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## Produktinformation



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# HoxB13 shRNA (m) Lentiviral Particles: sc-45668-V

## BACKGROUND

HOX genes play a fundamental role in the development of the vertebrate central nervous system, heart, axial skeleton, limbs, gut, urogenital tract and external genitalia. HoxB13 is a sequence-specific transcription factor which is part of a developmental regulatory system that provides cells with specific positional identities on the anterior-posterior axis. HoxB13 is highly expressed in the prostate gland from the embryonic stages to adulthood and is required for normal differentiation and secretory function of that organ. HoxB13 is primarily expressed in the nucleus, but is cytoplasmic throughout fetal skin development and some hyperproliferative skin conditions.

## REFERENCES

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2. Zeltser, L., et al. 1996. HoxB13: a new Hox gene in a distant region of the HOXB cluster maintains colinearity. Development 122: 2475-2484.
3. Stelnicki, E.J., et al. 1998. Modulation of the human homeobox genes PRX2 and HOXB13 in scarless fetal wounds. J. Invest. Dermatol. 111: 57-63.
4. Economides, K.D., et al. 2003. HoxB13 is required for normal differentiation and secretory function of the ventral prostate. Development 130: 2061-2069.
5. Komuves, L.G., et al. 2003. HoxB13 homeodomain protein is cytoplasmic throughout fetal skin development. Dev. Dyn. 227: 192-202.
6. Jung, C., et al. 2004. HoxB13 homeodomain protein suppresses the growth of prostate cancer cells by the negative regulation of T cell factor 4. Cancer Res. 64: 3046-3051.
7. Jung, C., et al. 2004. HOXB13 induces growth suppression of prostate cancer cells as a repressor of hormone-activated androgen receptor signaling. Cancer Res. 64: 9185-9192.
8. Dhanasekaran, S.M., et al. 2005. Molecular profiling of human prostate tissues: insights into gene expression patterns of prostate development during puberty. FASEB J. 19: 243-245.

## CHROMOSOMAL LOCATION

Genetic locus: Hoxb13 (mouse) mapping to 11 D .

## PRODUCT

HoxB13 shRNA (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  $\mu$ l 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 HoxB13 siRNA (m): sc-45668 and HoxB13 shRNA Plasmid (m): sc-45668-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.

## APPLICATIONS

HoxB13 shRNA (m) Lentiviral Particles is recommended for the inhibition of HoxB13 expression in mouse cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200  $\mu$ l frozen viral stock containing  $1.0 \times 10^6$  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

HoxB13 (H-80): sc-66923 is recommended as a control antibody for monitoring of HoxB13 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 (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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 HoxB13 gene expression knockdown using RT-PCR Primer: HoxB13 (m)-PR: sc-45668-PR (20  $\mu$ l). Annealing temperature for the primers should be  $55-60^{\circ}$  C and the extension temperature should be  $68-72^{\circ}$  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.

## PROTOCOLS

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