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# Bet1 shRNA (h) Lentiviral Particles: sc-45900-V

## BACKGROUND

Bet1 (Bet1p homologue, rbet1) is a Type IV membrane protein. It is required for vesicular transport from the ER to the Golgi complex. Bet1 forms a complex with SNARE (soluble N-ethylmaleimide-sensitive factor attachment protein receptor), and functions in membrane fusion between ER-derived vesicles and vesicular tubular clusters (VTCs) or by homotypically fusing ER-derived vesicles. Bet1 is predominantly associated with vesicular spotty structures that concentrate in the peri-Golgi region but are also present throughout the cytoplasm.

## REFERENCES

1. Newman, A.P., et al. 1990. BET1, BOS1, and SEC22 are members of a group of interacting yeast genes required for transport from the endoplasmic reticulum to the Golgi complex. *Mol. Cell. Biol.* 10: 3405-3414.
2. Hay, J.C., et al. 1996. Mammalian vesicle trafficking proteins of the endoplasmic reticulum and Golgi apparatus. *J. Biol. Chem.* 271: 5671-5679.
3. Xu, D., et al. 2000. Subunit structure of a mammalian ER/Golgi SNARE complex. *J. Biol. Chem.* 275: 39631-39639.
4. Zhang, T., et al. 2001. Ykt6 forms a SNARE complex with syntaxin 5, GS28, and Bet1 and participates in a late stage in endoplasmic reticulum-Golgi transport. *J. Biol. Chem.* 276: 27480-27487.
5. Joglekar, A.P., et al. 2003. The SNARE motif contributes to rbet1 intracellular targeting and dynamics independently of SNARE interactions. *J. Biol. Chem.* 278: 14121-14133.
6. Miller, E.A., et al. 2003. Multiple cargo binding sites on the COPII subunit Sec24p ensure capture of diverse membrane proteins into transport vesicles. *Cell* 114: 497-509.

## CHROMOSOMAL LOCATION

Genetic locus: BET1 (human) mapping to 7q21.3.

## PRODUCT

Bet1 shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200  $\mu$ l frozen stock containing  $1.0 \times 10^6$  infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see Bet1 siRNA (h): sc-45900 and Bet1 shRNA Plasmid (h): sc-45900-SH as alternate gene silencing products.

## STORAGE

Store lentiviral particles at  $-80^{\circ}$  C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at  $4^{\circ}$  C for up to one week. Avoid repeated freeze thaw cycles.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Bet1 shRNA (h) Lentiviral Particles is recommended for the inhibition of Bet1 expression in human cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200  $\mu$ l frozen viral stock containing  $1.0 \times 10^6$  infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

## GENE EXPRESSION MONITORING

Bet1 (17): sc-136390 is recommended as a control antibody for monitoring of Bet1 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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Bet1 gene expression knockdown using RT-PCR Primer: Bet1 (h)-PR: sc-45900-PR (20  $\mu$ l). Annealing temperature for the primers should be  $55-60^{\circ}$  C and the extension temperature should be  $68-72^{\circ}$  C.

## BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

## RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.