SANTA CRUZ BIOTECHNOLOGY, INC.

Endophilin B1 siRNA (h): sc-63282

BACKGROUND

The endophilins comprise a family of proteins that associate with Amphiphysin, Synaptojanin and Dynamin and are implicated in presynaptic vesicle trafficking at nerve terminals. The expression patterns of the endophilins are consistent with their cellular functions at the neuronal synapse. Endophilin B1 is a member of the B subgroup of the endophilin family that is required for maintenance of mitochondrial morphology and for the regulation of the outer mitochondrial membrane dynamics. The N-terminal domain of Endophilin B1 shares highest similarity with the lipid-binding and -modifying (LBM) domain of class A endophilins. The Endophilin B1 gene encodes at least three splice variants: Endophilin B1a, which shows a widespread tissue distribution, and Endophilin B1b and B1c, which appear to be brain-specific.

REFERENCES

1. Pierrat, B., et al. 2001. SH3GLB, a new Endophilin-related protein family featuring an SH3 domain. Genomics 71: 222-234.
2. Modregger, J., et al. 2003. Characterization of Endophilin B1b, a brain-specific membrane-associated lysophosphatidic acid acyl transferase with properties distinct from Endophilin A1. J. Biol. Chem. 278: 4160-4167.
3. Wang, M.Q., et al. 2003. Endophilins interact with Moloney murine leukemia virus Gag and modulate virion production. J. Biol. 3: 4.
4. Karbowski, M., et al. 2004. Endophilin B1 is required for the maintenance of mitochondrial morphology. J. Cell Biol. 166: 1027-1039.
5. Takahashi, Y., et al. 2005. Loss of Bif-1 suppresses Bax/Bak conformational change and mitochondrial apoptosis. Mol. Cell. Biol. 25: 9369-9382.
6. Aramaki, Y., et al. 2005. Direct interaction between metastasis-associated protein 1 and Endophilin 3. FEBS Lett. 579: 3731-3736.

CHROMOSOMAL LOCATION

Genetic locus: SH3GLB1 (human) mapping to 1p22.3.

PRODUCT

Endophilin B1 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 Endophilin B1 shRNA Plasmid (h): sc-63282-SH and Endophilin B1 shRNA (h) Lentiviral Particles: sc-63282-V as alternate gene silencing products.

For independent verification of Endophilin B1 (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-63282A, sc-63282B and sc-63282C.

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.

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

Endophilin B1 siRNA (h) is recommended for the inhibition of Endophilin B1 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

Endophilin B1 (G-6): sc-374146 is recommended as a control antibody for monitoring of Endophilin B1 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 Endophilin B1 gene expression knockdown using RT-PCR Primer: Endophilin B1 (h)-PR: sc-63282-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.