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SMAD6 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5344c

Product Information

Application	WB, E
Primary Accession	O43541
Other Accession	O35182, NP_005576.3
Reactivity	Human, Mouse
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	53497
Antigen Region	358-386

Additional Information

Gene ID	4091
Other Names	Mothers against decapentaplegic homolog 6, MAD homolog 6, Mothers against DPP homolog 6, SMAD family member 6, SMAD 6, Smad6, hSMAD6, SMAD6, MADH6
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.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
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.

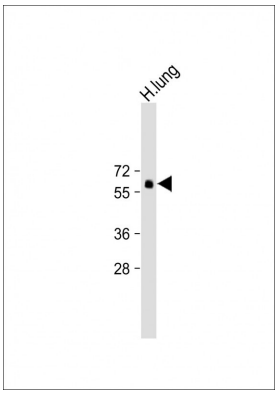
Background

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



Anti-SMAD6 Antibody (Center) at 1:500 dilution + H. lung whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 53 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.