SANTA CRUZ BIOTECHNOLOGY, INC.

# GM2-AP siRNA (m): sc-62386

## BACKGROUND

GM2-AP (GM2 ganglioside activator), also known as GM2A or SAP-3 (shingolipid activator protein 3), is a 193 amino acid protein that localizes to the lysosome. Existing as a small glycolipid transport protein, GM2-AP acts as a ganglioside-specific co-factor that, together with β-hexosaminidase A (HEXA), stimulates the breakdown of glycolipid GA2 and ganglioside GM2 and is important for the degradation of proteins containing terminal N-acetyl hexosamines. Mutations in the gene encoding GM2-AP are the cause of GM2-gangliosidosis type AB (GM2GAB), which is also known as Tay-Sachs disease AB variant, and is an autosomal recessive disease that is characterized by ganglioside GM2 accumulation in the presence of both hexosaminidase A and B.

## REFERENCES


1. Schröder, M., et al. 1989. Isolation of a cDNA encoding the human GM2 activator protein. FEBS Lett. 251: 197-200.
2. Xie, B., et al. 1991. Isolation and expression of a full-length cDNA encoding the human GM2 activator protein. Biochem. Biophys. Res. Commun. 177: 1217-1223.
3. Klima, H., et al. 1991. Characterization of full-length cDNAs and the gene coding for the human GM2 activator protein. FEBS Lett. 289: 260-264.
4. Schröder, M., et al. 1991. A mutation in the gene of a glycolipid-binding protein (GM2 activator) that causes GM2-gangliosidosis variant AB. FEBS Lett. 290: 1-3.
5. Nagarajan, S., et al. 1992. Evidence for two cDNA clones encoding human GM2-activator protein. Biochem. J. 282: 807-813.
6. Xie, B., et al. 1992. Identification of a processed pseudogene related to the functional gene encoding the GM2 activator protein: localization of the pseudogene to human chromosome 3 and the functional gene to human chromosome 5. Genomics 14: 796-798.


## CHROMOSOMAL LOCATION

Genetic locus: Gm2a (mouse) mapping to 11 B1.3.

## PRODUCT

GM2-AP siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GM2-AP shRNA Plasmid (m): sc-62386-SH and GM2-AP shRNA (m) Lentiviral Particles: sc-62386-V as alternate gene silencing products.

For independent verification of GM2-AP (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62386A, sc-62386B and sc-62386C.

## PROTOCOLS

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

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

GM2-AP siRNA (m) is recommended for the inhibition of GM2-AP expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor GM2-AP gene expression knockdown using RT-PCR Primer: GM2-AP (m)-PR: sc-62386-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.