

SMURF2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2105b

Specification

SMURF2 Antibody (C-term) - Product Information

Application IF, WB, IHC-P,E

Primary Accession <u>O9HAU4</u>

Other Accession <u>A2A5Z6</u>, <u>O9PUN2</u>,

Q9CUN6, Q9HCE7

Reactivity Human, Rat
Predicted Mouse, Xenopus

Host Rabbit
Clonality Polyclonal
Isotype Rabbit Ig
Antigen Region 702-731

SMURF2 Antibody (C-term) - Additional Information

Gene ID 64750

Other Names

E3 ubiquitin-protein ligase SMURF2, hSMURF2, 632-, SMAD ubiquitination regulatory factor 2, SMAD-specific E3 ubiquitin-protein ligase 2, SMURF2

Target/Specificity

This SMURF2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 702-731 amino acids from the C-terminal region of human SMURF2.

Dilution

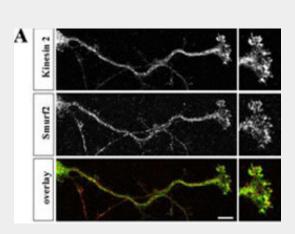
IF~~1:10~50 WB~~1:2000 IHC-P~~1:50~100

Format

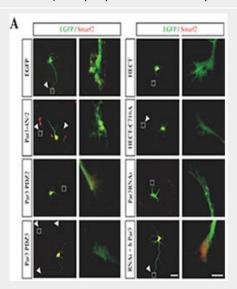
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw



Hippocampal neurons were fixed at stage 3, stained with anti-Smurf2 (red) and anti-Kinesin-2 (green) antibodies, and analyzed by confocal microscopy. The panels show single confocal planes. (J. Biol. Chem. 2007 Nov 30;282(48):35259-35268)



Hippocampal neurons were transfected 2 h after plating with expression vectors for EGFP, EGFP-tagged Par3-4N/2, Par3-PDZ2, Par3-PDZ3, Smurf2-HECT (HECT), Smurf2-HECT-C716A (HECT CA), and shRNA directed against mPar3 (Par3 RNAi), or vectors for the anti-Par3 shRNA and human Myc-Par3 (RNAi + h Par3) (green). Transfected cells were analyzed at 3 d.i.v. by staining with an anti-Smurf2 antibody (red).



cycles.

Precautions

SMURF2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

SMURF2 Antibody (C-term) - Protein Information

Name SMURF2 (HGNC:16809)

Function

E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates (PubMed:11016919" target="_blank">11016919). Interacts with SMAD7 to trigger SMAD7-mediated transforming growth factor beta/TGF-beta receptor ubiquitin-dependent degradation, thereby downregulating TGF-beta signaling (PubMed:<a href="http://www.uniprot.org/citations/11163210"

target="_blank">11163210,

PubMed:<a href="http://www.uniprot.org/ci tations/12717440"

target="_blank">12717440). In addition, interaction with SMAD7 activates autocatalytic degradation, which is prevented by interaction with AIMP1 (PubMed:http://www.uniprot.org/c

itations/18448069"
target=" blank">18448060/(a>) Also

target="_blank">18448069). Also forms a stable complex with TGF-beta receptor-mediated phosphorylated SMAD1, SMAD2 and SMAD3, and targets SMAD1 and SMAD2 for ubiquitination and

proteasome-mediated degradation

(PubMed:<a href="http://www.uniprot.org/c itations/11016919"

target="_blank">11016919,

PubMed: <a href="http://www.uniprot.org/ci tations/11158580"

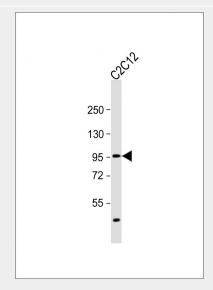
target=" blank">11158580,

PubMed: <a href="http://www.uniprot.org/ci tations/11389444"

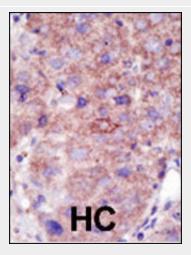
target="_blank">11389444). SMAD2 may recruit substrates, such as SNON, for ubiquitin-dependent degradation

(PubMed:<a href="http://www.uniprot.org/c itations/11389444"

target="_blank">11389444). Negatively regulates TGFB1-induced epithelial- mesenchymal transition and Axons are marked by arrowheads. The marked growth cones are shown at a higher magnification. Scale bars, 40 and 10?. (J. Biol. Chem. 2007 Nov 30;282(48):35259-35268)



Anti-SMURF2 Antibody (C-term) at 1:2000 dilution + C2C12 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 86 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.





myofibroblast differentiation (PubMed:<a hr ef="http://www.uniprot.org/citations/30696 809" target=" blank">30696809).

Cellular Location

Nucleus. Cytoplasm. Cell membrane. Membrane raft. Note=Cytoplasmic in the presence of SMAD7. Colocalizes with CAV1, SMAD7 and TGF-beta receptor in membrane rafts

Tissue Location Widely expressed.

SMURF2 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

SMURF2 Antibody (C-term) - Citations

• The interaction of mPar3 with the ubiquitin ligase Smurf2 is required for the establishment of neuronal polarity.

SMURF2 Antibody (C-term) - Background

SMURF2 is an E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. This protein interacts with SMAD1, SMAD2 and SMAD7 in order to trigger their ubiquitination and proteasome-dependent degradation. It enhances the inhibitory activity of SMAD7 and reduces the transcriptional activity of SMAD2. Coexpression of SMURF2 with SMAD1 results in considerable decrease in steady-state level of SMAD1 protein and a smaller decrease of SMAD2 level.

SMURF2 Antibody (C-term) - References

Tajima, Y., et al., J. Biol. Chem. 278(12):10716-10721 (2003). Suzuki, C., et al., J. Biol. Chem. 277(42):39919-39925 (2002). Ebisawa, T., et al., J. Biol. Chem. 276(16):12477-12480 (2001). Zhu, H., et al., Nature 400(6745):687-693 (1999). Lambris, J., et al., J. Immunol. Methods 27(1):55-59 (1979).