SANTA CRUZ BIOTECHNOLOGY, INC.

CYFIP1/2 (H-300): sc-134440

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The Power to Question

BACKGROUND

CYFIP1 (cytoplasmic FMR1 interacting protein 1) and CYFIP2 (cytoplasmic FMR1 interacting protein 2) are cytoplasmic proteins belonging to the CYFIP family. Both proteins bind GTP-bound Rac 1 to release FRM1 in its active state, which is thought to regulate mRNA translation of neural cytoskeletal proteins. A loss of CYFIP1 and CYFIP2 leads to mutant neurons with defective axonal growth and motor function. Also designated specifically Rac1-associated protein 1 (sra-1) or p140sra-1, CYFIP1 contains 1,253 amino acids and is a component of the WAVE2 complex. CYFIP1 is encoded by a gene that maps to human chromosome 15q11.2 and exists as three alternatively spliced isoforms. CYFIP2, also known as p53-inducible protein 121, contains 1,278 amino acids and plays a role in p53-dependent apoptosis. Existing as two alternatively spliced isoforms, CYFIP2 is a component of the WAVE1 complex and is encoded by a gene located on human chromosome 5q33.3.

REFERENCES

1. Kobayashi, K., et al. 1998. p140Sra-1 (specifically Rac1-associated protein) is a novel specific target for Rac1 small GTPase. J. Biol. Chem. 273: 291-295.
2. Saller, E., et al. 1999. Increased apoptosis induction by 121F mutant p53. EMBO J. 18: 4424-4437.
3. Schenck, A., et al. 2003. CYFIP/Sra-1 controls neuronal connectivity in *Drosophila* and links the Rac1 GTPase pathway to the fragile X protein. Neuron 38: 887-898.
4. 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.
5. Kawano, Y., et al. 2005. CRMP-2 is involved in kinesin-1-dependent transport of the Sra-1/WAVE1 complex and axon formation. Mol. Cell. Biol. 25: 9920-9935.
6. Jackson, R.S., et al. 2007. CYFIP2, a direct p53 target, is leptomycin-B sensitive. Cell Cycle 6: 95-103.

CHROMOSOMAL LOCATION

Genetic locus: CYFIP1 (human) mapping to 15q11.2, CYFIP2 (human) mapping to 5q33.3; Cyfip1 (mouse) mapping to 7 B5, Cyfip2 (mouse) mapping to 11 B1.1.

SOURCE

CYFIP1/2 (H-300) is a rabbit polyclonal antibody raised against amino acids 954-1253 mapping at the C-terminus of CYFIP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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

CYFIP1/2 (H-300) is recommended for detection of CYFIP1 and 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)], 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).

CYFIP1/2 (H-300) is also recommended for detection of CYFIP1 and CYFIP2 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of CYFIP1: 145 kDa.

Molecular Weight of CYFIP2: 148 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.