SANTA CRUZ BIOTECHNOLOGY, INC.

# S3-12 siRNA (h): sc-97544

## BACKGROUND

S3-12 (adipocyte protein S3-12), also known as PLIN4 (Perilipin-4), is a 1,357 amino acid protein that belongs to the perilipin family. S3-12 contains a repeated 33-amino acid motif also found in adipophilin, and it shares protein sequence identity to both adipophilin and TIP-47 in the COOH terminus, but not to perilipin. S3-12 exhibits sequence similarity to the PAT proteins. Up-regulated during adipocyte differentiation, S3-12 may play a role in triacylglycerol packaging into adipocytes, and functions as a coat protein involved in the biogenesis of lipid storage droplets. S3-12 demonstrates highest expression in skeletal muscle, followed by heart and liver, and lowest expression in adult whole brain. Existing as two alternatively spliced isoforms, the S3-12 gene is conserved in canine, bovine and mouse, and maps to human chromosome 19p13.3.

## REFERENCES


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## CHROMOSOMAL LOCATION

Genetic locus: PLIN4 (human) mapping to 19p13.3.

## RESEARCH USE

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

## PRODUCT

S3-12 siRNA (h) 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 S3-12 shRNA Plasmid (h): sc-97544-SH and S3-12 shRNA (h) Lentiviral Particles: sc-97544-V as alternate gene silencing products.

For independent verification of S3-12 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-97544A, sc-97544B and sc-97544C.

## 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

S3-12 siRNA (h) is recommended for the inhibition of S3-12 expression in human 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 S3-12 gene expression knockdown using RT-PCR Primer: S3-12 (h)-PR: sc-97544-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. Han, X., Zhu, J., Zhang, X., Song, Q., Ding, J., Lu, M., Sun, S. and Hu, G. 2018. Plin4-dependent lipid droplets hamper neuronal mitophagy in the MPTP/p-induced mouse model of Parkinson's disease. Front. Neurosci. 12: 397.


## PROTOCOLS

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