

WIPI-3 (B-7): sc-514194



The Power to Question

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. WIPI-3 (WD repeat domain phosphoinositide-interacting protein 3), also known as WD repeat-containing protein 45-like or WIPI49-like protein, is a 344 amino acid protein that is ubiquitously expressed with highest levels found in pancreas, heart and skeletal muscle. Upregulated in uterine and ovarian cancer, WIPI-3 contains two WD domains, seven WD40 domains, and is encoded by a gene that maps to human chromosome 17. Chromosome 17 comprises over 2.5% of the human genome, encodes over 1,200 genes and is associated with two key tumor suppressor genes, namely, p53 and BRCA1.

CHROMOSOMAL LOCATION

Genetic locus: WDR45B (human) mapping to 17q25.3; Wdr45b (mouse) mapping to 11 E2.

SOURCE

WIPI-3 (B-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 281-299 within an internal region of WIPI-3 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514194 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

WIPI-3 (B-7) is recommended for detection of WIPI-3 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).

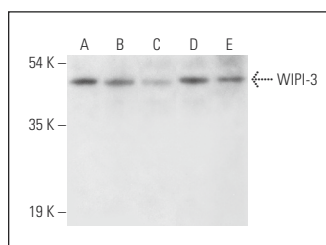
Suitable for use as control antibody for WIPI-3 siRNA (h): sc-72214, WIPI-3 siRNA (m): sc-72215, WIPI-3 shRNA Plasmid (h): sc-72214-SH, WIPI-3 shRNA Plasmid (m): sc-72215-SH, WIPI-3 shRNA (h) Lentiviral Particles: sc-72214-V and WIPI-3 shRNA (m) Lentiviral Particles: sc-72215-V.

Molecular Weight of WIPI-3: 38 kDa.

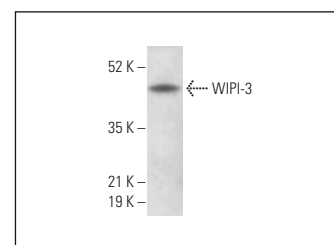
Positive Controls: c4 whole cell lysate: sc-364186, mouse liver extract: sc-2256 or Hep G2 cell lysate: sc-2227.

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 L-Agarose: sc-2336 (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

WIPI-3 (B-7): sc-514194. Western blot analysis of WIPI-3 expression in c4 (A), Hep G2 (B), MCF7 (C) and OVCA8-3 (D) whole cell lysates and mouse liver tissue extract (E).



WIPI-3 (B-7): sc-514194. Western blot analysis of WIPI-3 expression in F9 whole cell lysate.

SELECT PRODUCT CITATIONS

- Bakula, D., et al. 2017. WIPI-3 and WIPI-4 β-propellers are scaffolds for LKB1-AMPK-TSC signalling circuits in the control of autophagy. *Nat. Commun.* 8: 15637.
- Stavoe, A.K., et al. 2019. Expression of WIPI2B counteracts age-related decline in autophagosome biogenesis in neurons. *Elife* 8: e44219.
- De Leo, M.G., et al. 2021. WIPI-1 promotes fission of endosomal transport carriers and formation of autophagosomes through distinct mechanisms. *Autophagy* 17: 3644-3670.
- Häusl, A.S., et al. 2022. Mediobasal hypothalamic FKBP51 acts as a molecular switch linking autophagy to whole-body metabolism. *Sci. Adv.* 8: eabi4797.

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.