SANTA CRUZ BIOTECHNOLOGY, INC.

# Brn-1 siRNA (h): sc-29835

## BACKGROUND

The Brn family of transcription factors are found in a highly restricted subset of neurons and are critical to the early embryonic development of the central nervous system. Brn-1 and Brn-2 are class III POU domain proteins. Expressed during the development of the forebrain and co-expressed in most layer II-V cortical neurons, Brn-1 and Brn-2 appear to critically control the initiation of radial migration of cortical neurons. Brn-2 is thought to be involved in smooth muscle cell development and differentiation. Brn-3 is a class IV POU domain protein. Three Brn-3 proteins have been described and are designated Brn-3a, Brn-3b and Brn-3c. Brn-3a has two functional transactivating domains, one at the amino terminus and one at the carboxy terminus. While Brn-3a and Brn-3c stimulate transcription, Brn-3b generally functions as a transcriptional repressor. However, Brn-3b, but not Brn-3a, has been shown to regulate the expression of the acetylcholine receptor.

## REFERENCES


1. Atanasoski, S., et al. 1995. Isolation of the human genomic brain-2/N-Oct 3 gene (POUF3) and assignment tochromosome 6q16. Genomics 26: 272-280.
2. Fedtsova, N.G., et al. 1995. Brn-3.0 expression identifies early post-mitotic CNS neurons and sensory neural precursors. Mech. Dev. 53: 291-304.
3. Schonemann, M.D., et al. 1995. Development and survival of the endocrine hypothalamus and posterior pituitary gland requires the neuronal POU domain factor Brn-2. Genes Dev. 9: 3122-3135.
4. Erkman, L., et al. 1996. Role of transcription factors Brn-3.1 and Brn-3.2 in auditory and visual system development. Nature 381: 603-606.
5. Gan, L., et al. 1996. POU domain factor Brn-3b is required for the development of a large set of retinal ganglion cells. Proc. Natl. Acad. Sci. USA 93: 3920-3925.


## CHROMOSOMAL LOCATION

Genetic locus: POU3F3 (human) mapping to 2q12.1.

## PRODUCT

Brn-1 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 Brn-1 shRNA Plasmid (h): sc-29835-SH and Brn-1 shRNA (h) Lentiviral Particles: sc-29835-V as alternate gene silencing products.

For independent verification of Brn-1 (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-29835A, sc-29835B and sc-29835C.

## 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

Brn-1 siRNA (h) is recommended for the inhibition of Brn-1 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 Brn-1 gene expression knockdown using RT-PCR Primer: Brn-1 (h)-PR: sc-29835-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.