

WIPI-4 (G-12): sc-398272

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 three WD repeats. Existing as three alternatively spliced isoforms, WIPI-4 is ubiquitously expressed but found at highest levels in heart and skeletal muscle.

REFERENCES

- Clark, A.G., et al. 2003. Inferring nonneutral evolution from human-chimp-mouse orthologous gene trios. *Science* 302: 1960-1963.
- Jeffries, T.R., et al. 2004. PtdIns-specific MPR pathway association of a novel WD40 repeat protein, WIPI49. *Mol. Biol. Cell* 15: 2652-2663.
- 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.
- 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/>

CHROMOSOMAL LOCATION

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

SOURCE

WIPI-4 (G-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 124-149 within an internal region of WIPI-4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

WIPI-4 (G-12) is available conjugated to agarose (sc-398272 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398272 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398272 PE), fluorescein (sc-398272 FITC), Alexa Fluor[®] 488 (sc-398272 AF488), Alexa Fluor[®] 546 (sc-398272 AF546), Alexa Fluor[®] 594 (sc-398272 AF594) or Alexa Fluor[®] 647 (sc-398272 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398272 AF680) or Alexa Fluor[®] 790 (sc-398272 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398272 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

WIPI-4 (G-12) is recommended for detection of WIPI-4 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

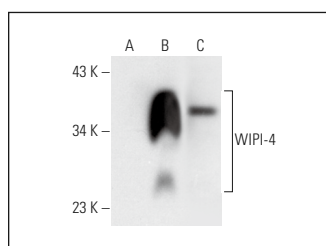
WIPI-4 (G-12) is also recommended for detection of WIPI-4 in additional species, including equine, canine, bovine and porcine.

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.

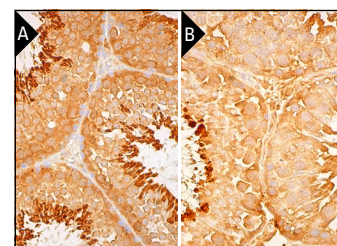
Molecular Weight of WIPI-4: 40 kDa.

Positive Controls: WIPI-4 (m): 293T Lysate: sc-124647 or A549 cell lysate: sc-2413.

DATA



WIPI-4 (G-12): sc-398272. Western blot analysis of WIPI-4 expression in non-transfected 293T: sc-117752 (A), mouse WIPI-4 transfected 293T: sc-124647 (B) and A549 (C) whole cell lysates.



WIPI-4 (G-12): sc-398272. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing cytoplasmic staining of cells in seminiferous ducts (A), and of rat testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells (B). Blocked with 0.25X UltraCruz[®] Blocking Reagent: sc-516214. Detected with m-IgGk BP-B: sc-516142 and ImmunoCruz[®] ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

- Stanga, D., et al. 2019. TRAPPC11 functions in autophagy by recruiting Atg2B-WIPI4/WDR45 to preautophagosomal membranes. *Traffic* 20: 325-345.
- Häusl, A.S., et al. 2022. Mediobasal hypothalamic FKBP51 acts as a molecular switch linking autophagy to whole-body metabolism. *Sci. Adv.* 8: eabi4797.

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.