

SMURF1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP2104a**Specification**

SMURF1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q9HCE7](#)**SMURF1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 57154**Other Names**

E3 ubiquitin-protein ligase SMURF1, hSMURF1, 632-, SMAD ubiquitination regulatory factor 1, SMAD-specific E3 ubiquitin-protein ligase 1, SMURF1, KIAA1625

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP2104a](/product/products/AP2104a) was selected from the N-term region of human SMURF1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SMURF1 Antibody (N-term) Blocking Peptide - Protein Information**Name** SMURF1**Synonyms** KIAA1625**Function**

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. Promotes ubiquitination and subsequent proteasomal degradation of MAVS (PubMed: [23087404](http://www.uniprot.org/citations/23087404)). Acts as an antagonist of TGF-beta signaling by ubiquitinating TGFBR1 and targeting it for degradation (PubMed: [21791611](http://www.uniprot.org/citations/21791611)). Plays a role in dendrite formation by melanocytes (PubMed: [23999003](http://www.uniprot.org/citations/23999003)).

Cellular Location

Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side

Tissue Location

Expressed in melanocytes (PubMed:23999003).

SMURF1 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

SMURF1 Antibody (N-term) Blocking Peptide - Images**SMURF1 Antibody (N-term) Blocking Peptide - Background**

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.

SMURF1 Antibody (N-term) Blocking Peptide - 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).