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Phospho-Smad5 (S463/465) Antibody

Rabbit mAb
Catalog # AP90177

Product Information

Application	WB, IHC, IF, ICC, IHF
Primary Accession	Q99717
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	hSmad5; JV5-1 ; MADH5; SMAD5; MusMLP ;SMAD family member 5;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	52258

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Phospho-Smad5 (S463/465)
Description	Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD5 is a receptor-regulated SMAD (R-SMAD). SMAD5 is required for normal development of the cardiovascular system in vivo; lack of the SMAD5 gene results in apoptosis of cardiac myocytes.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

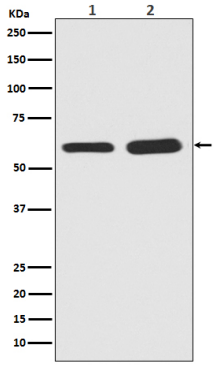
Name	SMAD5 (HGNC:6771)
Synonyms	MADH5
Function	Transcriptional regulator that plays a role in various cellular processes including embryonic development, cell differentiation, angiogenesis and tissue homeostasis (PubMed:12064918, PubMed:16516194). Upon BMP ligand binding to their receptors at the cell 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:9442019). In turn, the hetero-trimeric complex recognizes cis- regulatory elements containing Smad Binding Elements (SBEs) to modulate the outcome of the signaling network (PubMed:33510867). Non-phosphorylated SMAD5 has a cytoplasmic role in energy metabolism regulation by promoting mitochondrial respiration and glycolysis in response to cytoplasmic pH changes (PubMed:28675158). Mechanistically, interacts with hexokinase 1/HK1 and thereby accelerates glycolysis

(PubMed:28675158).

Cellular Location Cytoplasm. Nucleus Mitochondrion. Note=Cytoplasmic in the absence of ligand. Migrates to the nucleus when complexed with SMAD4

Tissue Location Ubiquitous.

Images



Western blot analysis of Phospho-Smad5 in (1)Mouse brain tissue lysate; (2)Rat brain tissue lysate.

Image not found : 202311/AP90177-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human pancreas, using Phospho-Smad5 (S463/465) Antibody.

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