

Tenascin-R siRNA (h): sc-36639

BACKGROUND

The Tenascin family of extracellular matrix proteins includes Tenascin (also designated cytotactin or Tenascin-C), Tenascin-R (also designated Restrictin or Janusin) and Tenascin-X. Tenascin proteins function as substrate-adhesion molecules (SAMs) and are involved in regulating numerous developmental processes, such as morphogenetic cell migration and organogenesis. The Tenascin family proteins arise from various splicing events in the region of coding for FNIII repeats. Tenascin and Tenascin-X are expressed in several tissues during embryogenesis, and in adult tissues undergoing active remodeling such as healing wounds and tumors. Tenascin-R (TN-R) is expressed on the surface of neurons and glial cells.

REFERENCES

1. Jung, M., et al. 1993. Astrocytes and neurons regulate the expression of the neural recognition molecule Janusin by cultured oligodendrocytes. *Glia* 9: 163-175.
2. Schachner, M., et al. 1994. The perplexing multifunctionality of Janusin, a tenascin-related molecule. *Perspect. Dev. Neurobiol.* 2: 33-41.
3. Chiquet-Ehrismann, R. 1995. Tenascins, a growing family of extracellular matrix proteins. *Experientia* 51: 853-862.
4. Eleftheriou, F., et al. 1997. Characterization of the bovine Tenascin-X. *J. Biol. Chem.* 272: 22866-22874.
5. Faissner, A. 1997. The Tenascin gene family in axon growth and guidance. *Cell Tissue Res.* 290: 331-341.
6. Srinivasan, J., et al. 1998. Interaction of voltage-gated sodium channels with the extracellular matrix molecules Tenascin-C and Tenascin-R. *Proc. Natl. Acad. Sci. USA* 95: 15753-15757.
7. Lundell, A., et al. 2004. Structural basis for interactions between tenascins and lectican C-type lectin domains: evidence for a crosslinking role for tenascins. *Structure* 12: 1495-1506.
8. Liao, H., et al. 2005. Tenascin-R plays a role in neuroprotection via its distinct domains that coordinate to modulate the microglia function. *J. Biol. Chem.* 280: 8316-8323.

CHROMOSOMAL LOCATION

Genetic locus: TNR (human) mapping to 1q25.1.

PRODUCT

Tenascin-R 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 Tenascin-R shRNA Plasmid (h): sc-36639-SH and Tenascin-R shRNA (h) Lentiviral Particles: sc-36639-V as alternate gene silencing products.

For independent verification of Tenascin-R (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-36639A, sc-36639B and sc-36639C.

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

Tenascin-R siRNA (h) is recommended for the inhibition of Tenascin-R 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.

GENE EXPRESSION MONITORING

Tenascin-R (A-2): sc-376341 is recommended as a control antibody for monitoring of Tenascin-R 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 Tenascin-R gene expression knockdown using RT-PCR Primer: Tenascin-R (h)-PR: sc-36639-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.

PROTOCOLS

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