

GSDML siRNA (h): sc-93597

BACKGROUND

GSDML (gasdermin-like), also known as GSDMB, PP4052 or PR02521, is a member of the GSDMDC (gasdermin-domain containing) family of proteins. Members of the GSDMDC family are involved in a wide variety of cellular processes, including cell-cycle control, extracellular matrix production, differentiation and apoptosis, and have been associated with the development and progression of cancer. GSDML is a widely expressed protein found in both cancerous and non-cancerous tissues localizing to the cytoplasm and in secretory vesicles. The gene encoding GSDML is thought to have been generated by a duplication event of the GSDM1 gene which encodes gasdermin. In addition, various isoforms exist for GSDML.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611221. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Katoh, M., et al. 2004. Evolutionary recombination hotspot around GSDML-GSDM locus is closely linked to the oncogenic recombination hotspot around the PPP1R1B-ERBB2-GRB7 amplicon. *Int. J. Oncol.* 24: 757-763.
3. Katoh, M., et al. 2004. Identification and characterization of human DFNA5L, mouse Dfna5l, and rat Dfna5l genes in silico. *Int. J. Oncol.* 25: 765-770.
4. Sin, H.S., et al. 2006. Transcriptional control of the HERV-H LTR element of the GSDML gene in human tissues and cancer cells. *Arch. Virol.* 151: 1985-1994.
5. Sun, Q., et al. 2006. Progress of researches on gene function of GSDMDC family. *Yi Chuan* 28: 596-600.
6. Nguyen, S.T., et al. 2007. Identification of a predictive gene expression signature of cervical lymph node metastasis in oral squamous cell carcinoma. *Cancer Sci.* 98: 740-746.
7. Tamura, M., et al. 2007. Members of a novel gene family, Gsdm, are expressed exclusively in the epithelium of the skin and gastrointestinal tract in a highly tissue-specific manner. *Genomics* 89: 618-629.

CHROMOSOMAL LOCATION

Genetic locus: GSDMB (human) mapping to 17q12.

PRODUCT

GSDML 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 GSDML shRNA Plasmid (h): sc-93597-SH and GSDML shRNA (h) Lentiviral Particles: sc-93597-V as alternate gene silencing products.

For independent verification of GSDML (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-93597A, sc-93597B and sc-93597C.

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

GSDML siRNA (h) is recommended for the inhibition of GSDML 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

GSDML (3D8): sc-101239 is recommended as a control antibody for monitoring of GSDML 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 GSDML gene expression knockdown using RT-PCR Primer: GSDML (h)-PR: sc-93597-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.