



GRIF-1 siRNA (m): sc-60764

BACKGROUND

GRIF-1 (γ -aminobutyric acid type A (GABA_A) receptor interacting factor-1, also known as: OGT-interacting protein, OIP106), is a kinesin-binding, trafficking protein which is a member of a recently identified coiled-coil family of proteins. It has been proposed that GRIF-1 is a kinesin associated protein that functions as an adaptor in the anterograde trafficking of organelles to synapses. Studies have found that the KIF5C binding domain of GRIF-1, GRIF-1 (124-283), associates with the KIF5C non-motor domain of kinesin. GRIF-1a protein is also only expressed in excitable tissues (i.e. brain, heart, and skeletal muscle). In brain tissue, it was seen that anti-GRIF-1-(8-633) antibodies specifically co-immunoprecipitated two kinesin-immunoreactive species, whereas in the heart, only one kinesin-immunoreactive species was immunoprecipitated.

REFERENCES

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2. Beck, M., et al. 2002. Identification, molecular cloning, and characterization of a novel GABA_A receptor-associated protein, GRIF-1. *J. Biol. Chem.* 277: 30079-30090.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608112. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Brickley, K., et al. 2005. GRIF-1 and OIP106, association *in vivo* and *in vitro* with kinesin. *J. Biol. Chem.* 280: 14723-14732.
5. Pozo, K. and Stephenson, F.A. 2006. GRIF-1-kinesin-1 interactions: a confocal microscopy study. *Biochem. Soc. Trans.* 34: 48-50.
6. Smith, M.J., et al. 2006. Mapping the GRIF-1 binding domain of the kinesin, KIF5C, substantiates a role for GRIF-1 as an adaptor protein in the anterograde trafficking of cargoes. *J. Biol. Chem.* 281: 27216-27228.

CHROMOSOMAL LOCATION

Genetic locus: Trak2 (mouse) mapping to 1 C1.3.

PRODUCT

GRIF-1 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 GRIF-1 shRNA Plasmid (m): sc-60764-SH and GRIF-1 shRNA (m) Lentiviral Particles: sc-60764-V as alternate gene silencing products.

For independent verification of GRIF-1 (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-60764A, sc-60764B and sc-60764C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

GRIF-1 siRNA (m) is recommended for the inhibition of GRIF-1 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 GRIF-1 gene expression knockdown using RT-PCR Primer: GRIF-1 (m)-PR: sc-60764-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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