For Research Use Only

SMAD7 Monoclonal antibody

Catalog Number:66478-1-Ig 11 Publications

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Basic Information

Catalog Number:
66478-1-Ig

Size:
150ul , Concentration: 1000 μg/ml by Bradford method using BSA as the standard;

Source:
Mouse

Isotype:
IgG2b

Immunogen Catalog Number:
AG13688

GenBank Accession Number:
BC074819

GeneID (NCBI):
4092

UNIPROT ID:
O15105

Full Name:
SMAD family member 7

Calculated MW:
426 aa, 46 kDa

Observed MW:
50 kDa

Purification Method:
Protein A purification

CloneNo.:
2B9A4

Recommended Dilutions:
WB 1:500-1:3000
IHC 1:50-1:500

Applications

Tested Applications:
WB, IF, IHC, ELISA

Cited Applications:
WB

Species Specificity:
Human, mouse, rat, pig

Cited Species:
human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : pig brain tissue, pig kidney tissue, rat brain tissue, rat kidney tissue, mouse brain tissue, mouse skeletal muscle tissue

IHC : mouse cerebellum tissue, human kidney tissue

Background Information

SMAD7, also named as Mothers against decapentaplegic homolog 7, is a 426 amino acid protein, which belongs to the dwarfin/SMAD family. SMAD7 Interaction with NEDD4L or RNF111 induces translocation from the nucleus to the cytoplasm (PubMed:16601693). TGF-beta stimulates its translocation from the nucleus to the cytoplasm. PDPK1 inhibits its translocation from the nucleus to the cytoplasm in response to TGF-beta (PubMed:17327236). SMAD7 as antagonist of signaling by TGF-beta (transforming growth factor) type 1 receptor superfamily members has been shown to inhibit TGF-beta (Transforming growth factor) and activin signaling by associating with their receptors thus preventing SMAD2 access. SMAD7 functions as an adapter to recruit SMURF2 to the TGF-beta receptor complex and also acts by recruiting the PPP1R15A-PP1 complex to TGFBR1, which promotes its dephosphorylation. SMAD7 positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.

Notable Publications

Author	Pubmed ID	Journal	Application
Qingshan Ji	33253708	Exp Cell Res	WB
Yuxing Zhu	33147570	Aging (Albany NY)	WB
Beichen Li	35727431	Stem Cell Rev Rep	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
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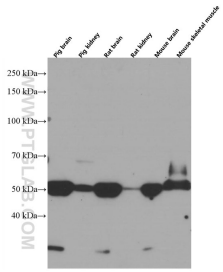
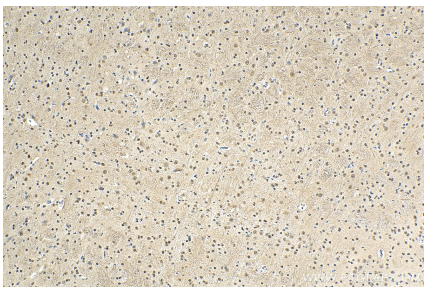
Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 66478-1-Ig (SMAD7 antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue slide using 66478-1-Ig (SMAD7 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).