

SAV1 (JJ-6): sc-101205

BACKGROUND

SAV1 (Salvador homolog 1), also known as SAV, WW45 (45 kDa WW domain protein) or WWP4, is a ubiquitously expressed protein with one SARAH (Salvador/RASSF/Hippo) domain and two WW domains. The SARAH domain is a protein-protein interaction domain that is involved in cell cycle regulation and apoptosis. SAV1 can form homodimers and is believed to function as a scaffold protein of the Hippo pathway. Via its SARAH domain, SAV1 is capable of binding Krs-2, a protein that restricts cell proliferation and promotes apoptosis. This interaction is important for the transduction of apoptosis and cell cycle arrest signals. More specifically, SAV1 is essential for the nuclear translocation and activation of Krs-2. Both of these events (Krs-2 translocation and activation) are required for the subsequent phosphorylation of LATS1 and kpm, two major tumor suppressors. Defects in this pathway (the Hippo pathway) have been associated with tumorigenesis, suggesting that dysfunctional SAV1 may contribute to tumor development.

REFERENCES

- Valverde, P. 2000. Cloning, expression, and mapping of hWW45, a novel human WW domain-containing gene. *Biochem. Biophys. Res. Commun.* 276: 990-998.
- Tapon, N., et al. 2002. Salvador promotes both cell cycle exit and apoptosis in *Drosophila* and is mutated in human cancer cell lines. *Cell* 110: 467-478.

CHROMOSOMAL LOCATION

Genetic locus: SAV1 (human) mapping to 14q22.1; Sav1 (mouse) mapping to 12 C2.

SOURCE

SAV1 (JJ-6) is a mouse monoclonal antibody raised against recombinant SAV1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SAV1 (JJ-6) is recommended for detection of SAV1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Suitable for use as control antibody for SAV1 siRNA (h): sc-92380, SAV1 siRNA (m): sc-153232, SAV1 shRNA Plasmid (h): sc-92380-SH, SAV1 shRNA Plasmid (m): sc-153232-SH, SAV1 shRNA (h) Lentiviral Particles: sc-92380-V and SAV1 shRNA (m) Lentiviral Particles: sc-153232-V.

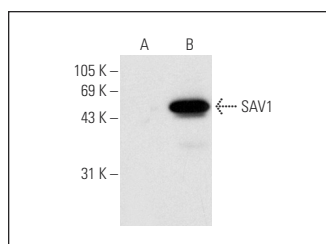
Molecular Weight of SAV1: 45 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, SAV1 (h): 293T Lysate: sc-113437 or HCT-116 whole cell lysate: sc-364175.

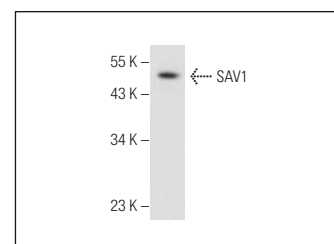
RECOMMENDED SUPPORT REAGENTS

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



SAV1 (JJ-6): sc-101205. Western blot analysis of SAV1 expression in non-transfected: sc-117752 (A) and human SAV1 transfected: sc-113437 (B) 293T whole cell lysates.



SAV1 (JJ-6): sc-101205. Western blot analysis of SAV1 expression in HCT-116 whole cell lysate.

SELECT PRODUCT CITATIONS

- Heallen, T., et al. 2013. Hippo signaling impedes adult heart regeneration. *Development* 140: 4683-4690.
- Bae, S.J., et al. 2020. STK25 suppresses Hippo signaling by regulating SAV1-STRIPAK antagonism. *Elife* 9: e54863.
- Yan, R., et al. 2023. An enhancer-based gene-therapy strategy for spatiotemporal control of cargoes during tissue repair. *Cell Stem Cell* 30: 96-111.e6.
- Zhang, H., et al. 2023. Identification of Filamin A mechanobinding partner III: SAV1 specifically interacts with Filamin A mechanosensitive domain 21. *Biochemistry*. E-published.

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.