SANTA CRUZ BIOTECHNOLOGY, INC.

FTSJ1 (B-2): sc-390355

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FTSJ1 (FtsJ homolog 1), also known as putative ribosomal RNA methyltransferase 1, rRNA (uridine-2'-O-)-methyltransferase, MRX44, JM23, SPB1, MRX9, TRM7 or CDLIV, is a 329 amino acid nucleolar protein belonging to the RlmE family and methyltransferase superfamily. Expressed in adult thalamus, hippocampus, amygdala, corpus callosum and caudate nucleus, as well as fetal kidney, lung, liver, brain and lung, FTSJ1 plays a role in rRNA modification and processing. FTSJ1 exists as multiple spliced isoforms which are encoded by a gene located on human chromosome Xp11.23. Notably, defects in the gene encoding FTSJ1 are the cause of mental retardation X-linked type 44 (MRX44) and nonsyndromic X-linked mental retardation (MRX9).

REFERENCES

1. Willems, P., et al. 1993. Localization of a gene responsible for nonspecific mental retardation (MRX9) to the pericentromeric region of the X chromosome. Genomics 18: 290-294.
2. Hamel, B.C., et al. 1999. Four families (MRX43, MRX44, MRX45, MRX52) with nonspecific X-linked mental retardation: clinical and psychometric data and results of linkage analysis. Am. J. Med. Genet. 85: 290-304.
3. Pintard, L., et al. 2000. Spb1p is a yeast nucleolar protein associated with Nop1p and Nop58p that is able to bind S-adenosyl-L-methionine *in vitro*. Mol. Cell. Biol. 20: 1370-1381.
4. Ropers, H.H., et al. 2003. Nonsyndromic X-linked mental retardation: where are the missing mutations? Trends Genet. 19: 316-320.
5. Freude, K., et al. 2004. Mutations in the FTSJ1 gene coding for a novel S-adenosylmethionine-binding protein cause nonsyndromic X-linked mental retardation. Am. J. Hum. Genet. 75: 305-309.

CHROMOSOMAL LOCATION

Genetic locus: FTSJ1 (human) mapping to Xp11.23; Ftsj1 (mouse) mapping to X A1.1.

SOURCE

FTSJ1 (B-2) is a mouse monoclonal antibody raised against amino acids 51-210 mapping near the N-terminus of FTSJ1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FTSJ1 (B-2) is available conjugated to agarose (sc-390355 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390355 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390355 PE), fluorescein (sc-390355 FITC), Alexa Fluor® 488 (sc-390355 AF488), Alexa Fluor® 546 (sc-390355 AF546), Alexa Fluor® 594 (sc-390355 AF594) or Alexa Fluor® 647 (sc-390355 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390355 AF680) or Alexa Fluor® 790 (sc-390355 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FTSJ1 (B-2) is recommended for detection of FTSJ1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for FTSJ1 siRNA (h): sc-90901, FTSJ1 siRNA (m): sc-145263, FTSJ1 shRNA Plasmid (h): sc-90901-SH, FTSJ1 shRNA Plasmid (m): sc-145263-SH, FTSJ1 shRNA (h) Lentiviral Particles: sc-90901-V and FTSJ1 shRNA (m) Lentiviral Particles: sc-145263-V.

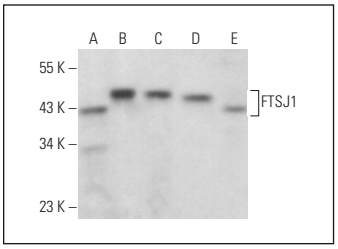
Molecular Weight of FTSJ1: 36 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, T24 cell lysate: sc-2292 or Hep G2 cell lysate: sc-2227.

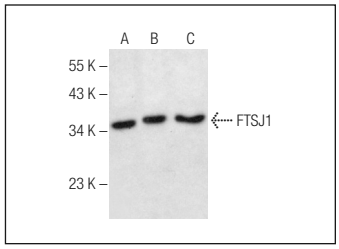
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FTSJ1 (B-2): sc-390355. Western blot analysis of FTSJ1 expression in T24 (**A**), SK-N-SH (**B**), c4 (**C**) and TK-1 (**D**) whole cell lysates and rat brain tissue extract (**E**).



FTSJ1 (B-2): sc-390355. Western blot analysis of FTSJ1 expression in SK-N-MC (**A**), T24 (**B**) and Hep G2 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Pokharel, Y.R., et al. 2015. Relevance rank platform (RRP) for functional filtering of high content protein-protein interaction data. Mol. Cell. Proteomics 14: 3274-3283.

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.