## SANTA CRUZ BIOTECHNOLOGY, INC.

# 82-FIP (V-16): sc-50881



BACKGROUND

Fragile X syndrome is the most frequent form of inherited mental retardation and is the result of transcriptional silencing of the FMR1 gene on the X chromosome. The FMR1 protein (or FMRP) is an RNA binding protein that associates with polyribosomes and is a likely component of a messenger ribonuclear protein (mRNP) particle. 82-FIP, is an RNA binding protein that interacts with FMR1 through an N-terminal interaction motif. In some neurons it is detected in both nucleus and cytoplasm, while it is only found in the cytoplasm of other neurons. The localizations appear to be cell cycledependent, suggesting that 82-FIP is modulated by the cell cycle. The human 82-FIP protein is comprised of 695 amino acids and shares 95% sequence homology with the mouse protein.

#### REFERENCES

- Bardoni, B., Castets, M., Huot, M.E., Schenck, A., Adinolfi, S., Corbin, F., Pastore, A., Khandjian, E.W. and Mandel, J.L. 2003. 82-FIP, a novel FMRP (fragile X mental retardation protein) interacting protein, shows a cell cycle-dependent intracellular localization. Hum. Mol. Genet. 12: 1689-1698.
- Brill, L.M., Salomon, A.R., Ficarro, S.B., Mukherji, M., Stettler-Gill, M. and Peters, E.C. 2004. Robust phosphoproteomic profiling of tyrosine phosphorylation sites from human T cells using immobilized metal affinity chromatography and tandem mass spectrometry. Anal. Chem. 76: 2763-2772.
- Jin, J., Smith, F.D., Stark, C., Wells, C.D., Fawcett, J.P., Kulkarni, S., Metalnikov, P., O'Donnell, P., Taylor, P., Taylor, L., Zougman, A., Woodgett, J.R., Langeberg, L.K., Scott, J.D. and Pawson, T. 2004. Proteomic, functional, and domain-based analysis of *in vivo* 14-3-3 binding proteins involved in cytoskeletal regulation and cellular organization. Curr. Biol. 14: 1436-1450.
- Ballif, B.A., Villen, J., Beausoleil, S.A., Schwartz, D. and Gygi, S.P. 2004. Phosphoproteomic analysis of the developing mouse brain. Mol. Cell Proteomics 3: 1093-1101.
- Ramos, A., Hollingworth, D., Adinolfi, S., Castets, M., Kelly, G., Frenkiel, T.A., Bardoni, B. and Pastore, A. 2006. The structure of the N-terminal domain of the fragile X mental retardation protein: a platform for proteinprotein interaction. Structure 14: 21-31.

### CHROMOSOMAL LOCATION

Genetic locus: NUFIP2 (human) mapping to 17q11.2; Nufip2 (mouse) mapping to 11 B5.

#### SOURCE

82-FIP (V-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 82-FIP of human origin.

## PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50881 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

82-FIP (V-16) is recommended for detection of 82-FIP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for 82-FIP siRNA (h): sc-60103, 82-FIP siRNA (m): sc-60104, 82-FIP shRNA Plasmid (h): sc-60103-SH, 82-FIP shRNA Plasmid (m): sc-60104-SH, 82-FIP shRNA (h) Lentiviral Particles: sc-60103-V and 82-FIP shRNA (m) Lentiviral Particles: sc-60104-V.

Molecular Weight of 82-FIP: 76 kDa.

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### **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.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.