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SMURF1 Antibody
Catalog # ASC11844

Specification

SMURF1 Antibody - Product Information

Application	**WB, IHC-P, E**
Primary Accession	Q9HCE7
Other Accession	NP_065162, 31317292
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 80, 83 kDa** **Observed: 78 kDa KDa**
Application Notes	**SMURF1 body can be used for detection of SMURF1 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL.**

SMURF1 Antibody - Additional Information

Gene ID **57154**

Target/Specificity
SMURF1; SMURF1 antibody is human, mouse and rat reactive. At least three isoforms of SMURF1 are known to exist this antibody will recognize all three isoforms. SMURF1 is predicted to not cross-react with SMURF2.

Reconstitution & Storage
SMURF1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
SMURF1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SMURF1 Antibody - 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). Acts as an antagonist of TGF-beta signaling by ubiquitinating TGFBR1 and targeting it for

degradation (PubMed:21791611). Plays a role in dendrite formation by melanocytes (PubMed:23999003).

Cellular Location
Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side

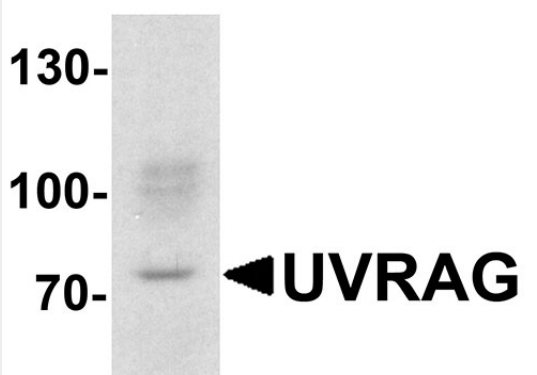
Tissue Location
Expressed in melanocytes (PubMed:23999003).

SMURF1 Antibody - Protocols

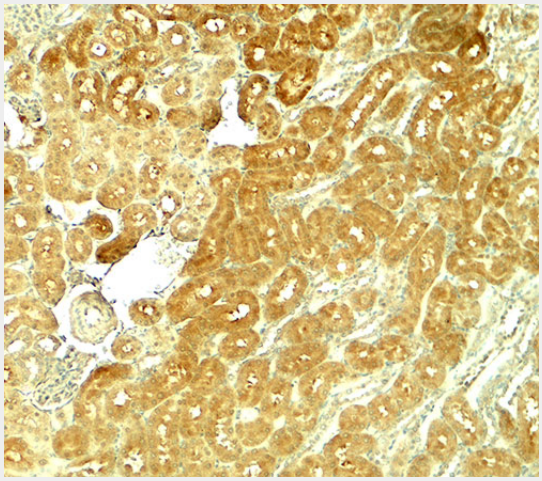
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SMURF1 Antibody - Images



Western blot analysis of SMURF1 in 293 cell lysate with SMURF1 antibody at 1 µg/ml.



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Immunohistochemistry of SMURF1 in rat kidney tissue with SMURF1 antibody at 5 µg/ml.

SMURF1 Antibody - Background

SMURF1 (SMAD ubiquitin regulatory factor 1) is a negative regulator of TGF-beta signaling (1). SMURF1 and SMURF2 are members of HECT domain E3 ubiquitin ligase which are involved in the enzymatic reactions of the Ub conjugating pathway (1,2). SMURF1 negatively regulates osteoblast activity and response to bone morphogenesis protein (BMP) through controlling MEKK2 degradation (3). SMURF1 has recently been shown to play a role in breast cancer cell migration and invasion through the downregulation of RhoA (4).

SMURF1 Antibody - References

Huibregtse JM, Scheffner M, Beaudenon S, et al. A family of proteins structurally and functionally related to the E6-AP ubiquitin-protein ligase. Proc. Natl. Acad. Sci. USA 1995; 92:2563-7.
Hwang YS, Lee HS, Kamata T, et al. The Smurf ubiquitin ligases regulate tissue separation via antagonistic interactions with ephrinB1. Genes Dev. 2013; 27:491-503.
Yamashita M, Ying SX, Zhang G, et al. Ubiquitin ligase Smurf1 controls osteoblast activity and bone homeostasis by targeting MEKK2 for degradation. Cell 2005; 121:101-113.
Kwon A, Lee HL, Woo KM, et al. SMURF1 plays a role in EGF-induced breast cancer cell migration and invasion. Mol. Cells 2013; 36:548-55.