

## Smad3 (phospho Ser425) Polyclonal Antibody

<b>Catalog No :</b>	YP0585
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	IF;WB;IHC;ELISA
<b>Target :</b>	Smad3
<b>Fields :</b>	>>FoxO signaling pathway;>>Cell cycle;>>Endocytosis;>>Cellular senescence;>>Wnt signaling pathway;>>TGF-beta signaling pathway;>>Apelin signaling pathway;>>Hippo signaling pathway;>>Adherens junction;>>Signaling pathways regulating pluripotency of stem cells;>>Th17 cell differentiation;>>AGE-RAGE signaling pathway in diabetic complications;>>Hepatitis B;>>Human T-cell leukemia virus 1 infection;>>Pathways in cancer;>>Colorectal cancer;>>Pancreatic cancer;>>Chronic myeloid leukemia;>>Hepatocellular carcinoma;>>Gastric cancer;>>Inflammatory bowel disease;>>Diabetic cardiomyopathy
<b>Gene Name :</b>	SMAD3
<b>Protein Name :</b>	Mothers against decapentaplegic homolog 3
<b>Human Gene Id :</b>	4088
<b>Human Swiss Prot No :</b>	P84022
<b>Mouse Gene Id :</b>	17127
<b>Mouse Swiss Prot No :</b>	Q8BUN5
<b>Rat Gene Id :</b>	25631
<b>Rat Swiss Prot No :</b>	P84025
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human Smad3 around the phosphorylation site of Ser425. AA range:376-425
<b>Specificity :</b>	Phospho-Smad3 (S425) Polyclonal Antibody detects endogenous levels of Smad3 protein only when phosphorylated at S425.

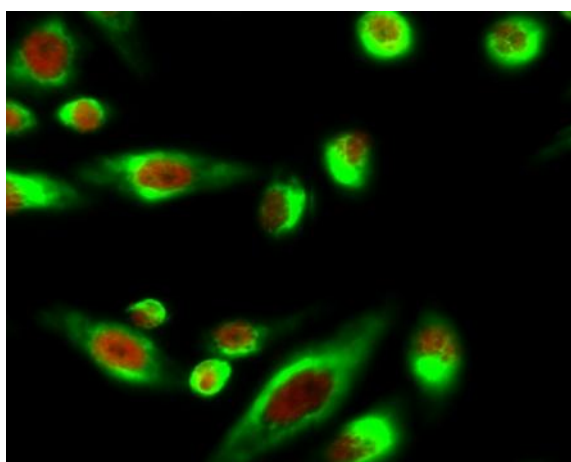
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IF 1:50-200 WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:40000. Not yet tested in other applications.
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Observed Band :</b>	58kD
<b>Cell Pathway :</b>	Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;WNT;WNT-T CELLTGF-beta;Adherens_Junction;Pathways in cancer;Colorectal cancer;Pancreatic cancer;Chronic myeloid leukemia;
<b>Background :</b>	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 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],
<b>Function :</b>	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 wit
<b>Subcellular Location :</b>	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)

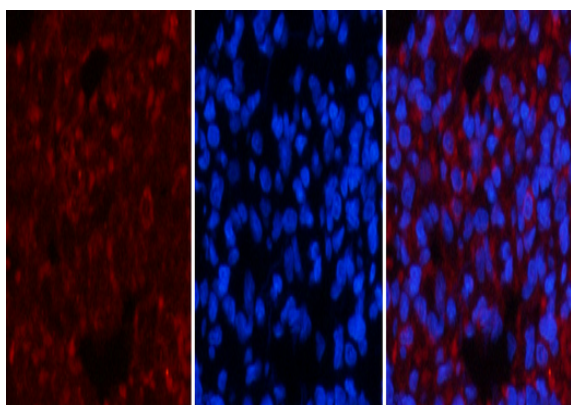
## Expression :

Brain,Colon carcinoma,Esophagus tumor,Pancreas,Placenta,Spleen,Umbilical cord blood

## Products Images



Immunofluorescence analysis of Hela cell. 1, Smad3 (phospho Ser425) Polyclonal Antibody (red) was diluted at 1:200 (4° overnight). ATG5 mouse Monoclonal Antibody (3C7) (green) was diluted at 1:200 (4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog:RS3611 was diluted at 1:1000 (room temperature, 50min). Goat Anti Mouse Alexa Fluor 488 Catalog:RS3208 was diluted at 1:1000 (room temperature, 50min).

