bs-0718R **[Primary Antibody]**

Smad2 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 4087 **SWISS:** Q15796

Target: Smad2

Immunogen: KLH conjugated synthetic peptide derived from human Smad2: 21-120/467.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

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. [provided by RefSeq, May 2012]

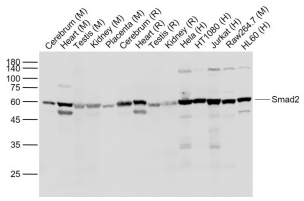
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (1μg/Test)

Reactivity: Human, Mouse, Rat (predicted: Rabbit, Cow, Chicken, Dog)

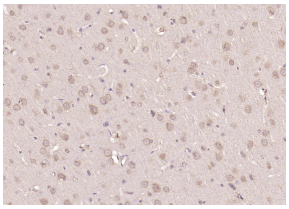
Predicted MW.: 52 kDa

Subcellular Location: Cytoplasm ,Nucleus

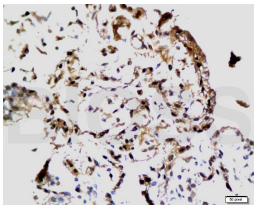
VALIDATION IMAGES



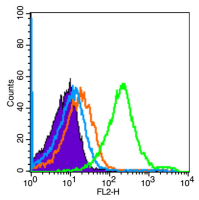
Sample: Lane 1: Cerebrum (Mouse) Lysate at 40 ug Lane 2: Heart (Mouse) Lysate at 40 ug Lane 3: Testis (Mouse) Lysate at 40 ug Lane 4: Kidney (Mouse) Lysate at 40 ug Lane 5: Placenta (Mouse) Lysate at 40 ug Lane 6: Cerebrum (Rat) Lysate at 40 ug Lane 7: Heart (Rat) Lysate at 40 ug Lane 8: Testis (Rat) Lysate at 40 ug Lane 9: Kidney (Rat) Lysate at 40 ug Lane 10: Hela (Human) Cell Lysate at 30 ug Lane 11: HT1080 (Human) Cell Lysate at 30 ug Lane 12: Jurkat (Human) Cell Lysate at 30 ug Lane 13: Raw264.7 (Mouse) Cell Lysate at 30 ug Lane 14: HL60 (Human) Cell Lysate at 30 ug Primary: Anti-Smad2 (bs-0718R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 60 kD Observed band size: 60 kD



Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Smad2) Polyclonal Antibody, Unconjugated (bs-0718R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Tissue/cell: rat choroid tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-Smad2 Polyclonal Antibody, Unconjugated(bs-0718R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control (Black line): Mouse spleen(Black). Primary Antibody (green line): Rabbit Anti-Smad2 antibody (bs-0718R) Dilution: 1μg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE Dilution: 1μg /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at room temperature. The cells were then incubated in 5%BSA goat serum to block non-specific protein-protein interactions for 15 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=10.7]** Jiayi Li. et al. Chronic arsenic exposure-provoked biotoxicity involved in liver-microbiota-gut axis disruption in chickens based on multi-omics technologies. J ADV RES. 2024 Jan;: WB ;Chicken. 38237767
- **[IF=10.6]** Yu Shujun. et al. Thermosensitive hydrogel as a sustained release carrier for mesenchymal stem cell-derived extracellular vesicles in the treatment of intrauterine adhesion. J NANOBIOTECHNOL. 2024 Dec;22(1):1-17 WB ;Mouse. 39289737
- **[IF=8.5]** Genghua Chen. et al. Bulk and single-cell alternative splicing analyses reveal roles of TRA2B in myogenic differentiation. CELL PROLIFERAT. 2023 Sep;:e13545 WB ;Chicken. 37705195
- **[IF=8.7]** Yu Han. et al. High-precision bioactive scaffold with dECM and extracellular vesicles targeting 4E-BP inhibition for cartilage injury repair. MATER TODAY BIO. 2024 Aug;27:101114 WB ;Rat. 10.1016/j.mtbio.2024.101114
- **[IF=7.917]** Huang Shu. et al. Targeting nano-regulator based on metal–organic frameworks for enhanced immunotherapy of bone metastatic prostate cancer. CANCER NANOTECHNOL. 2023 Dec;14(1):1-15 WB ;Mouse,Human. 10.1186/s12645-023-00200-y