

TRIM34 siRNA (h): sc-96814

BACKGROUND

Tripartite motif-containing protein 34 (TRIM34), also known as RING finger protein 21 (RNF21) or interferon-responsive finger protein 1 (IFP1), is a 488 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. Three isoforms of TRIM34 exist as a result of alternative splicing events. Isoform 1, the most abundant isoform, is highly expressed in placenta, spleen, colon and peripheral blood leukocytes. Studies have shown that Interferon (IFN) stimulation leads to an upregulation of TRIM34. These findings suggest that TRIM34 maybe a downstream effector that mediates IFN activities.

REFERENCES

- Orimo, A., Tominaga, N., Yoshimura, K., Yamauchi, Y., Nomura, M., Sato, M., Nogi, Y., Suzuki, M., Suzuki, H., Ikeda, K., Inoue, S. and Muramatsu, M. 2000. Molecular cloning of ring finger protein 21 (RNF21)/interferon-responsive finger protein (ifp1), which possesses two RING-B box-coiled coil domains in tandem. *Genomics* 69: 143-149.
- Meroni, G. and Diez-Roux, G. 2005. TRIM/RBCC, a novel class of "single protein RING finger" E3 ubiquitin ligases. *Bioessays* 27: 1147-1157.
- 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.
- Massiah, M.A., Simmons, B.N., Short, K.M. and Cox, T.C. 2006. Solution structure of the RBCC/TRIM B-box1 domain of human MID1: B-box with a RING. *J. Mol. Biol.* 358: 532-545.
- Li, X., Li, Y., Stremlau, M., Yuan, W., Song, B., Perron, M. and Sodroski, J. 2006. Functional replacement of the RING, B-box 2, and coiled-coil domains of tripartite motif 5 α (TRIM5 α) by heterologous TRIM domains. *J. Virol.* 80: 6198-6206.
- Si, Z., Vandegraaff, N., O'huigin, C., Song, B., Yuan, W., Xu, C., Perron, M., Li, X., Marasco, W.A., Engelman, A., Dean, M. and Sodroski, J. 2006. Evolution of a cytoplasmic tripartite motif (TRIM) protein in cows that restricts retroviral infection. *Proc. Natl. Acad. Sci. USA* 103: 7454-7459.
- Sawyer, S.L., Emerman, M. and Malik, H.S. 2007. Discordant evolution of the adjacent antiretroviral genes TRIM22 and TRIM5 in mammals. *PLoS Pathog.* 3: e197.
- Li, X., Gold, B., O'huigin, C., Diaz-Griffero, F., Song, B., Si, Z., Li, Y., Yuan, W., Stremlau, M., Mische, C., Javanbakht, H., Scally, M., Winkler, C., Dean, M. and Sodroski, J. 2007. Unique features of TRIM5 α among closely related human TRIM family members. *Virology* 360: 419-433.

CHROMOSOMAL LOCATION

Genetic locus: TRIM34 (human) mapping to 11p15.4.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

TRIM34 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 TRIM34 shRNA Plasmid (h): sc-96814-SH and TRIM34 shRNA (h) Lentiviral Particles: sc-96814-V as alternate gene silencing products.

For independent verification of TRIM34 (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-96814A, sc-96814B and sc-96814C.

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

TRIM34 siRNA (h) is recommended for the inhibition of TRIM34 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 TRIM34 gene expression knockdown using RT-PCR Primer: TRIM34 (h)-PR: sc-96814-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.