SANTA CRUZ BIOTECHNOLOGY, INC.

TRIM10 siRNA (m): sc-76733

BACKGROUND

The tripartite motif (TRIM) family of proteins are characterized by a conserved TRIM domain that includes a coiled-coil region, a B-box type zinc finger, one RING finger and three zinc-binding domains. TRIM10, also known as RING finger protein 9, RFB30 or HERF1, is a 481 amino acid protein that localizes to the cytoplasm. Expressed exclusively in hematopoetic tissues that contain developing myeloid, erythroid or megakaryocytic progenitors, TRIM10 has been shown to play a critical role in the terminal differentiation of erythroid cells. The functions of the various domains in TRIM10 suggest a role in the regulation of transcriptional signaling as well a mechanistic role in the morphological changes that occur during erythroid development. The expression of TRIM10 is dependent on upstream effectors such as PEBP2β and PU.1. Two named isoforms of TRIM10 exist as a result of alternative splicing events.

REFERENCES

1. Henry, J., et al. 1997. Cloning, structural analysis, and mapping of the B30 and B7 multigenic families to the major histocompatibility complex (MHC) and other chromosomal regions. Immunogenetics 46: 383-395.
2. Jones, E.P., et al. 1999. MHC class I and non-class I gene organization in the proximal H2-M region of the mouse. Immunogenetics 49: 183-195.
3. Harada, H., et al. 1999. HERF1, a novel hematopoiesis-specific RING finger protein, is required for terminal differentiation of erythroid cells. Mol. Cell. Biol. 19: 3808-3815.
4. Orimo, A., et al. 2000. Molecular cloning of testis-abundant finger protein/RING finger protein 23 (RNF23), a novel RING B-box coiled-coil-B30.2 protein on the class I region of the human MHC. Biochem. Biophys. Res. Commun. 276: 45-51.
5. Nisole, S., et al. 2005. TRIM family proteins: retroviral restriction and antiviral defence. Nat. Rev. Microbiol. 3: 799-808.
6. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 605701. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Trim10 (mouse) mapping to 17 B1.

PRODUCT

TRIM10 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. Suit-able for 50-100 transfections. Also see TRIM10 shRNA Plasmid (m): sc-76733-SH and TRIM10 shRNA (m) Lentiviral Particles: sc-76733-V as alternate gene silencing products.

For independent verification of TRIM10 (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-76733A, sc-76733B and sc-76733C.

RESEARCH USE

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

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

TRIM10 siRNA (m) is recommended for the inhibition of TRIM10 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 TRIM10 gene expression knockdown using RT-PCR Primer: TRIM10 (m)-PR: sc-76733-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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