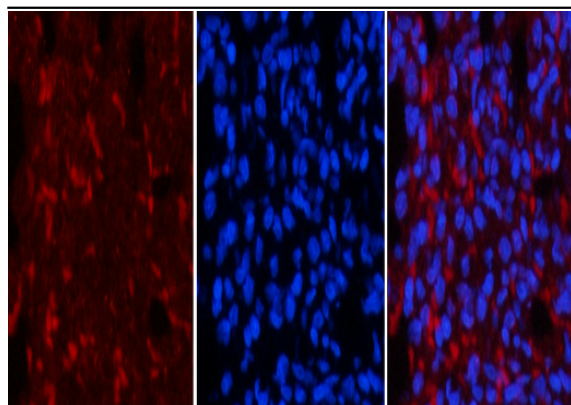


A

B

C

Immunofluorescence analysis of rat-lung tissue. 1, Smad3 (phospho Ser425) Polyclonal Antibody (red) was diluted at 1:200 (4° C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

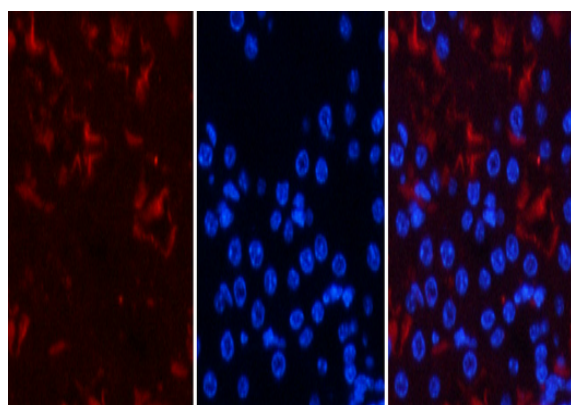


A

B

C

Immunofluorescence analysis of rat-lung tissue. 1, Smad3 (phospho Ser425) Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

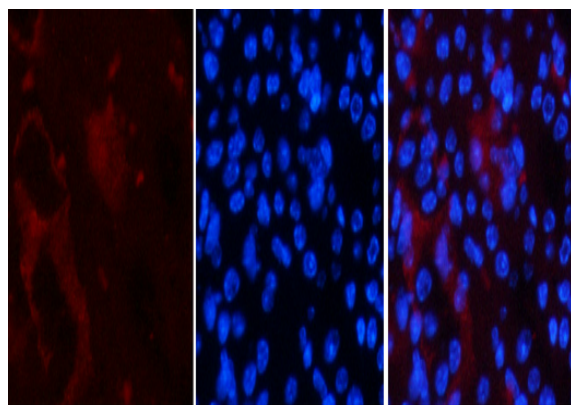


A

B

C

Immunofluorescence analysis of mouse-kidney tissue. 1, Smad3 (phospho Ser425) Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

