



BET3 siRNA (m): sc-141688

BACKGROUND

BET3, also known as TRAPPC3 (trafficking protein particle complex subunit 3), is a 180 amino acid protein that localizes to Golgi apparatus and endoplasmic reticulum. BET3 is a component of the multisubunit TRAPP complex, which is involved in tethering transport vesicles to *cis*-Golgi membrane. BET3 may play a role in vesicular transport from endoplasmic reticulum to Golgi and is also essential for VTC biogenesis. BET3 assumes an α/β -plait topology constructed by a twisted, antiparallel, four-stranded β sheet on one side, with five α helices forming the other side of the structural motif. BET3 forms a dimer around the crystallographic two-fold axis. Exhibiting strong self-palmitoylating activity BET3 consists of a hydrophobic pocket within the core of the α -helical face, which contains an internal palmitate molecule covalently attached through a thioester linkage to the conserved cys68.

REFERENCES

1. Sacher, M., et al. 1998. TRAPP, a highly conserved novel complex on the *cis*-Golgi that mediates vesicle docking and fusion. *EMBO J.* 17: 2494-2503.
2. Barrowman, J., et al. 2000. TRAPP stably associates with the Golgi and is required for vesicle docking. *EMBO J.* 19: 862-869.
3. Turnbull, A.P., et al. 2005. Structure of palmitoylated BET3: insights into TRAPP complex assembly and membrane localization. *EMBO J.* 24: 875-884.
4. Loh, E., et al. 2005. Mammalian BET3 functions as a cytosolic factor participating in transport from the ER to the Golgi apparatus. *J. Cell Sci.* 118: 1209-1222.
5. Kim, Y.G., et al. 2005. Crystal structure of BET3 reveals a novel mechanism for Golgi localization of tethering factor TRAPP. *Nat. Struct. Mol. Biol.* 12: 38-45.
6. Kim, M.S., et al. 2005. Biochemical and crystallographic studies reveal a specific interaction between TRAPP subunits Trs33p and BET3p. *Traffic* 6: 1183-1195.
7. Kümmel, D., et al. 2006. Structure of the BET3-Tpc6B core of TRAPP: two Tpc6 paralogs form trimeric complexes with BET3 and Mum2. *J. Mol. Biol.* 361: 22-32.

CHROMOSOMAL LOCATION

Genetic locus: *Trappc3* (mouse) mapping to 4 D2.2.

PRODUCT

BET3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BET3 shRNA Plasmid (m): sc-141688-SH and BET3 shRNA (m) Lentiviral Particles: sc-141688-V as alternate gene silencing products.

For independent verification of BET3 (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-141688A, sc-141688B and sc-141688C.

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

BET3 siRNA (m) is recommended for the inhibition of BET3 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 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 BET3 gene expression knockdown using RT-PCR Primer: BET3 (m)-PR: sc-141688-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.

PROTOCOLS

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