Validated] Smad4 Rabbit mAb (lower panel).