SANTA CRUZ BIOTECHNOLOGY, INC.

STRIP1 siRNA (h): sc-88619

BACKGROUND

STRIP1 (striatin interacting protein 1), also known as FAM40A, is an 837 amino acid cytoplasmic protein that belongs to the STRIP family and exists as four alternatively spliced isoforms. While it plays a role in the regulation of cell morphology and cytoskeletal organization, STRIP1 is required in the control of cell shape. The gene that encodes STRIP1 maps to human chromosome 1, which is the largest human chromosome panning 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.

REFERENCES

1. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
2. Lans, H., et al. 2006. Cell biology: aging nucleus gets out of shape. Nature 440: 32-34.
3. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
4. McClintock, D., et al. 2006. Hutchinson-Gilford progeria mutant lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody. Proc. Natl. Acad. Sci. USA 103: 2154-2159.
5. Scaffidi, P., et al. 2006. Lamin A-dependent nuclear defects in human aging. Science 312: 1059-1063.
6. Bienvenut, W.V., et al. 2012. Comparative large scale characterization of plant versus mammal proteins reveals similar and idiosyncratic N-α-acetylation features. Mol. Cell. Proteomics 11: M111.015131.
7. Bian, Y., et al. 2014. An enzyme assisted RP-RPLC approach for in-depth analysis of human liver phosphoproteome. J. Proteomics 96: 253-262.
8. Lant, B., et al. 2015. CCM-3/STRIPAK promotes seamless tube extension through endocytic recycling. Nat. Commun. 6: 6449.

CHROMOSOMAL LOCATION

Genetic locus: STRIP1 (human) mapping to 1p13.3.

PRODUCT

STRIP1 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 STRIP1 shRNA Plasmid (h): sc-88619-SH and STRIP1 shRNA (h) Lentiviral Particles: sc-88619-V as alternate gene silencing products.

For independent verification of STRIP1 (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-88619A, sc-88619B and sc-88619C.

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

STRIP1 siRNA (h) is recommended for the inhibition of STRIP1 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 STRIP1 gene expression knockdown using RT-PCR Primer: STRIP1 (h)-PR: sc-88619-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.

PROTOCOLS

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