SANTA CRUZ BIOTECHNOLOGY, INC.

TRIM32 siRNA (m): sc-61715

BACKGROUND

Tripartite motif-containing protein 32 (TRIM32) belongs to the tripartite motif (TRIM) protein family. TRIM32, like all TRIM proteins, contains a domain structure composed of a B-box, a RING-finger and a coiled-coil motif. Additionally, TRIM32 has six C-terminal NHL domains; it is expressed mainly in the skeletal muscle. The TRIM32 gene encodes an E3 ubiquitin ligase, a protein that attaches ubiquitin to a lysine residue on a target protein and acts in conjunction with ubiquitin-conjugating enzymes UbcH5a, UbcH5c and UbcH6. Mutations in the TRIM32 gene cause two forms of autosomal recessive muscular dystrophy designated limb girdle muscular dystrophy type 2H (LGMD2H) and sarcotubular myopathy (STM). TRIM32 mutations can also result in Bardet-Biedl syndrome (BBS), an autosomal recessive disorder characterized by pigmentary retinopathy, polydactyly, hypogenitalism, renal abnormalities, learning disabilities and obesity.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602290. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Horn, E.J., et al. 2004. RING protein Trim32 associated with skin carcinogenesis has anti-apoptotic and E3-ubiquitin ligase properties. Carcinogenesis 25: 157-167.
3. Frosk, P., et al. 2005. Hutterite brothers both affected with two forms of limb girdle muscular dystrophy: LGMD2H and LGMD2I. Eur. J. Hum. Genet. 13: 978-982.
4. Schoser, B.G., et al. 2005. Commonality of TRIM32 mutation in causing sarcotubular myopathy and LGMD2H. Ann. Neurol. 57: 591-595.
5. Guglieri, M., et al. 2005. Molecular etiopathogenesis of limb girdle muscular and congenital muscular dystrophies: boundaries and contiguities. Clin. Chim. Acta 361: 54-79.
6. Kudryashova, E., et al. 2005. TRIM32 is a ubiquitin ligase mutated in limb girdle muscular dystrophy type 2H that binds to skeletal muscle myosin and ubiquitinates Actin. J. Mol. Biol. 354: 413-424.

CHROMOSOMAL LOCATION

Genetic locus: Trim32 (mouse) mapping to 4 C1.

PRODUCT

TRIM32 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 TRIM32 shRNA Plasmid (m): sc-61715-SH and TRIM32 shRNA (m) Lentiviral Particles: sc-61715-V as alternate gene silencing products.

For independent verification of TRIM32 (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-61715A, sc-61715B and sc-61715C.

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

TRIM32 siRNA (m) is recommended for the inhibition of TRIM32 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TRIM32 gene expression knockdown using RT-PCR Primer: TRIM32 (m)-PR: sc-61715-PR (20 µl, 562 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Shen, Y., et al. 2022. Ursodeoxycholic acid reduces antitumor immunosuppression by inducing CHIP-mediated TGF-β degradation. Nat. Commun. 13: 3419.

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.