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SMAD6 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5282

Product Information

Application	FC, WB
Primary Accession	O43541
Other Accession	O35182, NP_005576.3
Reactivity	Mouse, Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	53497
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	4091
Antigen Region	358-386
Other Names	SMAD6; MADH6; Mothers against decapentaplegic homolog 6; SMAD family member 6
Dilution	FC~~1:10~50 WB~~1:1000
Target/Specificity	This SMAD6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 358-386 amino acids from the Central region of human SMAD6.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SMAD6 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SMAD6 (HGNC:6772)
Synonyms	MADH6

Function	Acts as an inhibitory regulator of signaling mediated by the TGF-beta superfamily, with strong selectivity toward BMP-dependent pathways (PubMed:10647776, PubMed:10708948, PubMed:10708949, PubMed:16951688, PubMed:22275001, PubMed:30848080, PubMed:9436979, PubMed:9759503). Suppresses IL1R-TLR signaling through its direct interaction with PEL1, preventing NF-kappa-B activation, nuclear translocation and NF-kappa-B-mediated expression of pro-inflammatory genes (PubMed:16951688). Blocks the BMP-SMAD1 signaling pathway by competing with SMAD4 for receptor-activated SMAD1-binding (PubMed:30848080, PubMed:9436979). Associates with regulatory elements in target promoter regions (PubMed:16491121). Functions as an adapter protein that recruits ubiquitin ligases, including SMURF1 and, in some contexts, SMURF2, promoting proteasomal degradation of signaling components and transcription factors such as RUNX2, TBX6, BMPR1A and MYD88 (PubMed:16299379, PubMed:19561075, PubMed:28847510).
Cellular Location	Nucleus. Cytoplasm {ECO:0000250|UniProtKB:O35182}
Tissue Location	[Isoform B]: Expressed in the brain, heart, ovary, peripheral blood leukocytes, small intestine, spleen, thymus, bone marrow, fetal liver and lymph nodes.

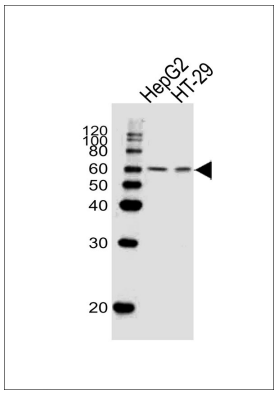
Background

SMAD6 belongs to the SMAD family of proteins, which are related to Drosophila 'mothers against decapentaplegic' (Mad) and C. elegans Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein functions in the negative regulation of BMP and TGF-beta/activin-signalling.

References

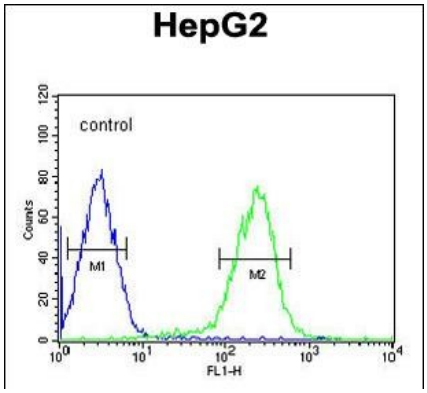
Tseng, Z.H., et al. Heart Rhythm 6(12):1745-1750(2009)
Shintani, M., et al. J. Med. Genet. 46(5):331-337(2009)
Yu, H., et al. Acta Derm. Venereol. 89(4):351-356(2009)

Images



Western blot analysis of lysates from HepG2,HT-29 cell line (from left to right), using SMAD6Antibody(Center)(Cat. #AW5282). AW5282 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.

SMAD6 Antibody (Center) (Cat. #AW5282) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



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