



galectin-6 siRNA (m): sc-44536

BACKGROUND

Galectins are a family of soluble β -galactoside-binding animal lectins that modulate cell-to-cell adhesion and cell-to-extracellular matrix (ECM) interactions and play a role in tumor progression, pre-mRNA splicing and apoptosis. Mouse gastrointestinal tract specifically expresses two closely related galectins, galectin-4 and galectin-6, each with two carbohydrate recognition domains in the same peptide. Galectin-6 lacks a 24-amino acid stretch in the link region between the two carbohydrate recognition domains that is present in galectin-4. Expression of both galectin-4 and -6 is confined to the epithelial cells of the embryonic and adult gastrointestinal tract. Galectin-6 is expressed at about equal levels throughout the gastrointestinal tract.

REFERENCES

1. Couraud, P.O., et al. 1989. Molecular cloning, characterization and expression of a human 14 kDa lectin. *J. Biol. Chem.* 264: 1310-1316.
2. Chiu, M.L., et al. 1994. An adherens junction protein is a member of the family of lactose-binding lectins. *J. Biol. Chem.* 269: 31770-31776.
3. Rechreche, H., et al. 1997. Cloning and expression of the mRNA of human galectin-4, an S-type lectin downregulated in colorectal cancer. *Eur. J. Biochem.* 248: 225-230.
4. Gitt M.A., et al. 1998. Galectin-4 and galectin-6 are two closely related lectins expressed in mouse gastrointestinal tract. *J. Biol. Chem.* 273: 2954-2960.
5. Gitt M.A., et al. 1998. Sequence, structure and chromosomal mapping of the mouse *Lgals6* gene, encoding galectin-6. *J. Biol. Chem.* 273: 2961-2970.
6. Kondoh, N., et al. 1999. Identification and characterization of genes associated with human hepatocellular carcinogenesis. *Cancer Res.* 59: 4990-4996.

CHROMOSOMAL LOCATION

Genetic locus: *Lgals6* (mouse) mapping to 7 A3.

PRODUCT

galectin-6 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 galectin-6 shRNA Plasmid (m): sc-44536-SH and galectin-6 shRNA (m) Lentiviral Particles: sc-44536-V as alternate gene silencing products.

For independent verification of galectin-6 (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-44536A, sc-44536B and sc-44536C.

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 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

galectin-6 siRNA (m) is recommended for the inhibition of galectin-6 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 galectin-6 gene expression knockdown using RT-PCR Primer: galectin-6 (m)-PR: sc-44536-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.