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[KO Validated] Smad2 Rabbit pAb

Catalog No.: A7699SP KO Validated 21 Publications

Basic Information

Observed MW
60 kDa

Calculated MW
49 kDa/52 kDa

Category
Primary antibody

Applications
WB,IP,IF/ICC,ChIP,ELISA

Cross-Reactivity
Human, Mouse, Rat

Background

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation of this protein into the nucleus, where it binds to target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants have been observed for this gene.

Recommended Dilutions

WB	1:1000 - 1:5000
IP	0.5 μg - 4 μg antibody for 200 μg - 400 μg extracts of whole cells
IF/ICC	1:200 - 1:400
ChIP	5μg antibody for 10μg-15μg of Chromatin
ELISA	Recommended starting concentration is 1 μg/mL. Please optimize the concentration based on your specific assay requirements. For high-ratio antibody dilutions (≥1:10000)，a sequential dilution method is strongly recommended to ensure measurement accuracy.

Immunogen Information

Gene ID
4087/17126

Swiss Prot
Q15796/Q62432

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

Synonyms
JV18; LDS6; CHTD8; MADH2; MADR2; JV18-1; hMAD-2; hSMAD2; d2

Product Information

Source
Rabbit

Isotype
IgG

Purification
Affinity purification

Storage
Store at -20℃. Avoid freeze / thaw cycles.
Buffer: PBS, pH 7.3, containing 50% glycerol. Preserved with Proclin300 or sodium azide. May contain 0.05% BSA as specified on the Certificate of Analysis.

Contact

400-999-6126

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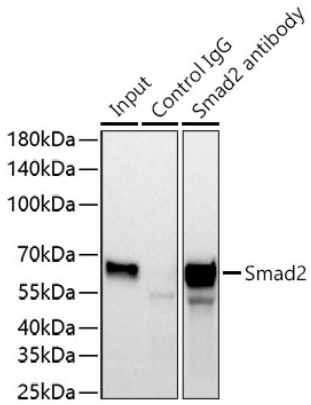
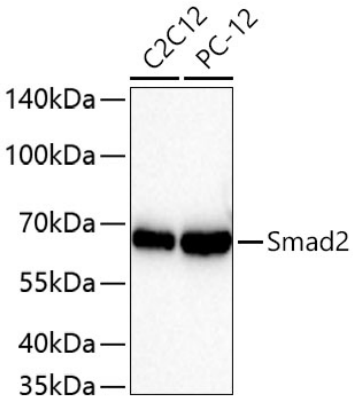
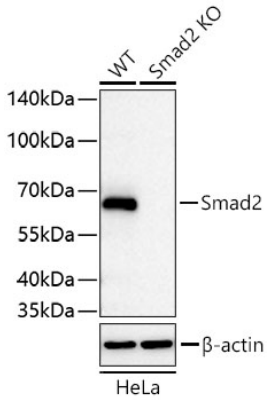
Validation Data



Immunoprecipitation of Smad2 from 300 µg extracts of HeLa cells was performed using 1 µg of [KO Validated] Smad2 Rabbit pAb (A7699SP). Rabbit Control IgG (AC005) was used to precipitate the Control IgG sample. IP samples were eluted with 1x Laemmli Buffer. The Input lane represents 10% of the total input. Western blot analysis of immunoprecipitates was conducted using [KO Validated] Smad2 Rabbit pAb (A7699SP) at a dilution of 1:5000.

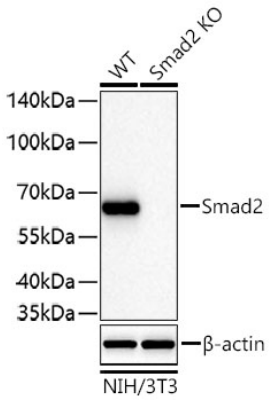


Western blot analysis of various lysates using [KO Validated] Smad2 Rabbit pAb (A7699SP) at 1:5000 dilution incubated overnight at 4℃.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 45 s.



Western blot analysis of lysates from wild type (WT) and Smad2 knockout (KO) HeLa cells using [KO Validated] Smad2 Rabbit pAb (A7699SP) at 1:5000 dilution incubated overnight at 4℃.
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.

Validation Data



Western blot analysis of lysates from wild type (WT) and Smad2 knockout (KO) NIH/3T3 cells using [KO Validated] Smad2 Rabbit pAb (A7699SP) at 1:5000 dilution incubated overnight at 4℃.
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.
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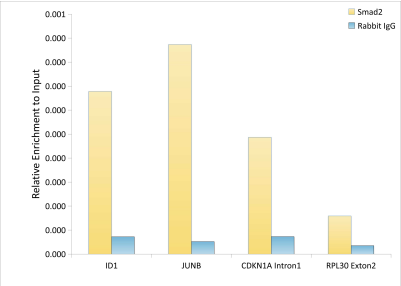
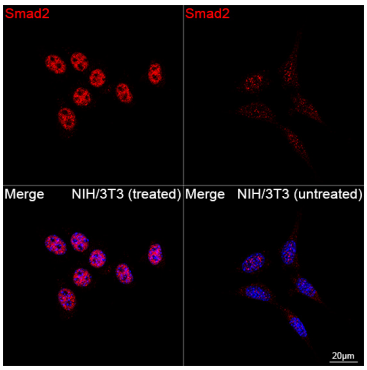
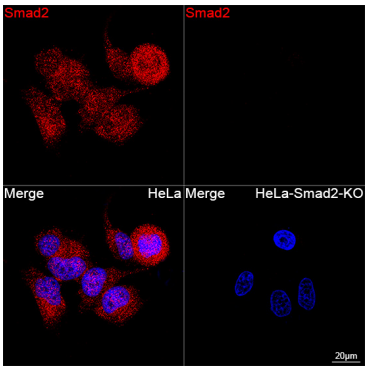


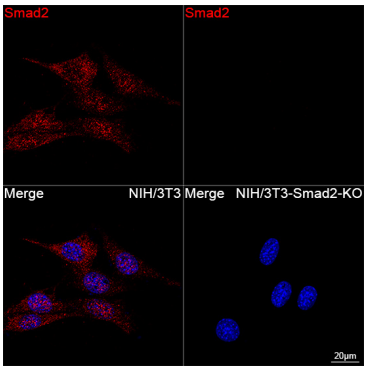
Chromatin immunoprecipitation was performed with 15 µg of cross-linked chromatin from A549 cells treated by TGF-β3 (20 ng/mL, 30 min), using 2 µg of [KO Validated] Smad2 Rabbit pAb(A7699SP) and Rabbit IgG isotype control (AC042). The enrichment of immunoprecipitated DNA at different genomic loci was examined by quantitative PCR. The histogram compares the ratio of the immunoprecipitated DNA to the input at given loci.



Confocal imaging of NIH/3T3 cells (treated with hTGF-β3) and NIH/3T3 cells (untreated) using [KO Validated] Smad2 Rabbit pAb (A7699SP, dilution 1:200) followed by a further incubation with Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 100x.



Confocal imaging of HeLa cells and Smad2 knockdown (KO) HeLa cells using [KO Validated] Smad2 Rabbit pAb (A7699SP, dilution 1:200) followed by a further incubation with Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 100x.



Confocal imaging of NIH/3T3 cells and Smad2 knockdown (KO) NIH/3T3 cells using [KO Validated] Smad2 Rabbit pAb (A7699SP, dilution 1:200) followed by a further incubation with Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 100x.