

CIP4 (21): sc-135868

BACKGROUND

CIP4 (Cdc42-interacting protein 4), also known as TRIP10 (thyroid hormone receptor interactor 10), STOT, STP or HSTP, is a 601 amino acid protein that localizes to the cytoplasm and the cytoskeleton, as well as to the lysosome and the Golgi apparatus and contains one FCH domain, one SH3 domain and one REM repeat. Expressed in a variety of tissues, including kidney, brain, liver, lung, heart and pancreas, CIP4 is required for the Insulin-dependent translocation of Glut4 to the plasma membrane and is essential for the coordination of membrane tubulation with Actin cytoskeletal reorganization during endocytosis. CIP4 exists as multiple alternative spliced isoforms and is subject to post-translational tyrosine phosphorylation. Aberrant splicing events during CIP4 transcription are associated with the pathogenesis of renal cell carcinoma, suggesting a role for CIP4 in tumor transformation and metastasis.

REFERENCES

- Lee, J.W., et al. 1995. Two classes of proteins dependent on either the presence or absence of thyroid hormone for interaction with the thyroid hormone receptor. *Mol. Endocrinol.* 9: 243-254.
- Aspenström, P. 1997. A Cdc42 target protein with homology to the non-kinase domain of FER has a potential role in regulating the Actin cytoskeleton. *Curr. Biol.* 7: 479-487.
- Wang, L., et al. 2002. Identification and genetic analysis of human and mouse activated Cdc42 interacting protein-4 isoforms. *Biochem. Biophys. Res. Commun.* 293: 1426-1430.
- Holbert, S., et al. 2003. Cdc42-interacting protein 4 binds to Huntingtin: neuropathologic and biological evidence for a role in Huntington's disease. *Proc. Natl. Acad. Sci. USA* 100: 2712-2717.
- Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 604504. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Larocca, M.C., et al. 2004. AKAP 350 interaction with Cdc42 interacting protein 4 at the Golgi apparatus. *Mol. Biol. Cell* 15: 2771-2781.
- Tsuji, E., et al. 2006. Splicing variant of Cdc42 interacting protein-4 disrupts β -catenin-mediated cell-cell adhesion: expression and function in renal cell carcinoma. *Biochem. Biophys. Res. Commun.* 339: 1083-1088.
- Shimada, A., et al. 2007. Curved EFC/F-BAR-domain dimers are joined end to end into a filament for membrane invagination in endocytosis. *Cell* 129: 761-772.
- Banerjee, P.P., et al. 2007. Cdc42-interacting protein-4 functionally links Actin and microtubule networks at the cytolytic NK cell immunological synapse. *J. Exp. Med.* 204: 2305-2320.

CHROMOSOMAL LOCATION

Genetic locus: TRIP10 (human) mapping to 19p13.3; Trip10 (mouse) mapping to 17 D.

SOURCE

CIP4 (21) is a mouse monoclonal antibody raised against amino acids 411-501 of CIP4 of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

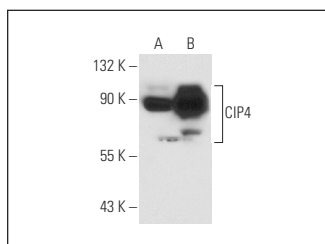
CIP4 (21) is recommended for detection of CIP4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CIP4 siRNA (h): sc-72910, CIP4 siRNA (m): sc-72911, CIP4 shRNA Plasmid (h): sc-72910-SH, CIP4 shRNA Plasmid (m): sc-72911-SH, CIP4 shRNA (h) Lentiviral Particles: sc-72910-V and CIP4 shRNA (m) Lentiviral Particles: sc-72911-V.

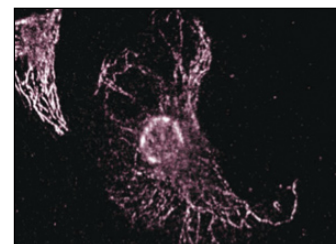
Molecular Weight of CIP4: 75 kDa.

Positive Controls: CIP4 (m): 293T Lysate: sc-119268 or JAR cell lysate: sc-2276.

DATA



CIP4 (21): sc-135868. Western blot analysis of CIP4 expression in non-transfected: sc-117752 (A) and mouse CIP4 transfected: sc-119268 (B) 293T whole cell lysates.



CIP4 (21): sc-135868. Immunofluorescence staining of NRK cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

- Van Itallie, C.M., et al. 2015. A complex of ZO-1 and the BAR-domain protein TOCA-1 regulates Actin assembly at the tight junction. *Mol. Biol. Cell* 26: 2769-2787.
- Chan Wah Hak, L., et al. 2018. FBP17 and CIP4 recruit SHIP2 and lamellipodin to prime the plasma membrane for fast endophilin-mediated endocytosis. *Nat. Cell Biol.* 20: 1023-1031.
- Ferreira, A.P.A., et al. 2021. Cdk5 and GSK3 β inhibit fast endophilin-mediated endocytosis. *Nat. Commun.* 12: 2424.

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. Not for resale.