

WIPI-4 (C-20): sc-83075

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-4 (WD repeat domain phosphoinositide-interacting protein 4), also known as WDR45 (WD repeat domain 45), JM5 or WDRX1, is a 360 amino acid protein containing 3 WD repeats. Existing as three alternatively spliced isoforms, WIPI-4 is ubiquitously expressed but found at highest levels in heart and skeletal muscle.

REFERENCES

1. Clark, A.G., et al. 2003. Inferring nonneutral evolution from human-chimp-mouse orthologous gene trios. *Science* 302: 1960-1963.
2. Jeffries, T.R., et al. 2004. PtdIns-specific MPR pathway association of a novel WD40 repeat protein, WIPI49. *Mol. Biol. Cell* 15: 2652-2663.
3. 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.
4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 300526. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Proikas-Cezanne, T., et al. 2007. Human WIPI-1 puncta-formation: a novel assay to assess mammalian autophagy. *FEBS Lett.* 581: 3396-3404.
6. Hudson, A.M. and Cooley, L. 2008. Phylogenetic, structural and functional relationships between WD- and Kelch-repeat proteins. *Subcell. Biochem.* 48: 6-19.

CHROMOSOMAL LOCATION

Genetic locus: WDR45 (human) mapping to Xp11.23; Wdr45 (mouse) mapping to X A1.1.

SOURCE

WIPI-4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of WIPI-4 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-83075 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

WIPI-4 (C-20) is recommended for detection of WIPI-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-4 (C-20) is also recommended for detection of WIPI-4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for WIPI-4 siRNA (h): sc-72216, WIPI-4 siRNA (m): sc-72217, WIPI-4 shRNA Plasmid (h): sc-72216-SH, WIPI-4 shRNA Plasmid (m): sc-72217-SH, WIPI-4 shRNA (h) Lentiviral Particles: sc-72216-V and WIPI-4 shRNA (m) Lentiviral Particles: sc-72217-V.

Molecular Weight of WIPI-4: 40 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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