

WSB1 (A-7): sc-393200

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. WSB1 (WD repeat and SOCS box-containing 1), also known as SWIP1, is a 421 amino acid protein that contains one SOCS box domain and 6 WD repeats. Expressed as multiple alternatively spliced isoforms, WSB1 is thought to function as part of an SCF-like ECS (elongin-cullin-SOCS-box protein) E3 ubiquitin ligase complex that mediates the ubiquitination and proteasomal degradation of target proteins, such as DIO2. Overexpression of WSB1 is implicated in pancreatic cancer progression, suggesting a role for WSB1 in carcinogenesis.

REFERENCES

- Vasiliauskas, D., et al. 1999. SWIP-1: novel SOCS box containing WD-protein regulated by signalling centres and by Shh during development. *Mech. Dev.* 82: 79-94.
- Kile, B.T., et al. 2002. The SOCS box: a tale of destruction and degradation. *Trends Biochem. Sci.* 27: 235-241.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610091. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Dentice, M., et al. 2005. The Hedgehog-inducible ubiquitin ligase subunit WSB-1 modulates thyroid hormone activation and PTHrP secretion in the developing growth plate. *Nat. Cell Biol.* 7: 698-705.
- Chen, Q.R., et al. 2006. Increased WSB1 copy number correlates with its over-expression which associates with increased survival in neuroblastoma. *Genes Chromosomes Cancer* 45: 856-862.
- Ling, J.Q., et al. 2006. CTCF mediates interchromosomal colocalization between Igf2/H19 and Wsb1/Nf1. *Science* 312: 269-272.

CHROMOSOMAL LOCATION

Genetic locus: WSB1 (human) mapping to 17q11.1; Wsb1 (mouse) mapping to 11 B5.

SOURCE

WSB1 (A-7) is a mouse monoclonal antibody raised against amino acids 302-354 mapping near the C-terminus of WSB1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

WSB1 (A-7) is recommended for detection of WSB1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

WSB1 (A-7) is also recommended for detection of WSB1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for WSB1 siRNA (h): sc-93766, WSB1 siRNA (m): sc-155361, WSB1 shRNA Plasmid (h): sc-93766-SH, WSB1 shRNA Plasmid (m): sc-155361-SH, WSB1 shRNA (h) Lentiviral Particles: sc-93766-V and WSB1 shRNA (m) Lentiviral Particles: sc-155361-V.

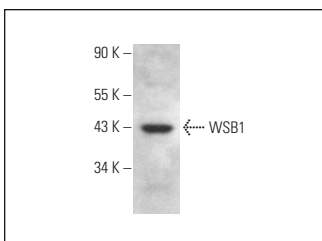
Molecular Weight of WSB1 isoform 1/2: 47/31 kDa.

Positive Controls: A549 cell lysate: sc-2413 or KNRK whole cell lysate: sc-2214.

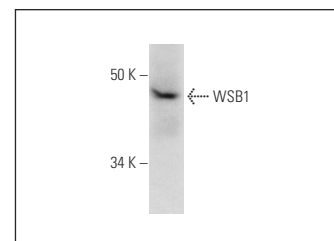
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



WSB1 (A-7): sc-393200. Western blot analysis of WSB1 expression in KNRK whole cell lysate.



WSB1 (A-7): sc-393200. Western blot analysis of WSB1 expression in A549 whole cell lysate.

SELECT PRODUCT CITATIONS

- Nucifora, F.C., et al. 2016. Ubiquitination via K27 and K29 chains signals aggregation and neuronal protection of LRRK2 by WSB1. *Nat. Commun.* 7: 11792.

RESEARCH USE

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