

# Produktinformation



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#### SANTA CRUZ BIOTECHNOLOGY, INC.

## Mesothelin siRNA (m) Lentiviral Particles: sc-45387-V



BACKGROUND

Mesothelin is a glycosylphosphatidylinositol-linked cell-surface molecule expressed in the mesothelial lining of the body cavities and in many tumor cells. Mesothelin is a tumor antigen on the surface of human ovarian cancers and mesotheliomas. Mesothelin immunoreactivity is high in cancers of the ovary (serous papillary, endometrioid and undifferentiated) and pancreas, with less frequent staining seen in adenocarcinomas of the endometrium, lung and stomach/esophagus. In adult mouse tissues the Mesothelin transcript is present in lung, heart, spleen, liver, kidney and testis.

#### REFERENCES

- Chang, K., et al. 1996. Molecular cloning of Mesothelin, a differentiation antigen present on mesothelium, mesotheliomas and ovarian cancers. Proc. Natl. Acad. Sci. USA 93: 136-140.
- 2. Chowdhury, P.S., et al. 1997. Isolation of anti-Mesothelin antibodies from a phage display library. Mol. Immunol. 34: 9-20.
- Hassan, R., et al. 1999. 111Indium-labeled monoclonal antibody K1: biodistribution study in nude mice bearing a human carcinoma xenograft expressing Mesothelin. Int. J. Cancer 80: 559-563.
- Bera, T.K., et al. 2000. Mesothelin is not required for normal mouse development or reproduction. Mol. Cell. Biol. 20: 2902-2906.
- Frierson, H.F., Jr., et al. 2003. Large-scale molecular and tissue microarray analysis of Mesothelin expression in common human carcinomas. Hum. Pathol. 34: 605-609.
- Rump, A., et al. 2004. Binding of ovarian cancer antigen CA125/MUC16 to Mesothelin mediates cell adhesion. J. Biol. Chem. 279: 9190-9198.

#### CHROMOSOMAL LOCATION

Genetic locus: MsIn (mouse) mapping to 17 A3.3.

#### PRODUCT

Mesothelin siRNA (m) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing  $1.0 \times 10^6$  infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see Mesothelin siRNA (m): sc-45387 and Mesothelin siRNA (m): sc-45387-SH as alternate gene silencing products.

#### **STORAGE**

Store lentiviral particles at  $-80^{\circ}$  C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at  $4^{\circ}$  C for up to one week. Avoid repeated freeze thaw cycles.

#### PROTOCOLS

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

#### APPLICATIONS

Mesothelin siRNA (m) Lentiviral Particles is recommended for the inhibition of Mesothelin expression in mouse cells.

#### SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200  $\mu$ l frozen viral stock containing 1.0 x 10<sup>6</sup> infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

#### GENE EXPRESSION MONITORING

Mesothelin (G-4): sc-166125 is recommended as a control antibody for monitoring of Mesothelin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluores-cence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker<sup>™</sup> compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

#### **RT-PCR REAGENTS**

Semi-quantitative RT-PCR may be performed to monitor Mesothelin gene expression knockdown using RT-PCR Primer: Mesothelin siRNA (m)-PR: sc-45387-PR (20  $\mu$ l, 428 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

#### BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

#### **RESEARCH USE**

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.