

CYFIP2 (6-YD16): sc-134308

BACKGROUND

CYFIP2 (cytoplasmic FMR1-interacting protein 2, p53-inducible protein 121) is a 1,278 amino acid protein encoded by the human gene CYFIP2. CYFIP2 belongs to the CYFIP family and is involved in T-cell adhesion and p53-dependent induction of apoptosis. It interacts with FMR1, FXR1 and FXR2 and is a component of the WAVE1 complex composed of Abi-2, CYFIP2, C3orf10/HSPC300, NAP125 and WASF1/WAVE1. Upon binding to activated Rac 1, CYFIP2 causes the complex to dissociate, releasing activated WASF1. The CYFIP2 promoter contains a p53-responsive element that confers p53 binding as well as transcriptional activation of a heterologous reporter. Induced expression of CYFIP2 is sufficient for caspase activation and cellular apoptosis, reminiscent of p53 activation.

REFERENCES

1. Schenck, A., et al. 2001. A highly conserved protein family interacting with the fragile X mental retardation protein (FMRP) and displaying selective interactions with FMRP-related proteins FXR1P and FXR2P. *Proc. Natl. Acad. Sci. USA* 98: 8844-8849.
2. Schenck, A., et al. 2003. CYFIP/Sra-1 controls neuronal connectivity in *Drosophila* and links the Rac 1 GTPase pathway to the fragile X protein. *Neuron* 38: 887-898.
3. Mayne, M., et al. 2004. CYFIP2 is highly abundant in CD4⁺ cells from multiple sclerosis patients and is involved in T cell adhesion. *Eur. J. Immunol.* 34: 1217-1227.
4. Levanon, E.Y., et al. 2005. Evolutionarily conserved human targets of adenosine to inosine RNA editing. *Nucleic Acids Res.* 33: 1162-1168.
5. Morris, C.P., et al. 2007. Unravelling the molecular control of calvarial suture fusion in children with craniosynostosis. *BMC Genomics* 8: 458.
6. Cho, Y.J., et al. 2007. CYFIP2, a direct p53 target, is leptomycin-B sensitive. *Cell Cycle* 6: 95-103.
7. Wang, C., et al. 2007. Abelson interactor protein-1 positively regulates breast cancer cell proliferation, migration, and invasion. *Mol. Cancer Res.* 5: 1031-1039.

CHROMOSOMAL LOCATION

Genetic locus: CYFIP2 (human) mapping to 5q33.3; Cyfip2 (mouse) mapping to 11 B1.1.

SOURCE

CYFIP2 (6-YD16) is a mouse monoclonal antibody raised against recombinant CYFIP2 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

CYFIP2 (6-YD16) is recommended for detection of CYFIP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CYFIP2 siRNA (h): sc-62175, CYFIP2 siRNA (m): sc-62176, CYFIP2 shRNA Plasmid (h): sc-62175-SH, CYFIP2 shRNA Plasmid (m): sc-62176-SH, CYFIP2 shRNA (h) Lentiviral Particles: sc-62175-V and CYFIP2 shRNA (m) Lentiviral Particles: sc-62176-V.

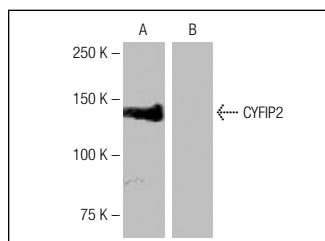
Molecular Weight of CYFIP2: 148 kDa.

Positive Controls: CYFIP2 transfected 293T whole cell lysate or human brain tissue extract.

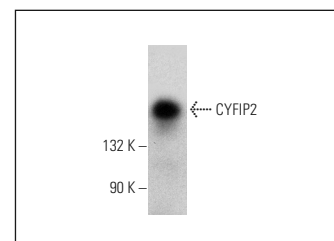
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



CYFIP2 (6-YD16): sc-134308. Western blot analysis of CYFIP2 expression in human CYFIP2 transfected (A) and non-transfected (B) 293T whole cell lysates.



CYFIP2 (6-YD16): sc-134308. Western blot analysis of CYFIP2 expression in human brain tissue extract.

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.