SANTA CRUZ BIOTECHNOLOGY, INC.

Atat1 siRNA (m): sc-108799

BACKGROUND

Atat1, α-Tubulin N-acetyltransferase, also known as 2610110G12Rik, Mec17 or acetyltransferase mec-17 homolog, is a 421 amino acid mouse protein that belongs to the acetyltransferase ATAT1 family and exists as five alternatively spliced isoforms. Atat1 is homologous to human ATAT1, also known as α-Tubulin N-acetyltransferase, MEC17 or C6orf134. ATAT1 is a 421 amino acid protein that exists as seven alternatively spliced isoforms and belongs to the acetyltransferase ATAT1 family. The genes that encode Atat1 and ATAT1 map to mouse chromosome 17 B1 and human chromosome 6p21.33, respectively.

REFERENCES

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3. Batts, K.P. 2007. Iron overload syndromes and the liver. Mod. Pathol. 20: S31-S39.
4. Olsson, K.S., et al. 2007. The HLA-A1-B8 haplotype hitchhiking with the hemochromatosis mutation: does it affect the phenotype? Eur. J. Haematol. 79: 429-434.
5. Park, E., et al. 2007. Modulation of parkin gene expression in noradrenergic neuronal cells. Int. J. Dev. Neurosci. 25: 491-497.
6. Safadi, S.S. and Shaw, G.S. 2007. A disease state mutation unfolds the Parkin ubiquitin-like domain. Biochemistry 46: 14162-14169.
7. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. Genes Chromosomes Cancer 47: 159-164.
8. Akella, J.S., et al. 2010. MEC-17 is an α-Tubulin acetyltransferase. Nature 467: 218-222.
9. Shida, T., et al. 2010. The major α-Tubulin K40 acetyltransferase αTAT1 promotes rapid ciliogenesis and efficient mechanosensation. Proc. Natl. Acad. Sci. USA 107: 21517-21522.

CHROMOSOMAL LOCATION

Genetic locus: Atat1 (mouse) mapping to 17 B1.

PRODUCT

Atat1 siRNA (m) is a pool of 2 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 Atat1 shRNA Plasmid (m): sc-108799-SH and Atat1 shRNA (m) Lentiviral Particles: sc-108799-V as alternate gene silencing products.

For independent verification of Atat1 (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-108799A and sc-108799B.

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

Atat1 siRNA (m) is recommended for the inhibition of Atat1 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 Atat1 gene expression knockdown using RT-PCR Primer: Atat1 (m)-PR: sc-108799-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Nowosad, A., et al. 2021. p27 controls autophagic vesicle trafficking in glucose-deprived cells via the regulation of ATAT1-mediated microtubule acetylation. Cell Death Dis. 12: 481.
2. Le Dour, C., et al. 2022. Actin-microtubule cytoskeletal interplay mediated by MRTF-A/SRF signaling promotes dilated cardiomyopathy caused by LMNA mutations. Nat. Commun. 13: 7886.

RESEARCH USE

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

PROTOCOLS

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