

Smad3 (phospho Thr179) Polyclonal Antibody

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| Catalog No : | YP0745 |
| Reactivity : | Human;Mouse;Rat |
| Applications : | WB;IHC;IF;ELISA |
| Target : | Smad3 |
| Fields : | >>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 |
| Gene Name : | SMAD3 |
| Protein Name : | Mothers against decapentaplegic homolog 3 |
| Human Gene Id : | 4088 |
| Human Swiss Prot No : | P84022 |
| Mouse Gene Id : | 17127 |
| Mouse Swiss Prot No : | Q8BUN5 |
| Rat Gene Id : | 25631 |
| Rat Swiss Prot No : | P84025 |
| Immunogen : | The antiserum was produced against synthesized peptide derived from human Smad3 around the phosphorylation site of Thr179. AA range:145-194 |
| Specificity : | Phospho-Smad3 (T179) Polyclonal Antibody detects endogenous levels of Smad3 protein only when phosphorylated at T179. |

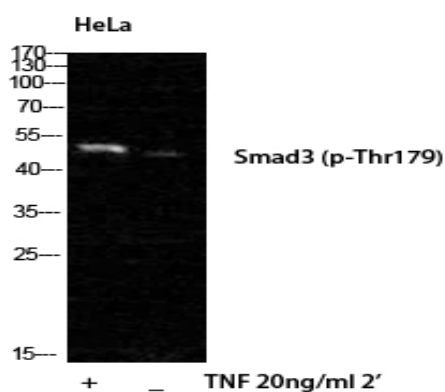
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| Formulation : | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide. |
| Source : | Polyclonal, Rabbit,IgG |
| Dilution : | WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:10000.. IF 1:50-200 |
| Purification : | The antibody was 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 : | 50kD |
| Cell Pathway : | Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;WNT;WNT-T CELLTGF-beta;Adherens_Junction;Pathways in cancer;Colorectal cancer;Pancreatic cancer;Chronic myeloid leukemia; |
| 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], |
| 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 wit |
| 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: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)

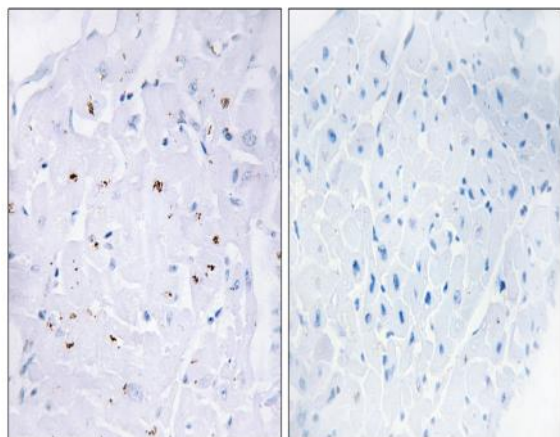
Expression :

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

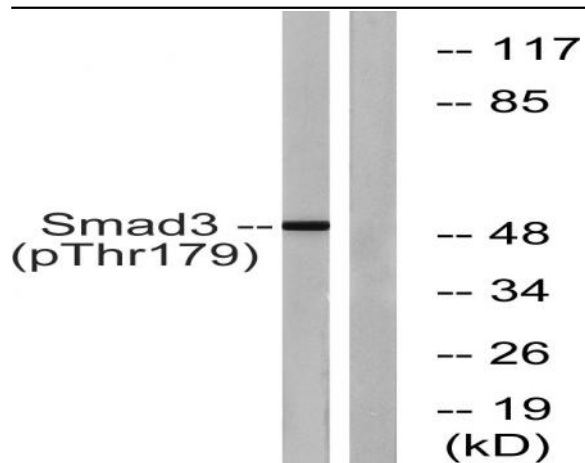
Products Images



Western Blot analysis of HELA cells using Phospho-Smad3 (T179) Polyclonal Antibody



Immunohistochemistry analysis of paraffin-embedded human heart, using Smad3 (Phospho-Thr179) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from HeLa cells treated with TNF 20ng/ml 2', using Smad3 (Phospho-Thr179) Antibody. The lane on the right is blocked with the phospho peptide.