SANTA CRUZ BIOTECHNOLOGY, INC.

SQSTM1 siRNA (m): sc-29828

BACKGROUND

The chronic focal skeletal disorder, Paget's disease of bone, affects 2-3% of the population over the age of 60 years. Paget's disease is characterized by increased bone resorption by osteoclasts, followed by abundant new bone formation that is of poor quality. The disease leads to several complications, including bone pain and deformities, as well as fissures and fractures. Mutations in the ubiquitin-associated (UBA) domain of the sequestosome 1 protein (SQSTM1), also designated p62 or ZIP, commonly cause Paget's disease since the UBA is necessary for aggregate sequestration and cell survival.

CHROMOSOMAL LOCATION

Genetic locus: Sqstm1 (mouse) mapping to 11 B1.3.

PRODUCT

SQSTM1 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 SQSTM1 shRNA Plasmid (m): sc-29828-SH and SQSTM1 shRNA (m) Lentiviral Particles: sc-29828-V as alternate gene silencing products.

For independent verification of SQSTM1 (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-29828A, sc-29828B and sc-29828C.

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

SQSTM1 siRNA (m) is recommended for the inhibition of SQSTM1 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.

RESEARCH USE

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

GENE EXPRESSION MONITORING

SQSTM1 (A-6): sc-48402 is recommended as a control antibody for monitoring of SQSTM1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SQSTM1 gene expression knockdown using RT-PCR Primer: SQSTM1 (m)-PR: sc-29828-PR (20 µl, 430 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

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4. Rodriguez-Muela, N., et al. 2018. Blocking p62-dependent SMN degradation ameliorates spinal muscular atrophy disease phenotypes. J. Clin. Invest. 128: 3008-3023.
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8. Molagoda, I.M.N., et al. 2021. Fisetin inhibits NLRP3 inflammasome by suppressing TLR4/MD2-mediated mitochondrial ROS production. Antioxidants 10: 1215.
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PROTOCOLS

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