SANTA CRUZ BIOTECHNOLOGY, INC.

TRIM46 siRNA (h): sc-78728

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. TRIM46 (tripartite motif-containing 46), also known as TRIFIC or GENEY, is a 759 amino acid intracellular protein that contains a variety of domains that are characteristic to TRIM proteins, including a RING-type zinc finger and a B box-type zinc finger. All subclass members, including TRIM46, TRIM9, TRIM67 and TRIM36, have conserved domain arrangement and associate with microtubule cytoskeleton, which may suggest that subcellular compartmentalization is determined by the unique domain architecture. The gene encoding TRIM46 is located on human chromosome 1, which spans about 260 million base pairs and comprises nearly 8% of the human genome.

REFERENCES

1. Vos, H.L., et al. 1995. A tightly organized, conserved gene cluster on mouse chromosome 3 (E3-F1). Mamm. Genome 6: 820-822.
2. Jensen, K., et al. 2001. PML protein isoforms and the RBCC/TRIM motif. Oncogene 20: 7223-7233.
3. 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. 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.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 600986. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Sardiello, M., et al. 2008. Genomic analysis of the TRIM family reveals two groups of genes with distinct evolutionary properties. BMC Evol. Biol. 8: 225.
7. Carthagena, L., et al. 2009. Human TRIM gene expression in response to interferons. PLoS ONE 4: e4894.

CHROMOSOMAL LOCATION

Genetic locus: TRIM46 (human) mapping to 1q22.

PRODUCT

TRIM46 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TRIM46 shRNA Plasmid (h): sc-78728-SH and TRIM46 shRNA (h) Lentiviral Particles: sc-78728-V as alternate gene silencing products.

For independent verification of TRIM46 (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-78728A, sc-78728B and sc-78728C.

PROTOCOLS

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

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

TRIM46 siRNA (h) is recommended for the inhibition of TRIM46 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 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 TRIM46 gene expression knockdown using RT-PCR Primer: TRIM46 (h)-PR: sc-78728-PR (20 µl). 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.