SMURF1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	SMURF1, Polyclonal Antibody
Full Product Name	SMURF1, NT (SMURF1, KIAA1625, E3 ubiquitin-protein ligase SMURF1, SMAD ubiquitination regulatory factor 1, SMAD-specific E3 ubiquitin-protein ligase 1) (MaxLight 650)
Product Gene Name	anti-SMURF1 antibody
Product Synonym Names	SMURF1; KIAA1625; E3 ubiquitin-protein ligase SMURF1; SMAD ubiquitination regulatory factor 1; SMAD-specific E3 ubiquitin-protein ligase 1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight650.
Purity/Purification	Purified by Protein G Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight650 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	83,440 Da
OMIM	605568
3D Structure	ModBase 3D Structure for Q9HCE7
Immunogen	SMURF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 74~104 amino acids from the N-terminal region of human SMURF1.
Conjugate	MaxLight650
Note	Preservative Free
Product Categories/Family for anti-SMURF1 antibody	Antibodies; Ubiquitin Ligases
Applications Tested/Suitable for anti-SMURF1 antibody	Immunohistochemistry (IHC), FLISA, Western Blot (WB)
Application Notes for anti-SMURF1 antibody	IHC: 1:50-100 FLISA: 1:1,000 WB: 1:100-500 Applications are based on unconjugated antibody.

Related Product Information for anti-SMURF1 antibody	Members of the transforming growth factor-beta (TGFB) family signal through type I and type II serine/threonine-kinase receptors, which in turn activate the SMAD signaling pathway. Bone morphogenetic protein (BMP) receptors target SMAD1, SMAD5, and SMAD8, whereas receptors for activin and TGFB (e.g., ACVR1 and TGFBR1, respectively) target SMAD2 and SMAD3. Phosphorylation of these receptor-regulated SMADs induces their association with the common-partner SMAD, SMAD4. Smurf1, a HECT domain E3 ubiquitin ligase, regulates cell polarity and protrusive activity and is required to maintain the transformed morphology and motility of a tumor cell. Atypical protein kinase C-zeta (PKC2), an effector of the Cdc42/Rac1-PAR6 polarity complex, recruits Smurf1 to cellular protrusions, where it controlled the local level of RhoA. Smurf1 thus links the polarity complex to degradation of RhoA in lamellipodia and filopodia to prevent RhoA signaling during dynamic membrane movements.
Product References and Citations for anti-SMURF1 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-SMURF1 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 SMURF1 purchase	MBS6349141 is an antibody targeting SMURF1. Also known as SMURF1, NT (SMURF1, KIAA1625, E3 ubiquitin-protein ligase SMURF1, SMAD ubiquitination regulatory factor 1, SMAD-specific E3 ubiquitin-protein ligase 1) (MaxLight 650). Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SMURF1. It may not necessarily be applicable to this product.

NCBI GI #	315434204
NCBI GeneID	57154
NCBI Accession #	NP_001186776.1
UniProt Primary Accession #	Q9HCE7
UniProt Secondary Accession #	O75853; Q547Q3; Q9UJT8; A4D279; B7ZMB6; B9EGV3
UniProt Related Accession #	Q9HCE7
GenBank Nucleotide #	NM_001199847.1
NCBI Official Full Name	E3 ubiquitin-protein ligase SMURF1 isoform 3
NCBI Official Synonym Full Names	SMAD specific E3 ubiquitin protein ligase 1
NCBI Official Symbol	SMURF1
UniProt Protein Name	E3 ubiquitin-protein ligase SMURF1
UniProt Synonym Protein Names	SMAD ubiquitination regulatory factor 1; SMAD-specific E3 ubiquitin-protein ligase 1
Protein Family	E3 ubiquitin-protein ligase
UniProt Gene Name	SMURF1
UniProt Synonym Gene Names	KIAA1625; hSMURF1
UniProt Entry Name	SMUF1_HUMAN
NCBI Protein Information	E3 ubiquitin-protein ligase SMURF1
NCBI Summary for SMURF1	This gene encodes a ubiquitin ligase that is specific for receptor-regulated SMAD proteins in the bone morphogenetic protein (BMP) pathway. This protein plays a key roll in the regulation of cell motility, cell signalling, and cell polarity. Alternative splicing results in multiple transcript variants encoding different isoforms.[provided by RefSeq, Dec 2010]

UniProt Comments for SMURF1	SMURF1: E3 ubiquitin-protein ligase that acts as a negative regulator of BMP signaling pathway. Mediates ubiquitination and degradation of SMAD1 and SMAD5, 2 receptor-regulated SMADs specific for the BMP pathway. Promotes ubiquitination and subsequent proteasomal degradation of TRAF family members and RHOA. Interacts with TRAF4. Interacts (via HECT domain) with FBXL15 (via LRR repeats). Interacts with SMAD7 and TGFBR1; SMAD7 recruits SMURF1 to TGFBR1 and regulates TGF-beta receptor degradation. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 6.3.2.19; Ubiquitin conjugating system; EC 6.3.2.-; Ligase; Ubiquitin ligase Chromosomal Location of Human Ortholog: 7q22.1 Cellular Component: axon; cell soma; cytoplasm; cytosol; mitochondrion; nucleoplasm; nucleus; plasma membrane Molecular Function: activin binding; ligase activity; phospholipid binding; protein binding; ubiquitin-protein ligase activity Biological Process: BMP signaling pathway; cell differentiation; ectoderm development; negative regulation of BMP signaling pathway; negative regulation of ossification; negative regulation of transforming growth factor beta receptor signaling pathway; positive regulation of defense response to virus by host; proteasomal ubiquitin-dependent protein catabolic process; protein export from nucleus; protein polyubiquitination; protein ubiquitination; protein ubiquitination during ubiquitin-dependent protein catabolic process; receptor catabolic process; transforming growth factor beta receptor signaling pathway; ubiquitin-dependent SMAD protein catabolic process; Wnt receptor signaling pathway, planar cell polarity pathway
Research Articles on SMURF1	**1.** a model that CD166 regulates MCAM through a signaling flow from activation of PI3K/AKT and c-Raf/MEK/ERK signaling to the inhibition of potential MCAM ubiquitin E3 ligases, betaTrCP and Smurf1.
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