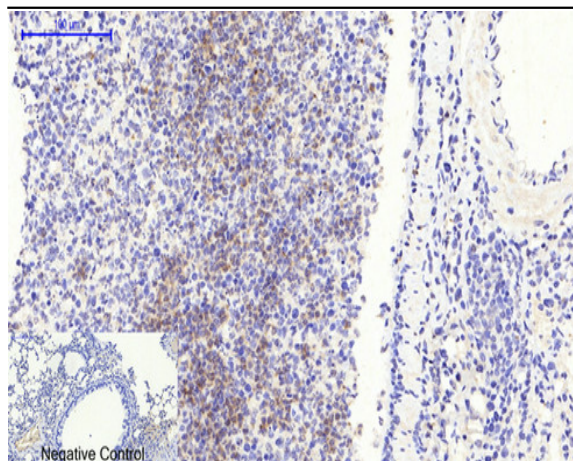


A

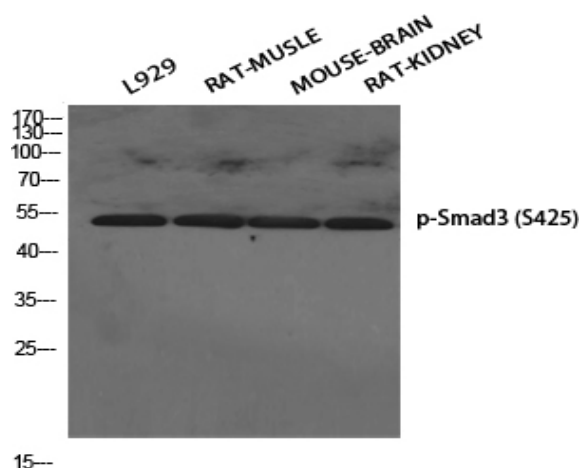
B

C

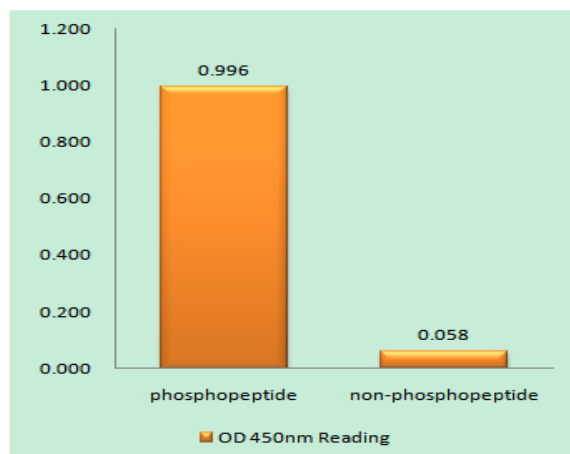
Immunofluorescence analysis of mouse-kidney tissue. 1, Smad3 (phospho Ser425) Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded Mouse-lung tissue. 1, Smad3 (phospho Ser425) Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.

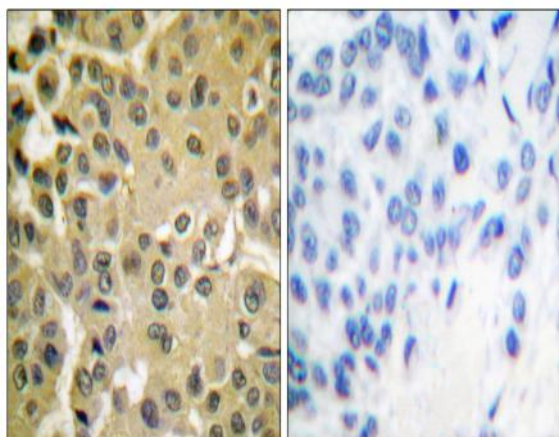


Western Blot analysis of various cells using Phospho-Smad3 (S425) Polyclonal Antibody diluted at 1:500

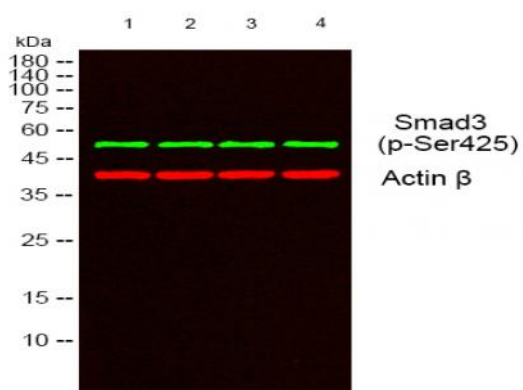


Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Smad3 (Phospho-Ser425) Antibody





Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using Smad3 (Phospho-Ser425) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from 1) L929, 2) RAT MUSCLE, 3) MOUSE-BRAIN, 4) RAT- KIDNEY 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) Actin  $\beta$  Monoclonal Antibody (5B7) (cat:YM3028) antibody was diluted at 1:5000 as loading control, 4° over night, secondary antibody (cat:RS23710) was diluted at 1:10000, 37° 1 hour.