SANTA CRUZ BIOTECHNOLOGY, INC.

BET5 siRNA (h): sc-93679

BACKGROUND

Correct vesicular transport is essential to the survival of eukaryotic cells. The TRAPP I (transport protein particle I) multi-subunit complex resides on the Golgi apparatus and mediates the targeting of ER-to-Golgi vesicles. The complex is involved in the initial interaction between the vesicle and the target membrane, otherwise known as tethering, which is crucial to ensure specificity. As one of the ten components of the TRAPP complex, BET5, also known as TRAPPC1 (trafficking protein particle complex subunit 1) and MUM2 (multiple myeloma protein 2), is a 145 amino acid protein that acts in conjunction with BET3 to mediate a late stage in ER-to-Golgi vesicular transport. The gene encoding BET5 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Jiang, Y., et al. 1998. A high copy suppressor screen reveals genetic interactions between BET3 and a new gene. Evidence for a novel complex in ER-to-Golgi transport. Genetics 149: 833-841.
2. Chiari, R., et al. 1999. Two antigens recognized by autologous cytolytic T lymphocytes on a melanoma result from a single point mutation in an essential housekeeping gene. Cancer Res. 59: 5785-5792.
3. Whyte, J.R., et al. 2002. Vesicle tethering complexes in membrane traffic. J. Cell Sci. 115: 2627-2637.
4. Gavin, A.C., et al. 2002. Functional organization of the yeast proteome by systematic analysis of protein complexes. Nature 415: 141-147.
5. Sacher, M., et al. 2008. The TRAPP complex: insights into its architecture and function. Traffic 9: 2032-2042.
6. Colovic, N., et al. 2009. Immunochemotherapy for Bcl-2 and MUM-negative aggressive primary cutaneous B-cell non-Hodgkin's lymphoma. Arch. Dermatol. Res. 301: 689-692.

CHROMOSOMAL LOCATION

Genetic locus: TRAPPC1 (human) mapping to 17p13.1.

PRODUCT

BET5 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BET5 shRNA Plasmid (h): sc-93679-SH and BET5 shRNA (h) Lentiviral Particles: sc-93679-V as alternate gene silencing products.

For independent verification of BET5 (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-93679A and sc-93679B.

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

BET5 siRNA (h) is recommended for the inhibition of BET5 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.

GENE EXPRESSION MONITORING

BET5 (B-4): sc-377024 is recommended as a control antibody for monitoring of BET5 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 reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor BET5 gene expression knockdown using RT-PCR Primer: BET5 (h)-PR: sc-93679-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.