

Wnt-8b siRNA (h): sc-41118

BACKGROUND

The Wnt genes belong to a family of protooncogenes with at least 13 known members that are expressed in species ranging from *Drosophila* to man. The name Wnt denotes the relationship of this family to the *Drosophila* segment polarity gene "wingless" and to its vertebrate ortholog, Int-1, a mouse protooncogene. Transcription of Wnt family genes appears to be developmentally regulated in a precise temporal and spatial manner. The Wnt genes encode cysteine-rich putative glycoproteins, which have features typical of secreted growth factors. Wnt-8b was named on the basis of the very high sequence similarity (approximately 90% identity) of the inferred protein to those encoded by the *Xenopus* and zebrafish Wnt-8b genes. The human and mouse expression patterns appear to be identical and are restricted to the developing brain, with the great majority of expression being found in the developing forebrain. Expression in the developing hippocampus may suggest a role for Wnt-8b in patterning of this region. The gene which encodes Wnt-8b maps to human chromosome 10q24.31.

REFERENCES

1. Gavin, B.J., et al. 1990. Expression of multiple novel Wnt-1/Int-1-related genes during fetal and adult mouse development. *Genes Dev.* 4: 2319-2332.
2. Lako, M., et al. 1996. Isolation and characterization of Wnt-8b, a novel human Wnt gene that maps to 10q24. *Genomics* 35: 386-388.
3. Lako, M., et al. 1998. A novel mammalian Wnt gene, Wnt-8b, shows brain-restricted expression in early development, with sharply delimited expression boundaries in the developing forebrain. *Hum. Mol. Genet.* 7: 813-822.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 601396. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: WNT8B (human) mapping to 10q24.31.

PRODUCT

Wnt-8b 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Wnt-8b shRNA Plasmid (h): sc-41118-SH and Wnt-8b shRNA (h) Lentiviral Particles: sc-41118-V as alternate gene silencing products.

For independent verification of Wnt-8b (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-41118A, sc-41118B and sc-41118C.

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 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

Wnt-8b siRNA (h) is recommended for the inhibition of Wnt-8b 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 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 Wnt-8b gene expression knockdown using RT-PCR Primer: Wnt-8b (h)-PR: sc-41118-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.