

# ZBTB20 shRNA (m) Lentiviral Particles: sc-155438-V

## BACKGROUND

Zinc finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. ZBTB20 (zinc finger and BTB domain containing 20), also known as HOF, DPZF, ODA-8S or ZNF288, is a 741 amino acid protein that localizes to the nucleus and contains one BTB (POZ) domain and five C<sub>2</sub>H<sub>2</sub>-type zinc fingers. Expressed in thymus, spleen, lymph node and fetal liver, ZBTB20 exists as either a monomer or a homodimer that is thought to function as a transcription factor, playing a role in hematopoiesis, oncogenesis and immune responses. Multiple isoforms of ZBTB20 exist due to alternative splicing events.

## REFERENCES

1. Harboe, T.L., Tümer, Z., Hansen, C., Jensen, N.A. and Tommerup, N. 2000. Assignment of the human zinc finger gene, ZNF288, to chromosome 3 band q13.2 by radiation hybrid mapping and fluorescence *in situ* hybridisation. *Cytogenet. Cell Genet.* 89: 156-157.
2. Zhang, W., Mi, J., Li, N., Sui, L., Wan, T., Zhang, J., Chen, T. and Cao, X. 2001. Identification and characterization of DPZF, a novel human BTB/POZ zinc finger protein sharing homology to BCL-6. *Biochem. Biophys. Res. Commun.* 282: 1067-1073.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606025. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Mitchelmore, C., Kjaerulff, K.M., Pedersen, H.C., Nielsen, J.V., Rasmussen, T.E., Fisker, M.F., Finsen, B., Pedersen, K.M. and Jensen, N.A. 2002. Characterization of two novel nuclear BTB/POZ domain zinc finger isoforms. Association with differentiation of hippocampal neurons, cerebellar granule cells, and macroglia. *J. Biol. Chem.* 277: 7598-7609.
5. Nielsen, J.V., Nielsen, F.H., Ismail, R., Norberg, J. and Jensen, N.A. 2007. Hippocampus-like corticoneurogenesis induced by two isoforms of the BTB-zinc finger gene Zbtb20 in mice. *Development* 134: 1133-1140.

## CHROMOSOMAL LOCATION

Genetic locus: Zbtb20 (mouse) mapping to 16 B4.

## PRODUCT

ZBTB20 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 µl frozen stock containing 1.0 x 10<sup>6</sup> 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 ZBTB20 siRNA (m): sc-155438 and ZBTB20 shRNA Plasmid (m): sc-155438-SH as alternate gene silencing products.

## STORAGE

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

## APPLICATIONS

ZBTB20 shRNA (m) Lentiviral Particles is recommended for the inhibition of ZBTB20 expression in mouse cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl 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

ZBTB20 (E-11): sc-515370 is recommended as a control antibody for monitoring of ZBTB20 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).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZBTB20 gene expression knockdown using RT-PCR Primer: ZBTB20 (m)-PR: sc-155438-PR (20 µl). 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.