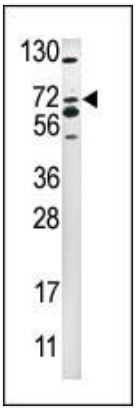
SMURF2 Antibody – Rabbit Polyclonal

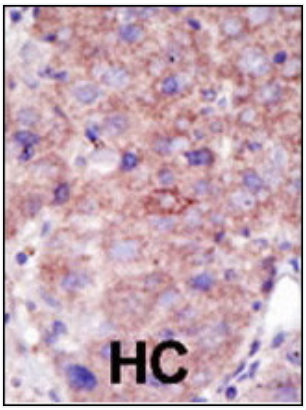
PRODUCT OVERVIEW

Product Name	SMURF2, Polyclonal Antibody
Full Product Name	SMURF2, CT (SMURF2, E3 ubiquitin-protein ligase SMURF2, SMAD ubiquitination regulatory factor 2, SMAD-specific E3 ubiquitin-protein ligase 2) (Azide free) (HRP)
Product Gene Name	anti-SMURF2 antibody
Product Synonym Names	SMURF2; E3 ubiquitin-protein ligase SMURF2; SMAD ubiquitination regulatory factor 2; SMAD-specific E3 ubiquitin-protein ligase 2
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Horseradish Peroxidase (HRP).
Purity/Purification	Purified by Protein G Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	Predicted: 82 kDa Observed: 85 kDa
OMIM	605532
3D Structure	ModBase 3D Structure for Q9HAU4
Immunogen	SMURF2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 714~743 amino acids from the C-terminal region of human SMURF2.
Conjugate	HRP
Note	Preservative Free
Product Categories/Family for anti-SMURF2 antibody	Antibodies; Ubiquitin Ligases
Applications Tested/Suitable for anti-SMURF2 antibody	Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB)
Application Notes for anti-SMURF2 antibody	IHC: 1:50-100 ELISA: 1:1,000 WB: 1:100-500 Applications are based on unconjugated antibody.
Related Product Information for anti-SMURF2 antibody	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.

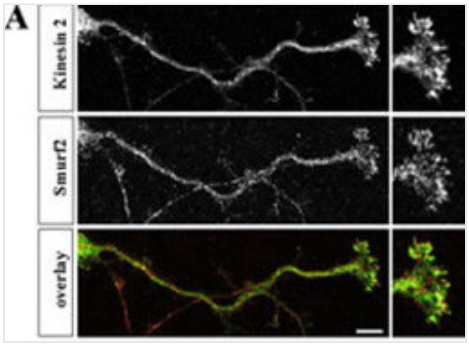
Product References and Citations for anti-SMURF2 antibody	Tajima, Y., et al., J. Biol. Chem. 278(12):10716-10721 (2003). Suzuki, C., et al., J. Biol. Chem. 277(42):39919-39925 (2002). Ebisawa, T., et al., J. Biol. Chem. 276(16):12477-12480 (2001). Zhu, H., et al., Nature 400(6745):687-693 (1999). Lambris, J., et al., J. Immunol. Methods 27(1):55-59 (1979).
Other Notes	Small volumes of anti-SMURF2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for SMURF2 purchase	MBS6349148 is an antibody targeting SMURF2. Also known as SMURF2, CT (SMURF2, E3 ubiquitin-protein ligase SMURF2, SMAD ubiquitination regulatory factor 2, SMAD-specific E3 ubiquitin-protein ligase 2) (Azide free) (HRP). Reactive in Human. Host: Rabbit.



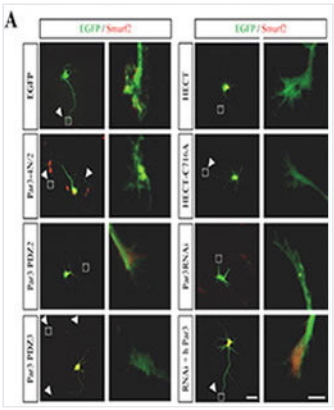
Western Blot (WB) of anti-SMURF2 antibody
Western blot analysis of anti-SMURF2 Pab in 293 cell line lysate (35ug/lane). SMURF2(arrow) was detected using the purified Pab



Immunohistochemistry (IHC) of anti-SMURF2 antibody
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.



Testing Data of anti-SMURF2 antibody
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)



Testing Data of anti-SMURF2 antibody
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). 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)

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SMURF2. It may not necessarily be applicable to this product.

NCBI GI #	12232397
NCBI GeneID	64750
NCBI Accession #	NP_073576
UniProt Primary Accession #	Q9HAU4

UniProt Secondary Accession #	Q52LL1; Q9H260
UniProt Related Accession #	Q9HAU4
GenBank Nucleotide #	NM_022739.3
NCBI Official Full Name	E3 ubiquitin-protein ligase SMURF2
NCBI Official Synonym Full Names	SMAD specific E3 ubiquitin protein ligase 2
NCBI Official Symbol	SMURF2
UniProt Protein Name	E3 ubiquitin-protein ligase SMURF2
UniProt Synonym Protein Names	SMAD ubiquitination regulatory factor 2; SMAD-specific E3 ubiquitin-protein ligase 2
Protein Family	E3 ubiquitin-protein ligase
UniProt Gene Name	SMURF2
UniProt Synonym Gene Names	hSMURF2
UniProt Entry Name	SMUF2_HUMAN
NCBI Protein Information	E3 ubiquitin-protein ligase SMURF2; hSMURF2; E3 ubiquitin ligase SMURF2; SMAD ubiquitination regulatory factor 2; SMAD-specific E3 ubiquitin-protein ligase 2
UniProt Comments for SMURF2	SMURF2: 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. Interacts with SMAD1 and SMAD7 in order to trigger their ubiquitination and proteasome-dependent degradation. In addition, interaction with SMAD7 activates autocatalytic degradation, which is prevented by interaction with SCYE1. Forms a stable complex with the TGF-beta receptor-mediated phosphorylated SMAD2 and SMAD3. In this way, SMAD2 may recruit substrates, such as SNON, for ubiquitin-mediated degradation. 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. Protein type: EC 6.3.2.-; EC 6.3.2.19; Ligase; Ubiquitin ligase; Ubiquitin conjugating system Chromosomal Location of Human Ortholog: 17q22-q23 Cellular Component: nucleoplasm; cytoplasm; plasma membrane; cytosol; nucleus; ubiquitin ligase complex; lipid raft Molecular Function: identical protein binding; protein binding; ubiquitin-protein ligase activity; SMAD binding; transforming growth factor beta receptor binding; ligase activity Biological Process: BMP signaling pathway; ubiquitin-dependent protein catabolic process; transcription initiation from RNA polymerase II promoter; regulation of transforming growth factor beta receptor signaling pathway; transcription, DNA-dependent; transforming growth factor beta receptor signaling pathway; protein ubiquitination during ubiquitin-dependent protein catabolic process; gene expression; negative regulation of transcription from RNA polymerase II promoter; negative regulation of transcription, DNA-dependent; negative regulation of transforming growth factor beta receptor signaling pathway; ubiquitin-dependent SMAD protein catabolic process
Research Articles on SMURF2	**1.** The SMURF2:UBCH5 complex is critical in maintaining KRAS protein stability.
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