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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

ZZZ3 siRNA (m): sc-155857

BACKGROUND

ZZZ3 (ZZ-type zinc finger-containing protein 3) is a 903 amino acid protein that contains one HTH Myb-type DNA-binding domain and one ZZ-type zinc finger. Phosphorylated upon DNA damage by ATM or ATR, ZZZ3 is a subunit of the ATAC complex, which is composed of GCN5, CRP2BP, ADA3, TADA2L, DR1, CCDC101, YEATS2, WDR5 and MBIP. The ATAC complex has histone acetyltransferase activity on Histones H3 and H4. ZZZ3 is expressed as four isoforms produced by alternative splicing and is encoded by a gene mapping to human chromosome 1p31.1. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes Lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

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CHROMOSOMAL LOCATION

Genetic locus: Zzz3 (mouse) mapping to 3 H3.

PRODUCT

ZZZ3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZZZ3 shRNA Plasmid (m): sc-155857-SH and ZZZ3 shRNA (m) Lentiviral Particles: sc-155857-V as alternate gene silencing products.

For independent verification of ZZZ3 (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-155857A, sc-155857B and sc-155857C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ZZZ3 siRNA (m) is recommended for the inhibition of ZZZ3 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 μ M in 66 μ l. 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 ZZZ3 gene expression knockdown using RT-PCR Primer: ZZZ3 (m)-PR: sc-155857-PR (20 μ l). 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.