SANTA CRUZ BIOTECHNOLOGY, INC.

TRIM41 siRNA (h): sc-91877



BACKGROUND

Tripartite motif-containing protein 41 (TRIM41), also known as RINCK, is a 630 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 both the nucleus and cytoplasm, TRIM41 associates with protein kinase C (PKC) through the C1A domain of PKC. Studies have shown that overexpression of TRIM41 reduces the levels of PKC in cells, whereas knockdown of TRIM41 leads to increased levels of PKC. Thus, it is hypothesized that TRIM41 plays a role in regulating PKC levels in cells, specifically through the ubiquitination of PKC. Four isoforms of TRIM41 exist as a result of alternative splicing events.

REFERENCES

- Miyamoto, K., et al. 2002. RING-finger, B-box, and coiled-coil (RBCC) protein expression in branchial epithelial cells of Japanese eel, *Anguilla japonica*. Eur. J. Biochem. 269: 6152-6161.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610530. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Meroni, G. and Diez-Roux, G. 2005. TRIM/RBCC, a novel class of "single protein RING-finger" E3 ubiquitin ligases. Bioessays 27: 1147-1157.
- 4. Kitamura, K., et al. 2005. The RING-finger protein haprin: domains and function in the acrosome reaction. Curr. Protein Pept. Sci. 6: 567-574.
- 5. Tanaka, M., et al. 2005. Intracellular localization and domain organization of human TRIM41 proteins. Mol. Biol. Rep. 32: 87-93.
- 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.
- Chen, D., et al. 2007. Amplitude control of protein kinase C by RINCK, a novel E3 ubiquitin ligase. J. Biol. Chem. 282: 33776-33787.
- 8. Lerner, M., et al. 2007. The RBCC gene RFP2 (Leu5) encodes a novel transmembrane E3 ubiquitin ligase involved in ERAD. Mol. Biol. Cell 18: 1670-1682.
- Tramontana, S., et al. 2008. Internal controls for quantitative polymerase chain reaction of swine mammary glands during pregnancy and lactation. J. Dairy Sci. 91: 3057-3066.

CHROMOSOMAL LOCATION

Genetic locus: TRIM41 (human) mapping to 5q35.3.

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.

PRODUCT

TRIM41 siRNA (h) is a pool of 2 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 TRIM41 shRNA Plasmid (h): sc-91877-SH and TRIM41 shRNA (h) Lentiviral Particles: sc-91877-V as alternate gene silencing products.

For independent verification of TRIM41 (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-91877A and sc-91877B.

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

 $\mathsf{TRIM41}$ siRNA (h) is recommended for the inhibition of $\mathsf{TRIM41}$ 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TRIM41 gene expression knockdown using RT-PCR Primer: TRIM41 (h)-PR: sc-91877-PR (20 μ I). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.