SANTA CRUZ BIOTECHNOLOGY, INC.

GBX1 siRNA (h): sc-38663

BACKGROUND

The homeobox is DNA sequence that is approximately 180 base pairs long that is involved in all steps of the developmental regulation of animals, fungi and plants, from embryogenesis to cell differentiation. The homeobox encodes a protein domain of about 60 amino acids, called the homeodomain, that can bind to DNA. The gastrulation brain homeobox 1 (GBX1) gene, along with another homeobox gene (EN2), maps to chromosome 7q36.1, and is expressed in septal and pallidal areas and in the basal forebrain cholinergic system, an area implicated in Alzheimer's disease. The GBX1 gene encodes the GBX1 protein, which localizes to the nucleus and contains one homeobox DNA-binding domain.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GBX1 (human) mapping to 7q36.1.

PRODUCT

GBX1 siRNA (h) is a pool of 2 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 GBX1 shRNA Plasmid (h): sc-38663-SH and GBX1 shRNA (h) Lentiviral Particles: sc-38663-V as alternate gene silencing products.

For independent verification of GBX1 (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-38663A and sc-38663B.

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 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

GBX1 siRNA (h) is recommended for the inhibition of GBX1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor GBX1 gene expression knockdown using RT-PCR Primer: GBX1 (h)-PR: sc-38663-PR (20 µl). 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.