SANTA CRUZ BIOTECHNOLOGY, INC.

Gros1 siRNA (h): sc-37433

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

At the epithelial/mesenchymal interface of most tissues lies the basement membrane. These thin sheets of highly specialized, extracellular matrices vary in composition in a tissue-specific manner and during development and repair. Growth suppressor Gros1, also designated leprecan, is a leucine proline-enriched basement membrane-associated proteoglycan. The gene encodes a transcript that is alternatively spliced to form two proteins, Gros1S and Gros1L. Gros1S is predominantly found in placenta, ovary and testis. The rat homolog of Gros1/leprecan is secreted by parietal yolk sac tumor (L-2) cells and is thought to be involved in the generation of substrates for protein glycosylation.

REFERENCES

1. Wassenhove-McCarthy, D.J. and McCarthy, K.J. 1999. Molecular characterization of a novel basement membrane-associated proteoglycan, leprecan. J. Biol. Chem. 274: 25004-25017.
2. Erickson, A.C. and Couchman, J.R. 2000. Still more complexity in mammalian basement membranes. J. Histochem. Cytochem. 48: 1291-1306.
3. Kaul, S.C., et al. 2000. Gros1, a potential growth suppressor on chromosome 1: its identity to basement membrane-associated proteoglycan, leprecan. Oncogene 19: 3576-3583.
4. Hotta, K., et al. 2000. Characterization of brachyury-downstream notochord genes in the *Ciona intestinalis* embryo. Dev. Biol. 224: 69-80.
5. Aravind, L. and Koonin, E.V. 2001. The DNA-repair protein ALKB, EGL-9, and leprecan define new families of 2-oxoglutarate- and iron-dependent dioxygenases. Genome Biol. 2: RESEARCH0007.

CHROMOSOMAL LOCATION

Genetic locus: P3H1 (human) mapping to 1p34.2.

PRODUCT

Gros1 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 Gros1 shRNA Plasmid (h): sc-37433-SH and Gros1 shRNA (h) Lentiviral Particles: sc-37433-V as alternate gene silencing products.

For independent verification of Gros1 (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-37433A, sc-37433B and sc-37433C.

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

Gros1 siRNA (h) is recommended for the inhibition of Gros1 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.

GENE EXPRESSION MONITORING

Gros1 (F-5): sc-393003 is recommended as a control antibody for monitoring of Gros1 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 Gros1 gene expression knockdown using RT-PCR Primer: Gros1 (h)-PR: sc-37433-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Milton, N.G., et al. 2012. Kisspeptin prevention of Amyloid-β peptide neurotoxicity *in vitro*. ACS Chem. Neurosci. 3: 706-719.
2. Kim, T.H. and Cho, S.G. 2017. Melatonin-induced KiSS1 expression inhibits triple-negative breast cancer cell invasiveness. Oncol. Lett. 14: 2511-2516.

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.