

Smad3 (Phospho Ser213) Rabbit pAb

CatalogNo: YP0364

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, IHC, IF, ELISA

MW

- 48kD (Observed)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-1:2000

IHC 1:100-1:300

ELISA 1:5000

IF 1:50-200

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from human Smad3 around the phosphorylation site of Ser213. AA range:179-228

Specificity Phospho-Smad3 (S213) Polyclonal Antibody detects endogenous levels of Smad3 protein only when phosphorylated at S213.

| Target Information

Gene name SMAD3 MADH3

Protein Name Mothers against decapentaplegic homolog 3

Organism	Gene ID	UniProt ID
Human	4088 ;	P84022 ;
Mouse	17127 ;	Q8BUN5 ;
Rat	25631 ;	P84025 ;

Cellular Localization

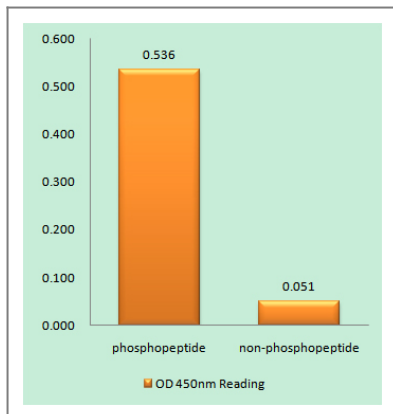
Cytoplasm . Nucleus . Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation , migrates to the nucleus when complexed with SMAD4 (PubMed:15799969 , PubMed:21145499) . Through the action of the phosphatase PPM1A , released from the SMAD2/SMAD4 complex , and exported out of the nucleus 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

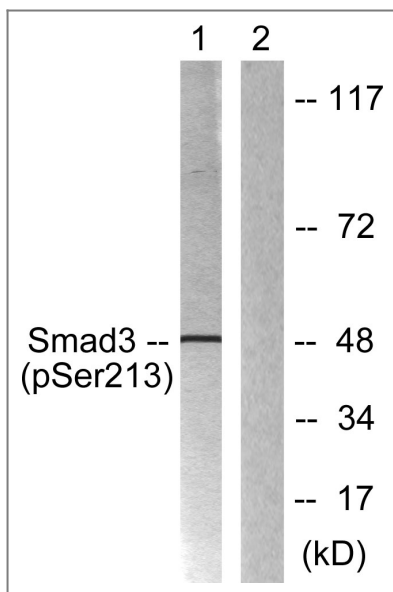
Function

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 TGFB11. 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. ,

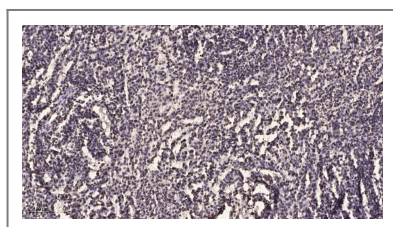
| Validation Data



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Smad3 (Phospho-Ser213) Antibody



Western blot analysis of lysates from HT29 cells, using Smad3 (Phospho-Ser213) Antibody. The lane on the right is blocked with the phospho peptide.



Immunohistochemical analysis of paraffin-embedded human brain tumor. 1, Antibody was diluted at 1:200 (4°C overnight). 2, Tris-EDTA, pH9.0 was used for antigen retrieval. 3, Secondary antibody was diluted at 1:200 (room temperature, 45min).

Contact information

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