

TRIM3 siRNA (h): sc-96295

BACKGROUND

Tripartite motif-containing protein 3 (TRIM3), also known as RING finger protein 22 (RNF22), RING finger protein 97 (RNF97) or brain-expressed RING finger protein (BERP), is a 744 amino acid member of the TRIM family, also known as the RING-B-box coiled-coil (RBCC) family. Members of the RBCC family have an N-terminal RING finger, followed by one or two zinc-binding domains (B-box domains), a leucine coiled-coil region and a variable C-terminal domain. Localized to cytoplasmic filaments, TRIM3 has been shown to interact with α -actinin-4 and myosin V, two proteins associated with the Actin cytoskeleton. Specifically, α -actinin-4 interacts with the RBCC domain of TRIM3, and the C-terminal tail of Myosin V interacts with the unique C-terminal β -propeller domain of TRIM3. These associations suggest that TRIM3 may play a role in cell motility and cargo transport. Three named isoforms of TRIM3 exist as a result of alternative splicing events.

REFERENCES

1. El-Husseini, A.E. and Vincent, S.R. 1999. Cloning and characterization of a novel RING finger protein that interacts with class V myosins. *J. Biol. Chem.* 274: 19771-19777.
2. El-Husseini, A.E., et al. 2000. BERP, a novel ring finger protein, binds to α -actinin-4. *Biochem. Biophys. Res. Commun.* 267: 906-911.
3. Raymond, A., et al. 2001. The tripartite motif family identifies cell compartments. *EMBO J.* 20: 2140-2151.
4. El-Husseini, A.E., Fretier, P. and Vincent, S.R. 2001. Cloning and characterization of a gene (RNF22) encoding a novel brain expressed ring finger protein (BERP) that maps to human chromosome 11p15.5. *Genomics* 71: 363-367.
5. Yan, Q., et al. 2005. CART: an Hrs/actinin-4/BERP/Myosin V protein complex required for efficient receptor recycling. *Mol. Biol. Cell* 16: 2470-2482.
6. Short, K.M. and Cox, T.C. 2006. Subclassification of the RBCC/TRIM superfamily reveals a novel motif necessary for microtubule binding. *J. Biol. Chem.* 281: 8970-8980.
7. Massiah, M.A., et al. 2006. Solution structure of the RBCC/TRIM B-box1 domain of human MID1: B-box with a RING. *J. Mol. Biol.* 358: 532-545.

CHROMOSOMAL LOCATION

Genetic locus: TRIM3 (human) mapping to 11p15.4.

PRODUCT

TRIM3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TRIM3 shRNA Plasmid (h): sc-96295-SH and TRIM3 shRNA (h) Lentiviral Particles: sc-96295-V as alternate gene silencing products.

For independent verification of TRIM3 (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-96295A, sc-96295B and sc-96295C.

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

APPLICATIONS

TRIM3 siRNA (h) is recommended for the inhibition of TRIM3 expression in human 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 μ M in 66 μ 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

TRIM3 (27): sc-136363 is recommended as a control antibody for monitoring of TRIM3 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 κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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 TRIM3 gene expression knockdown using RT-PCR Primer: TRIM3 (h)-PR: sc-96295-PR (20 μ l). 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.