SANTA CRUZ BIOTECHNOLOGY, INC.

TRIM16 siRNA (m): sc-76741

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. TRIM16 (tripartite motif-containing 16), also known as EBBP (Estrogen-responsive B box protein), is a 564 amino acid protein that belongs to the TRIM family and contains two B box-type zinc fingers and one B30.2/SPRY domain. TRIM16 is highly expressed in testis, ovary, small intestine, colon, placenta, heart, skeletal muscle and mammary gland. However, it is more highly expressed in fetus than in the corresponding adult tissues. TRIM16 is also expressed in basal keratinocytes, where it is thought to play a role in the regulation of keratinocyte differentiation. Overexpression of TRIM16 has been shown to increase histone acetylation in retinoid-resistant cancer cells and therefore may be a potential target for therapeutic drugs.

REFERENCES

1. Liu, H.L., et al. 1998. The novel estrogen-responsive B-box protein (EBBP) gene is tamoxifen-regulated in cells expressing an estrogen receptor DNA-binding domain mutant. Mol. Endocrinol. 12: 1733-1748.
2. Beer, H.D., et al. 2002. The estrogen-responsive B box protein: a novel regulator of keratinocyte differentiation. J. Biol. Chem. 277: 20740-20749.
3. Munding, C., et al. 2006. The estrogen-responsive B box protein: a novel enhancer of interleukin-1β secretion. Cell Death Differ. 13: 1938-1949.
4. Cheung, B.B., et al. 2006. The estrogen-responsive B box protein is a novel regulator of the retinoid signal. J. Biol. Chem. 281: 18246-18256.
5. Ozato, K., et al. 2008. TRIM family proteins and their emerging roles in innate immunity. Nat. Rev. Immunol. 8: 849-860.
6. Raif, A., et al. 2009. The estrogen-responsive B box protein (EBBP) restores retinoid sensitivity in retinoid-resistant cancer cells via effects on histone acetylation. Cancer Lett. 277: 82-90.

CHROMOSOMAL LOCATION

Genetic locus: Trim16 (mouse) mapping to 11 B2.

PRODUCT

TRIM16 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. Suitable for 50-100 transfections. Also see TRIM16 shRNA Plasmid (m): sc-76741-SH and TRIM16 shRNA (m) Lentiviral Particles: sc-76741-V as alternate gene silencing products.

For independent verification of TRIM16 (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-76741A, sc-76741B and sc-76741C.

PROTOCOLS

See our web site at www.scbt.com or our catalog 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

TRIM16 siRNA (m) is recommended for the inhibition of TRIM16 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.

GENE EXPRESSION MONITORING

TRIM16 (B-6): sc-398851 is recommended as a control antibody for monitoring of TRIM16 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 (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TRIM16 gene expression knockdown using RT-PCR Primer: TRIM16 (m)-PR: sc-76741-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.