

Smad2/3 (phospho Thr8) Polyclonal Antibody

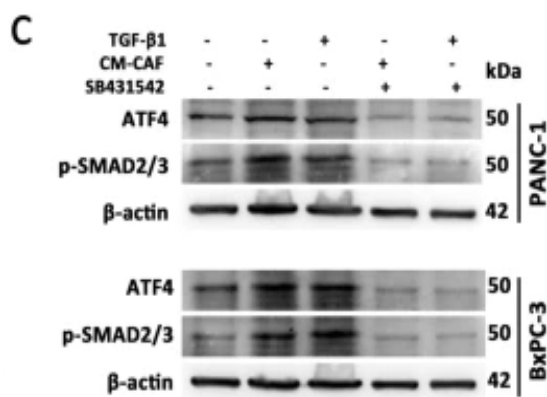
Catalog No :	YP0362
Reactivity :	Human;Mouse;Rat;Pig
Applications :	WB;IF;ELISA
Target :	Smad2/3
Fields :	>>Cell cycle;>>Endocytosis;>>Cellular senescence;>>TGF-beta signaling pathway;>>Apelin signaling pathway;>>Hippo signaling pathway;>>Signaling pathways regulating pluripotency of stem cells;>>Th17 cell differentiation;>>Relaxin signaling pathway;>>AGE-RAGE signaling pathway in diabetic complications;>>Chagas disease;>>Human T-cell leukemia virus 1 infection;>>Pathways in cancer;>>Proteoglycans in cancer;>>Colorectal cancer;>>Pancreatic cancer;>>Hepatocellular carcinoma;>>Gastric cancer;>>Inflammatory bowel disease;>>Diabetic cardiomyopathy
Gene Name :	SMAD2/SMAD3
Protein Name :	Mothers against decapentaplegic homolog 2/3
Human Gene Id :	4087/4088
Human Swiss Prot No :	Q15796/P84022
Mouse Gene Id :	17126/17127
Rat Gene Id :	29357/25631
Rat Swiss Prot No :	O70436/P84025
Immunogen :	The antiserum was produced against synthesized peptide derived from human Smad2/3 around the phosphorylation site of Thr8. AA range:1-50
Specificity :	Phospho-Smad2/3 (T8) Polyclonal Antibody detects endogenous levels of Smad2/3 protein only when phosphorylated at T8.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500-2000; IF ICC 1:100-500;ELISA 1:5000-20000
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	48kD
Cell Pathway :	Regulates Angiogenesis; Cell_Cycle_G1S;Cell_Cycle_G2M_DNA; Protein_Acetylation
Background :	<p>The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene <i>mothers against decapentaplegic</i> (Mad) and the C. elegans gene <i>Sma</i>. 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</p>
Function :	<p>disease:Defects in SMAD2 are found in sporadic cases of colorectal carcinoma.,function:Transcriptional modulator activated by TGF-beta and activin type 1 receptor kinase. SMAD2 is a receptor-regulated SMAD (R-SMAD). May act as a tumor suppressor in colorectal carcinoma.,PTM:Acetylated on Lys-19 by coactivators in response to TGF-beta signaling, which increases transcriptional activity. Isoform short: Acetylation increases DNA binding activity in vitro and enhances its association with target promoters in vivo.,PTM:In response to TGF-beta, ubiquitinated by NEDD4L; which promotes its degradation.,PTM:Phosphorylated on one or several of Thr-220, Ser-245, Ser-250, and Ser-255. In response to TGF-beta, phosphorylated on Ser-465/467 by TGF-beta and activin type 1 receptor kinases. Able to interact with SMURF2 when phosphorylated on Ser-465/467, recruiting other proteins, such as SNON, for degr</p>
Subcellular Location :	Cytoplasm . Nucleus . Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:9865696, PubMed:21145499). On dephosphorylation by phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the

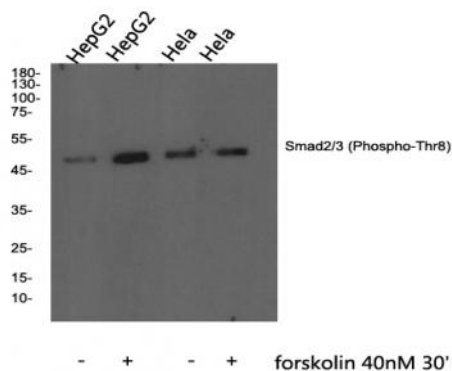
nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (By similarity).

Expression : Expressed at high levels in skeletal muscle, endothelial cells, heart and placenta.

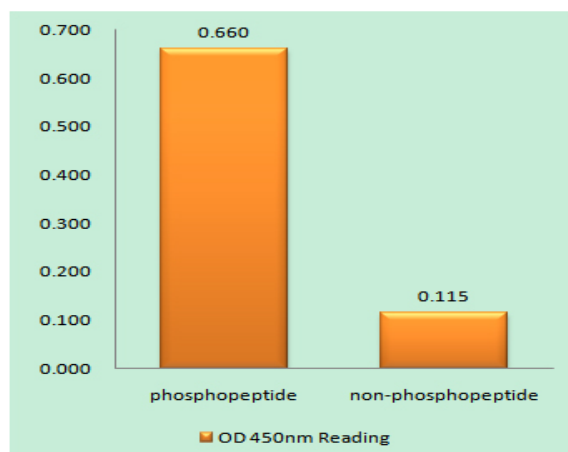
Products Images



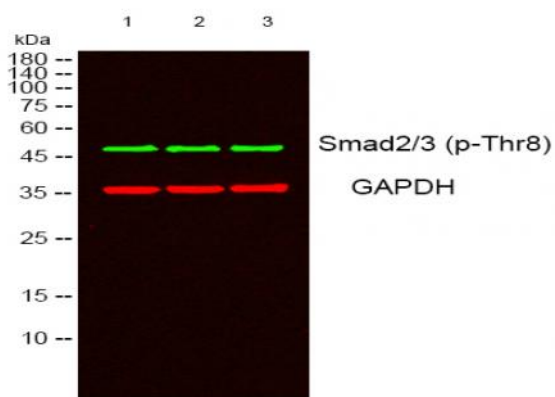
Wei, L., Lin, Q., Lu, Y. et al. Cancer-associated fibroblasts-mediated ATF4 expression promotes malignancy and gemcitabine resistance in pancreatic cancer via the TGF-β1/SMAD2/3 pathway and ABCC1 transactivation. *Cell Death Dis* 12, 334 (2021).



Western blot analysis of Smad2/3 (phospho Thr8) Polyclonal Antibody, using HeLa, HepG2 cell treated or untreated with forskolin 40nM 30', 4° over night, secondary antibody(cat: RS0002 was diluted at 1:10000, 37° 1hour.



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Smad2/3 (Phospho-Thr8) Antibody



Western blot analysis of lysates from 1) VEC, 2) HeLa, 3) HepG2 cells, (Green) primary antibody was diluted at 1:1000, 4° over night, secondary antibody(cat:RS23920)was diluted at 1:10000, 37° 1 hour. (Red) GAPDH Monoclonal Antibody(2B8) (cat:YM3029) antibody was diluted at 1:5000 as loading control, 4° over night,secondary antibody(cat:RS23710)was diluted at 1:10000, 37° 1 hour.