

WIPI-2 (D-20): sc-83067

BACKGROUND

Phosphatidylinositol is a negatively charged phospholipid that is found in the cellular membrane. When phosphorylated, phosphatidylinositol is known as phosphoinositide. Phosphoinositide is important in signal transduction, lipid signaling and membrane trafficking. WIPI-2 (WD repeat domain phosphoinositide-interacting protein 2), also known as WIPI49-like protein 2, is a 454 amino acid protein that is highly expressed in the heart, skeletal muscle and pancreas. WD40 family members function to regulate assembly of multi-protein complexes using a propeller platform for reversible interactions. WIPI-2 specifically has a seven-bladed propeller and a motif for interaction with phospholipids. Expression of WIPI-2 is downregulated in pancreatic and kidney tumors. WIPI-2 is encoded by a gene that maps to human chromosome 7 which houses over 1,000 genes and comprises nearly 5% of the human genome.

REFERENCES

- Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. *Nature* 424: 157-164.
- Proikas-Cezanne, T., et al. 2004. WIPI-1 α (WIPI49), a member of the novel 7-bladed WIPI protein family, is aberrantly expressed in human cancer and is linked to starvation-induced autophagy. *Oncogene* 23: 9314-9325.
- Pattingre, S. and Levine, B. 2006. Bcl-2 inhibition of autophagy: a new route to cancer? *Cancer Res.* 66: 2885-2888.
- Proikas-Cezanne, T., et al. 2007. Human WIPI-1 puncta-formation: a novel assay to assess mammalian autophagy. *FEBS Lett.* 581: 3396-3404.
- Nowak, J., et al. 2009. The TP53INP2 protein is required for autophagy in mammalian cells. *Mol. Biol. Cell* 20: 870-881.

CHROMOSOMAL LOCATION

Genetic locus: WIPI2 (human) mapping to 7p22.1; Wipi2 (mouse) mapping to 5 G2.

SOURCE

WIPI-2 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WIPI-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-83067 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

WIPI-2 (D-20) is recommended for detection of WIPI-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other WIPI family members.

WIPI-2 (D-20) is also recommended for detection of WIPI-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for WIPI-2 siRNA (h): sc-72212, WIPI-2 siRNA (m): sc-72213, WIPI-2 shRNA Plasmid (h): sc-72212-SH, WIPI-2 shRNA Plasmid (m): sc-72213-SH, WIPI-2 shRNA (h) Lentiviral Particles: sc-72212-V and WIPI-2 shRNA (m) Lentiviral Particles: sc-72213-V.

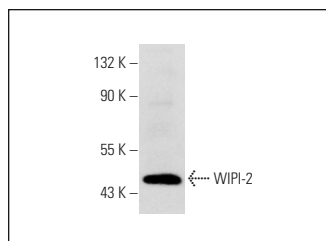
Molecular Weight of WIPI-2: 49 kDa.

Positive Controls: mouse skeletal muscle extract: sc-364250.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



WIPI-2 (D-20): sc-83067. Western blot analysis of WIPI-2 expression in mouse skeletal muscle tissue extract.

RESEARCH USE

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