SANTA CRUZ BIOTECHNOLOGY, INC.

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 six 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

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- 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.
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- Choi, D.W., et al. 2008. Ubiquitination and degradation of homeodomaininteracting protein kinase 2 by WD40 repeat/SOCS box protein WSB-1. J. Biol. Chem. 283: 4682-4689.
- Archange, C., et al. 2008. The WSB1 gene is involved in pancreatic cancer progression. PLoS ONE 3: e2475.

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 lgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 μ g per 100-500 μ g 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.

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.

SELECT PRODUCT CITATIONS

- 1. Nucifora, F.C., et al. 2016. Ubiqutination via K27 and K29 chains signals aggregation and neuronal protection of LRRK2 by WSB1. Nat. Commun. 7: 11792.
- Chen, J., et al. 2023. PIN1 and CDK1 cooperatively govern pVHL stability and suppressive functions. Cell Death Differ. 30: 1082-1095.
- Guang, Z., et al. 2023. Single-cell protein activity analysis reveals a novel subpopulation of chondrocytes and the corresponding key master regulator proteins associated with anti-senescence and OA progression. Front. Immunol. 14: 1077003.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.