SANTA CRUZ BIOTECHNOLOGY, INC.

# ABHD9 shRNA (m) Lentiviral Particles: sc-140777-V

## BACKGROUND

The α/β hydrolase superfamily comprise diverse members that are involved in important biochemical processes and related to various diseases. They have unrelated sequences, various substrates, and different kinds of catalytic activities, yet they share the same canonical α/β hydrolase fold, which consists of an eightstranded parallel α/β structure. They are also characterized by a catalytic triad composed of a histidine, an acid and a nucleophile. Members of this superfamily are often drug targets for treating diseases, such as diabetes, Alzheimer's disease, obesity and blood clotting disorders. The abhydrolase domain-containing protein 9 (ABHD9), also designated epoxide hydrolase 3 (EPHX3), is a 360 amino acid protein and a member of the α/β hydrolase superfamily. The gene encoding ABHD9 maps to chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

## REFERENCES


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2. Holmquist, M. 2000. α/β-hydrolase fold enzymes: structures, functions and mechanisms. Curr. Protein Pept. Sci. 1: 209-235.
3. Lefèvre, C., et al. 2001. Mutations in CGI-58, the gene encoding a new protein of the esterase/lipase/thioesterase subfamily, in Chanarin-Dorfman syndrome. Am. J. Hum. Genet. 69: 1002-1012.
4. Edgar, A.J., et al. 2002. Cloning and tissue distribution of three murine α/β hydrolase fold protein cDNAs. Biochem. Biophys. Res. Commun. 292: 617-625.
5. Buchet-Poyau, K., et al. 2002. Search for the second Peutz-Jeghers syndrome locus: exclusion of the STK13, PRKCG, KLK10, and PSCD2 genes on chromosome 19 and the STK11IP gene on chromosome 2. Cytogenet. Genome Res. 97: 171-178.
6. Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. Nature 428: 529-535.
7. Parham, P. 2005. Immunogenetics of killer cell immunoglobulin-like receptors. Mol. Immunol. 42: 459-462.


## CHROMOSOMAL LOCATION

Genetic locus: Ephx3 (mouse) mapping to 17 B1.

## PRODUCT

ABHD9 shRNA (m) Lentiviral Particles are concentrated, transduction-ready viral particles containing a target-specific construct that encodes a 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x $10^6$ 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 ABHD9 siRNA (m): sc-140777 and ABHD9 shRNA Plasmid (m): sc-140777-SH as alternate gene silencing products.

## APPLICATIONS

ABHD9 shRNA (m) Lentiviral Particles is recommended for the inhibition of ABHD9 expression in mouse cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x $10^6$ 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ABHD9 gene expression knockdown using RT-PCR Primer: ABHD9 (m)-PR: sc-140777-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.

## 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.

## 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 for detailed protocols and support products.