

A19116

Leader in Biomolecular Solutions for Life Science



[KO Validated] Smad4 Rabbit mAb

Catalog No.: A19116

KO Validated

Recombinant

13 Publications

Basic Information

Observed MW

70kDa/

Calculated MW

60kDa

Category

SMab Recombinant Monoclonal
Antibody

Applications

WB,IHC-P,IP,ChIP,ELISA,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 1:1000 - 1:6000

IHC-P 1:500 - 1:2000

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

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

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

CUT&Tag 10⁵ cells /1 µg

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

Product Information

Source

Rabbit

Isotype

IgG

Purification

Affinity purification

Storage

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

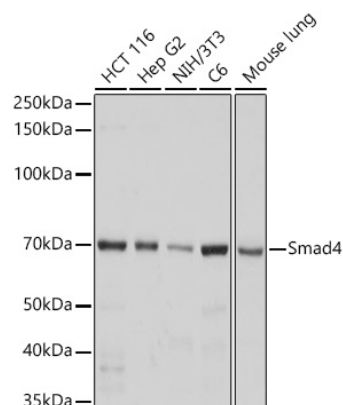
Buffer: PBS containing 50% glycerol and 0.05% BSA, preserved with proclin300 or sodium azide (as specified on the Certificate of Analysis), pH 7.3.

Contact

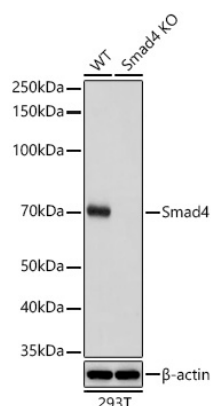


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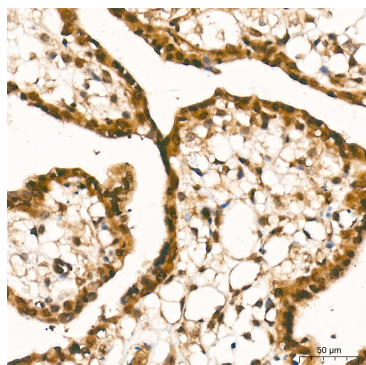
Validation Data



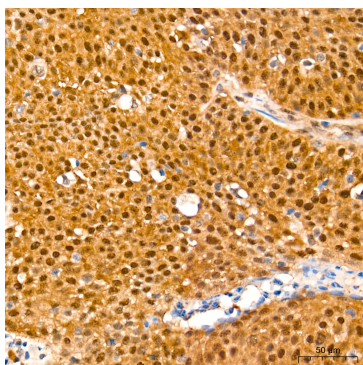
Western blot analysis of various lysates using [KO Validated] Smad4 Rabbit mAb (A19116) at 1:1000 dilution incubated overnight at 4°C.
 Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
 Lysates/proteins: 25 µg per lane.
 Blocking buffer: 3% nonfat dry milk in TBST.
 Detection: ECL Basic Kit (RM00020).
 Exposure time: 3s.



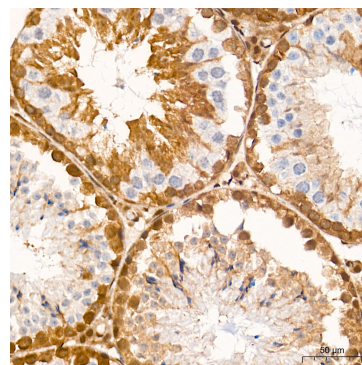
Western blot analysis of lysates from wild type (WT) and Smad4 knockout (KO) 293T cells using [KO Validated] Smad4 Rabbit mAb (A19116) at 1:1000 dilution incubated overnight at 4°C.
 Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
 Lysates/proteins: 25 µg per lane.
 Blocking buffer: 3% nonfat dry milk in TBST.
 Detection: ECL Basic Kit (RM00020).
 Exposure time: 3s.



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.

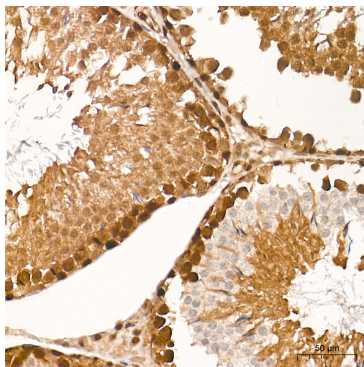


Immunohistochemistry analysis of paraffin-embedded Human cervix cancer tissue using [KO Validated] Smad4 Rabbit mAb (A19116) at a dilution of 1:500 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.

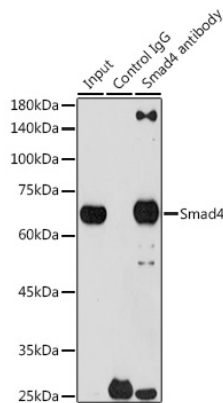


Immunohistochemistry analysis of paraffin-embedded Mouse testis tissue using [KO Validated] Smad4 Rabbit mAb (A19116) at a dilution of 1:500 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.

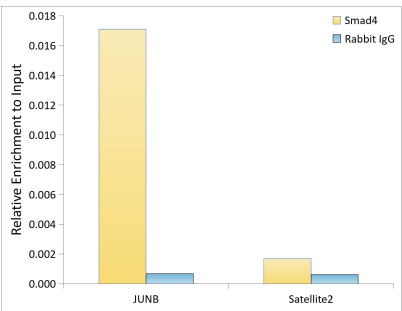
Validation Data



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.

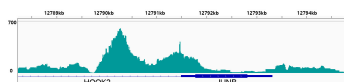
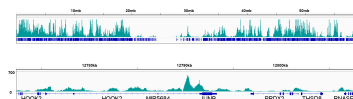


Immunoprecipitation analysis of 300 μg extracts of 293T cells using 3 μg Smad4 antibody (A19116). Western blot was performed from the immunoprecipitate using Smad4 antibody (A19116) at a dilution of 1:1000.



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.

Validation Data



CUT&Tag was performed using the CUT&Tag Assay Kit (pAG-Tn5) for illumina (RK20265) from 10⁵ 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).

CUT&Tag was performed using the CUT&Tag Assay Kit (pAG-Tn5) for Illumina (RK20265) from 10⁵ K562 cells 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.