

# Smurf2 (H-50): sc-25511

## BACKGROUND

Smurf1 and Smurf2 (smad ubiquitination regulatory factor 1 and 2) are members of the Hect family of proteins, which also includes the ubiquitin (Ub) E3-type ligases NEDD3 and E6-AP. E3 ligases are involved in the enzymatic reactions of the Ub conjugating pathway, which targets proteins for degradation by the 26S proteasome. Within the Ub pathway, the E3 ligases specifically catalyze the transfer of Ub from the Ub-conjugating enzymes to the individual protein substrate. As an E3 ligase, Smurf1 selectively interacts with receptor-regulated Smads specific to the BMP pathway in order to trigger their ubiquitination and degradation. Smurf2 interacts with receptor-activated Smads (R-Smads), including Smad1, Smad2 and Smad3, but not Smad4. Although Smurf2 localizes to the nucleus, binding to Smad7 induces its export and its recruitment to the activated TGF $\beta$  receptor, where it causes degradation of Smad7.

## CHROMOSOMAL LOCATION

Genetic locus: SMURF2 (human) mapping to 17q23.3; Smurf2 (mouse) mapping to 11 E1.

## SOURCE

Smurf2 (H-50) is a rabbit polyclonal antibody raised against amino acids 204-253 mapping to an internal region of Smurf2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Smurf2 (H-50) is recommended for detection of Smurf2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Smurf2 (H-50) is also recommended for detection of Smurf2 in additional species, including canine, bovine and avian.

Suitable for use as control antibody for Smurf2 siRNA (h): sc-41675, Smurf2 siRNA (m): sc-41676, Smurf2 shRNA Plasmid (h): sc-41675-SH, Smurf2 shRNA Plasmid (m): sc-41676-SH, Smurf2 shRNA (h) Lentiviral Particles: sc-41675-V and Smurf2 shRNA (m) Lentiviral Particles: sc-41676-V.

Molecular Weight of Smurf2: 86 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, U-2 OS cell lysate: sc-2295 or DU 145 cell lysate: sc-2268.

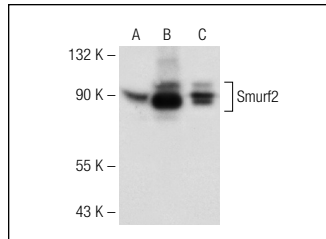
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

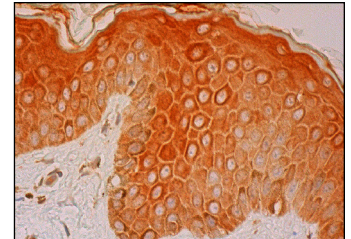
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



Smurf2 (H-50): sc-25511. Western blot analysis of Smurf2 expression in U-2 OS (A), WI-38 (B) and DU 145 (C) whole cell lysates.



Smurf2 (H-50): sc-25511. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes.

## SELECT PRODUCT CITATIONS

1. Tan, R., et al. 2006. Downregulation of SnoN expression in obstructive nephropathy is mediated by an enhanced ubiquitin-dependent degradation. *J. Am. Soc. Nephrol.* 17: 2781-2791.
2. Fukasawa, H., et al. 2006. Ubiquitin-dependent degradation of SnoN and Ski is increased in renal fibrosis induced by obstructive injury. *Kidney Int.* 69: 1733-1740.
3. Jin, C., et al. 2009. Smad ubiquitination regulatory factor 2 promotes metastasis of breast cancer cells by enhancing migration and invasiveness. *Cancer Res.* 69: 735-740.
4. Yang, F., et al. 2010. Essential role for Smad3 in angiotensin II-induced tubular epithelial-mesenchymal transition. *J. Pathol.* 221: 390-401.
5. Fukasawa, H., et al. 2010. Reduction of transforming growth factor- $\beta$  type II receptor is caused by the enhanced ubiquitin-dependent degradation in human renal cell carcinoma. *Int. J. Cancer* 127: 1517-1525.
6. Kim, S., et al. 2010. The protein stability of Axin, a negative regulator of Wnt signaling, is regulated by Smad ubiquitination regulatory factor 2 (Smurf2). *J. Biol. Chem.* 285: 36420-36426.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


 MONOS  
Satisfaction  
Guaranteed

Try **Smurf2 (D-5): sc-393848**, our highly recommended monoclonal alternative to Smurf2 (H-50).