

SMURF2 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP2105a**Specification**

SMURF2 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession [O9HAU4](#)
Other Accession [NP_073576](#)

SMURF2 Antibody (N-term) Blocking Peptide - 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

The synthetic peptide sequence used to generate the antibody [AP2105a](/product/products/AP2105a) was selected from the N-term region of human SMURF2. 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.

SMURF2 Antibody (N-term) Blocking Peptide - 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](http://www.uniprot.org/citations/11016919)). Interacts with SMAD7 to trigger SMAD7-mediated transforming growth factor beta/TGF-beta receptor ubiquitin-dependent degradation, thereby down-regulating TGF-beta signaling (PubMed: [11163210](http://www.uniprot.org/citations/11163210), PubMed: [12717440](http://www.uniprot.org/citations/12717440), PubMed: [21791611](http://www.uniprot.org/citations/21791611)). In addition, interaction with SMAD7 activates autocatalytic degradation, which is prevented by interaction with AIMP1 (PubMed: [18448069](http://www.uniprot.org/citations/18448069))

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:11016919, PubMed:11158580, PubMed:11389444). SMAD2 may recruit substrates, such as SNON, for ubiquitin-dependent degradation (PubMed:11389444). Negatively regulates TGFB1-induced epithelial-mesenchymal transition and myofibroblast differentiation (PubMed: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 (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

SMURF2 Antibody (N-term) Blocking Peptide - Images

SMURF2 Antibody (N-term) Blocking Peptide - Background

SMURF2, a 748-amino acid ubiquitin E3 ligase that is 83% identical to SMURF1, codes for a C2-WW-HECT domain ubiquitin ligase that associates constitutively with SMAD7. Binding to SMAD7 induces export of SMURF2 and recruitment to the activated transforming growth factor-beta receptor (TGFB1R), where it causes receptor and SMAD7 degradation. A strong interaction of second and third SMURF2 WW domains has been identified with SMAD1, SMAD2, and SMAD3, but not SMAD4. Western blot analysis showed that SMURF2 selectively downregulates the transcription of SMAD2 and SMAD1, but not SMAD3. The nuclear SMURF2/phosphorylated SMAD2 interaction is requires TGFB1.

SMURF2 Antibody (N-term) Blocking Peptide - References

Zhang, Y., et al., Proc. Natl. Acad. Sci. U.S.A. 98(3):974-979 (2001).Kavsak, P., et al., Mol. Cell 6(6):1365-1375 (2000).Lin, X., et al., J. Biol. Chem. 275(47):36818-36822 (2000).