## SANTA CRUZ BIOTECHNOLOGY, INC.

# 82-FIP (h): 293T Lysate: sc-111780



#### 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 cycle-dependent, 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.
- 4. 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.

#### PRODUCT

sc-111780 (h): 293T Lysate represents a lysate of human sc-111780 transfected 293T cells and is provided as 100  $\mu g$  protein in 200  $\mu l$  SDS-PAGE buffer.

#### **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### APPLICATIONS

sc-111780 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive sc-111780 antibodies. Recommended use: 10-20  $\mu I$  per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

#### PROTOCOLS

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