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NAALADL1 siRNA (m): sc-149792

BACKGROUND

Hydrolysis of the neuropeptide N-acetyl-L-aspartyl-L-glutamate (NAAG) by N-acetylated α -linked acidic dipeptidase (NAALADase) to release glutamate may be important in a number of neurodegenerative disorders in which excitotoxic mechanisms are implicated. NAALADL1 (N-acetylated α -linked acidic dipeptidase-like 1), also known as I100 or NAALADASEL, is a 740 amino acid single-pass type II membrane protein that localizes to the apical cell membrane. Belonging to the peptidase M28 family and the M28B subfamily, NAALADL1 is mainly expressed in the distal small intestine but is also expressed in spleen and testis. NAALADL1 is considered a novel ileal brush border membrane protein, and is thought to have dipeptidyl-peptidase IV type activity. NAALADL1 exists as eight alternatively spliced isoforms and is encoded by a gene located on human chromosome 11q13.1.

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CHROMOSOMAL LOCATION

Genetic locus: Naaladl1 (mouse) mapping to 19 A.

PROTOCOLS

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

PRODUCT

NAALADL1 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 NAALADL1 shRNA Plasmid (m): sc-149792-SH and NAALADL1 shRNA (m) Lentiviral Particles: sc-149792-V as alternate gene silencing products.

For independent verification of NAALADL1 (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-149792A, sc-149792B and sc-149792C.

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

NAALADL1 siRNA (m) is recommended for the inhibition of NAALADL1 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 NAALADL1 gene expression knockdown using RT-PCR Primer: NAALADL1 (m)-PR: sc-149792-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.