

# TRIM32 siRNA (h): sc-61714

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: TRIM32 (human) mapping to 9q33.1.

## PRODUCT

TRIM32 siRNA (h) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TRIM32 shRNA Plasmid (h): sc-61714-SH and TRIM32 shRNA (h) Lentiviral Particles: sc-61714-V as alternate gene silencing products.

For independent verification of TRIM32 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61714A, sc-61714B and sc-61714C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

TRIM32 siRNA (h) is recommended for the inhibition of human expression in TRIM32 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  $\mu$ M in 66  $\mu$ l. 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

TRIM32 (8H8): sc-135588 is recommended as a control antibody for monitoring of TRIM32 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-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 TRIM32 gene expression knockdown using RT-PCR Primer: TRIM32 (h)-PR: sc-61714-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Izumi, H. and Kaneko, Y. 2014. TRIM32 facilitates degradation of MYCN on spindle poles and induces asymmetric cell division in human neuroblastoma cells. *Cancer Res.* 74: 5620-5623.
2. Gong, K., et al. 2020. EGFR inhibition triggers an adaptive response by co-opting antiviral signaling pathways in lung cancer. *Nat. Cancer* 1: 394-409.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.