SANTA CRUZ BIOTECHNOLOGY, INC.

TRIM37 siRNA (m): sc-61717

BACKGROUND

TRIM37, also designated KIAA0898, is a protein that localizes to peroxisomes and contains a tripartite motif (TRIM) and a tumor necrosis factor-receptor associated factor (TRAF) domain. The protein and gene forms of TRIM37 are highly conserved between human and mouse. TRIM37 is expressed at a low level in the liver, ovary, heart, lung, skeletal muscle, and kidney, while it is highly expressed in the testis and brain, where it may act as an E3 ubiquitin ligase. Mutations in the TRIM37 gene result in Mulibrey nanism, an autosomal recessive prenatal-onset growth disorder that causes characteristic dysmorphic craniofacial features, heart disease, cardiopathy, failure of sexual maturation, and hepatomegaly.

REFERENCES

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2. Avela, K., et al. 2000. Gene encoding a new RING-B-box-coiled-coil protein is mutated in Mulibrey nanism. Nat. Genet. 25: 298-301.
3. Kallijärvi, J., et al. 2002. The TRIM37 gene encodes a peroxisomal RING-B-box-coiled-coil protein: classification of Mulibrey nanism as a new peroxisomal disorder. Am. J. Hum. Genet. 70: 1215-1228.
4. Jagiello, P., et al. 2003. A novel splice site mutation in the TRIM37 gene causes Mulibrey nanism in a Turkish family with phenotypic heterogeneity. Hum. Mutat. 21: 630-635.
5. Hämäläinen, R.H., et al. 2004. Novel mutations in the TRIM37 gene in Mulibrey nanism. Hum. Mutat. 23: 522.
6. Karlberg, N., et al. 2004. Mulibrey nanism: clinical features and diagnostic criteria. J. Med. Genet. 41: 92-98.
7. Karlberg, N., et al. 2005. Insulin resistance syndrome in subjects with mutated RING finger protein TRIM37. Diabetes 54: 3577-3581.
8. Hämäläinen, R.H., et al. 2006. Characterisation of the Mulibrey nanism-initiation, promoter region and alternative splicing. Gene 366: 180-188.

CHROMOSOMAL LOCATION

Genetic locus: Trim37 (mouse) mapping to 11 C.

PRODUCT

TRIM37 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TRIM37 shRNA Plasmid (m): sc-61717-SH and TRIM37 shRNA (m) Lentiviral Particles: sc-61717-V as alternate gene silencing products.

For independent verification of TRIM37 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61717A, sc-61717B and sc-61717C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

TRIM37 siRNA (m) is recommended for the inhibition of TRIM37 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

TRIM37 (C-6): sc-515044 is recommended as a control antibody for monitoring of TRIM37 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TRIM37 gene expression knockdown using RT-PCR Primer: TRIM37 (m)-PR: sc-61717-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.