

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. Coussens, A.K., 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.

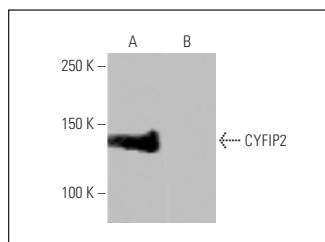
Molecular Weight of CYFIP2: 148 kDa.

Positive Controls: human CYFIP2 transfected 293T whole cell lysate or human brain extract: sc-364375.

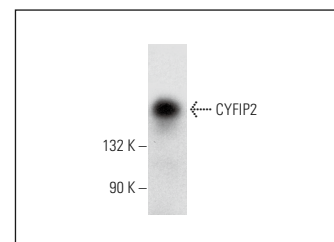
RECOMMENDED SUPPORT REAGENTS

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.

SELECT PRODUCT CITATIONS

1. Li, Y., et al. 2021. NUA2 silencing inhibits the proliferation, migration and epithelial-to-mesenchymal transition of cervical cancer cells via upregulating CYFIP2. *Mol. Med. Rep.* 24: 817.

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.