SANTA CRUZ BIOTECHNOLOGY, INC.

golgin 45 siRNA (h): sc-88282

BACKGROUND

Golgin 45, also known as JEM-1 or Basic Leucine Zipper Nuclear Factor 1, is a 400 amino acid protein that localizes to the lumen of the Golgi apparatus. The primary function of golgin 45 is to maintain normal Golgi structure and to facilitate protein transport from the endoplasmic reticulum to the cell surface. The latter process is regulated primarily through the interaction of golgin 45 and GRASP55, which, together, form a Rab 2 effector complex. Excluding formation of a Rab 2 complex, golgin 45 does not interact with any other Golgi Rab proteins. Golgin 45 is expressed as two isoforms, one of which localizes to the nucleus and is thought to function as a transcription factor.

REFERENCES

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2. Tong, J.H., Fant, X., Duprez, E., Benoit, G., Uphoff, C.C., Drexler, H.G., Pla, J.C., Lofvenberg, E. and Lanotte, M. 1998. Expression patterns of the JEM-1 gene in normal and tumor cells: ubiquity contrasting with a faint, but retinoid-induced, mRNA expression in promyelocytic NB4 cells. Leukemia 12: 1733-1740.
3. Tong, J.H., Duprez, E. and Lanotte, M. 1999. JEM-1, a novel nuclear cofactor: localisation and functional interaction with AP-1. Leukemia 13: 1982-1992.
4. Tong, J.H., Fant, X., Benoit, G., Chen, S.J., Chen, Z. and Lanotte, M. 2000. Genomic organization of the JEM-1 (BLZF1) gene on human chromosome 1q24: molecular cloning and analysis of its promoter region. Genomics 69: 380-390.
5. Short, B., Preisinger, C., Körner, R., Kopajtich, R., Byron, O. and Barr, F.A. 2001. A GRASP55-rRab2 effector complex linking Golgi structure to membrane traffic. J. Cell Biol. 155: 877-883.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608692. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim

CHROMOSOMAL LOCATION

Genetic locus: BLZF1 (human) mapping to 1q24.2.

PRODUCT

golgin 45 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 golgin 45 shRNA Plasmid (h): sc-88282-SH and golgin 45 shRNA (h) Lentiviral Particles: sc-88282-V as alternate gene silencing products.

For independent verification of golgin 45 (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-88282A, sc-88282B and sc-88282C.

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

golgin 45 siRNA (h) is recommended for the inhibition of golgin 45 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

golgin 45 (E-3): sc-515193 is recommended as a control antibody for monitoring of golgin 45 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 golgin 45 gene expression knockdown using RT-PCR Primer: golgin 45 (h)-PR: sc-88282-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.

PROTOCOLS

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