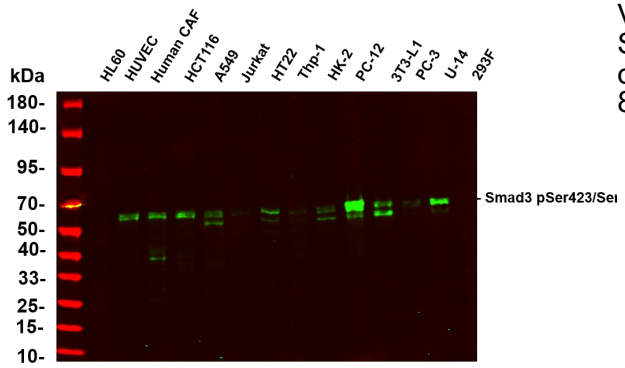
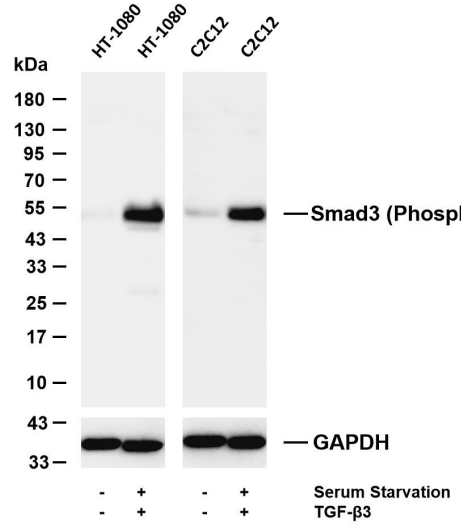
Smad3 (Phospho Ser423/Ser425) Rabbit mAb

Catalog No	YP-rAb-18410
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,ELISA
Gene Name	SMAD3 MADH3
Protein Name	Mothers against decapentaplegic homolog 3
Purification Process	Protein A
Specificity	Phospho-Smad3 (S423/S425) Antibody detects endogenous levels of Smad3 protein only when phosphorylated at S423/425.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):CSSVs
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	SMAD3 ; MADH3 ; Mothers against decapentaplegic homolog 3 ; MAD homolog 3 ; Mad3 ; Mothers against DPP homolog 3 ; hMAD-3 ; JV15-2 ; SMAD family member 3 ; SMAD 3 ; Smad3 ; hSMAD3
Observed Band	52kD
Calculated Molecular Weight	48kD
Cell Pathway	Cytoplasm . Nucleus . Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:15799969, PubMed:21145499). Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15601644). MAPK-mediated phosphorylation appears to have no effect on nuclear import (PubMed:19218245). PDPK1 prevents its nuclear translocation in response to TGF-beta (PubMed:17327236). Localized mainly to the nucleus in the early

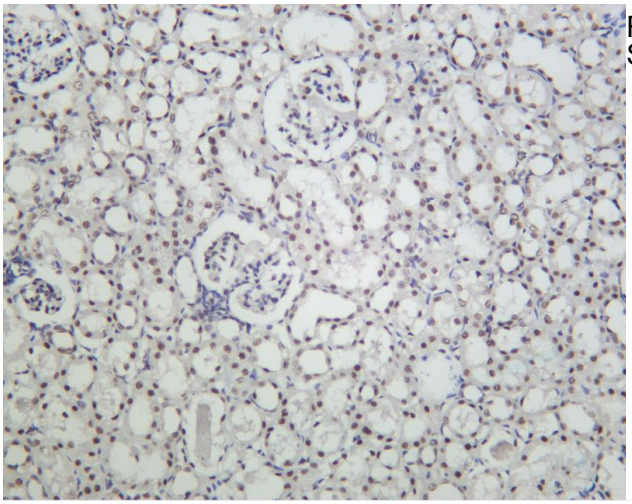
	stages of embryo development with expression becoming evident in the cytoplasm of the inner cell mass at the blastocyst stage (By similarity). .
Tissue Specificity	Brain,Colon carcinoma,Esophagus tumor,Pancreas,Placenta,Spleen,Umbilical cord blood
Function	Disease:Defects in SMAD3 may be a cause of colorectal cancer (CRC) [MIM:114500].,Domain:The MH2 domain is sufficient to carry protein nuclear export.,Function:Transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinase. SMAD3 is a receptor-regulated SMAD (R-SMAD).,PTM:Phosphorylated on serine by TGF-beta and activin type 1 receptor kinases.,similarity:Belongs to the dwarfin/SMAD family.,similarity:Contains 1 MH1 (MAD homology 1) domain.,similarity:Contains 1 MH2 (MAD homology 2) domain.,subcellular location:In the cytoplasm in the absence of ligand. Migration to the nucleus when complexed with Smad4.,subunit:Interacts with HGS. Interacts with NEDD4L in response to TGF-beta. Interacts with TTRAP (By similarity). Interacts with SARA (SMAD anchor for receptor activation); form trimers with another SMAD3 and the co-SMAD SMAD4. Interacts with JUN/FOS, vitamin D receptor, homeobox protein TGIF and TGIF2, PEBP2-alpha C subunit, CREB-binding protein (CBP), p300, SKI, SNON, ATF2, SMURF2, AIP1, DACH1 and TGFB1I1. Part of a complex consisting of AIP1, ACVR2A, ACVR1B and SMAD3. Found in a complex with SMAD2 and TRIM33 upon addition of TGF-beta. Interacts with SMAD2 and TRIM33. Found in a complex with SMAD3, Ran and XPO4. Interacts with XPO4. Interacts with LBXCOR1 and CORL2.,
Background	The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein functions as a transcriptional modulator activated by transforming growth factor-beta and is thought to play a role in the regulation of carcinogenesis. [provided by RefSeq, Apr 2009],
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



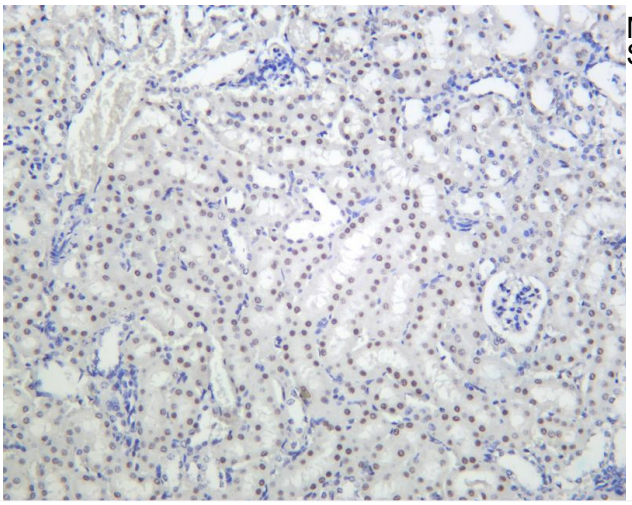
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4℃, over night with a 1:5000 dilution . The Dylight 800-conjugated Goat anti-Rabbit antibody



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Smad3 (Phospho Ser423/Ser425) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: HT-1080 Lane 2: HT-1080 serum was starved overnight and treated with TGF-β3(10ng/ml) for 30 minutes Lane 3: C2C12 Lane 4: C2C12 serum was starved overnight and treated with TGF-β3(10ng/ml) for 30 minutes Predicted band size: 48kDa Observed band size: 52kDa



Rat kidney was stained with anti-Smad3 (Phospho Ser423/Ser425) Rabbit antibody



Mouse kidney was stained with anti-Smad3 (Phospho Ser423/Ser425) Rabbit antibody