10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Smad1/5 (Ser463/465) Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5020

Product Information

Application	WB
Primary Accession	Q15797
Other Accession	O54835, Q9JIW5, O15198, P97588, P70340, Q9I8V2, Q1JQA2
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	52260
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	4086
Antigen Region	455-485
Other Names	Mothers against decapentaplegic homolog 1, MAD homolog 1, Mothers against DPP homolog 1, JV4-1, Mad-related protein 1, SMAD family member 1, SMAD 1, Smad1, hSMAD1, Transforming growth factor-beta-signaling protein 1, BSP-1, SMAD1, BSP1, MADH1, MADR1
Dilution	WB~~1:1000
Target/Specificity	This antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 455-485 amino acids from human.
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	Smad1/5 (Ser463/465) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SMAD1 (HGNC:6767)

Synonyms	BSP1, MADH1, MADR1
Function	Transcriptional modulator that plays a role in various cellular processes, including embryonic development, cell differentiation, and tissue homeostasis (PubMed:9335504). Upon BMP ligand binding to their receptors at the cell surface, is phosphorylated by activated type I BMP receptors (BMPRIs) and associates with SMAD4 to form a heteromeric complex which translocates into the nucleus acting as transcription factor (PubMed:33667543). In turn, the hetero-trimeric complex recognizes cis-regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network (PubMed:33667543). SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1. Positively regulates BMP4-induced expression of odontogenic development regulator MSX1 following IPO7-mediated nuclear import (By similarity).
Cellular Location	Cytoplasm. Nucleus Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4 (PubMed:15647271). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15647271). Exported from the nucleus to the cytoplasm when dephosphorylated (By similarity) {ECO:0000250|UniProtKB:P70340, ECO:0000269|PubMed:15647271}
Tissue Location	Ubiquitous. Highest expression seen in the heart and skeletal muscle

Background

Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD1 is a receptor-regulated SMAD (R-SMAD). SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1.

References

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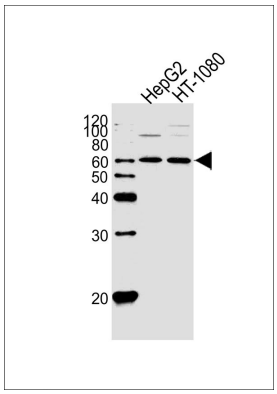
Liu F.,et al.Nature 381:620-623(1996).
Hoodless P.A.,et al.Cell 85:489-500(1996).
Lechleider R.J.,et al.J. Biol. Chem. 271:17617-17620(1996).
Zhang Y.,et al.Nature 383:168-172(1996).

Images



Western blot analysis of lysates from HepG2, HT-1080 cell line (from left to right), using Phospho-Smad1/5 (Ser463/465).ctrl3(Cat. #AW5020). AW5020 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.