SANTA CRUZ BIOTECHNOLOGY, INC.

FRG1 (m): 293T Lysate: sc-120320

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FRG1 is a 258 amino acid nuclear protein encoded by the human gene FRG1. The FRG1 protein is thought to be involved in pre-messenger RNA splicing. FRG1 plays a role in processing pre-rRNA, assembling rRNA into ribosomal subunits and may also be involved in pre-mRNA splicing. Facioscapulohumeral muscular dystrophy (FSHD) is a disease state associated with internal deletions among the tandem array of D4Z4 repeats on chromosome 4q35, a subtelomere region of chromosome 4 that contains the FRG1 gene. The muscle degeneration that is common in patients with FSHD results from increased expression of genes proximal to the deletion, including FRG1. In addition to muscle degeneration, most FSHD patients also develop abnormalities of the retinal vasculature. FRG1 is expressed in adult and fetal muscle, lymphocytes and placenta. It can be localized to nuclear Cajal bodies or speckles.

REFERENCES

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2. Grewal, P.K., van Deutekom, J.C., Mills, K.A., Lemmers, R.J., Mathews, K.D., Frants, R.R. and Hewitt, J.E. 1997. The mouse homolog of FRG1, a candidate gene for FSHD, maps proximal to the myodystrophy mutation on chromosome 8. Mamm. Genome 8: 394-398.
3. Grewal, P.K., Todd, L.C., van der Maarel, S., Frants, R.R. and Hewitt, J.E. 1998. FRG1, a gene in the FSH muscular dystrophy region on human chromosome 4q35, is highly conserved in vertebrates and invertebrates. Gene 216: 13-19.
4. Grewal, P.K., van Geel, M., Frants, R.R., de Jong, P. and Hewitt, J.E. 1999. Recent amplification of the human FRG1 gene during primate evolution. Gene 227: 79-88.
5. Tam, R., Smith, K.P. and Lawrence, J.B. 2004. The 4q subtelomere harboring the FSHD locus is specifically anchored with peripheral heterochromatin unlike most human telomeres. J. Cell Biol. 167: 269-279.
6. van Koningsbruggen, S., Dirks, R.W., Mommaas, A.M., Onderwater, J.J., Deidda, G., Padberg, G.W., Frants, R.R. and van der Maarel, S.M. 2004. FRG1P is localised in the nucleolus, Cajal bodies, and speckles. J. Med. Genet. 41: e46.

CHROMOSOMAL LOCATION

Genetic locus: Frg1 (mouse) mapping to 8 A4.

PRODUCT

FRG1 (m): 293T Lysate represents a lysate of mouse FRG1 transfected 293T cells and is provided as 100 µg protein in 200 µl 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.

APPLICATIONS

FRG1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive FRG1 antibodies. Recommended use: 10-20 µl per lane.

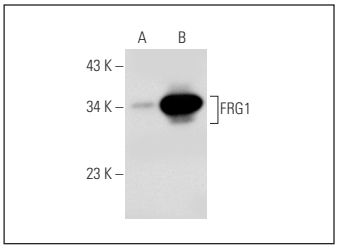
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

FRG1 (L-07): sc-101050 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse FRG1 expression in FRG1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



FRG1 (L-07): sc-101050. Western blot analysis of FRG1 expression in non-transfected: sc-117752 (**A**) and mouse FRG1 transfected: sc-120320 (**B**) 293T whole cell lysates.

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.