

# ISG12b shRNA (m) Lentiviral Particles: sc-146295-V

## BACKGROUND

ISG12b, also known as Ifi27/2a (interferon  $\alpha$ -inducible protein 27 like 2A) or Ifi27, is a 90 amino acid small hydrophobic protein murine protein that is highly expressed in white adipose tissue. Encoded by a gene which maps to a cluster of ISG12 genes on mouse chromosome 12, ISG12b localizes to mitochondria and functions to inhibit adipocyte differentiation, as well as mitochondrial function. Via its ability to negatively affect mitochondrial biogenesis, ISG12b may play a role in the association of aberrant mitochondrial function with adipocyte development and associated diseases. Murine chromosome 12 houses approximately 670 protein-coding genes, including immunoglobulin heavy chain proteins (IgHs), Myosin light chain proteins, eukaryotic translation initiation factors (eIFs) and thyroid growth factors, suggesting that chromosome 12-localized genes play an important role in cellular growth and development. Additionally, defects in select chromosome 12-encoded genes are associated with mouse lung adenocarcinomas, implicating a role for chromosome instability in tumor progression.

## REFERENCES

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## STORAGE

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

## CHROMOSOMAL LOCATION

Genetic locus: Ifi27/2a (mouse) mapping to 12 E.

## PRODUCT

ISG12b 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  $\mu\text{l}$  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 ISG12b siRNA (m): sc-146295 and ISG12b shRNA Plasmid (m): sc-146295-SH as alternate gene silencing products.

## APPLICATIONS

ISG12b shRNA (m) Lentiviral Particles is recommended for the inhibition of ISG12b expression in mouse cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200  $\mu\text{l}$  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.

## 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.