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Popeye 3 siRNA (m): sc-152390

BACKGROUND

Three Popeye domain-containing family-members exist in vertebrates, BVES, Popeye 2 and Popeye 3, that regulate cell-cell adhesion and cell migration during development. Popeye expression is modified in end-stage heart failure, suggesting regulatory and functional differences among the three family members. Popeye 3, also known as POPDC3 (popeye domain containing 3), is a 291 amino acid multi-pass membrane protein that contains three putative N-terminal transmembrane helices. Highly homologous to its vertebrate orthologs, Popeye 3 is expressed predominantly in skeletal muscle and heart. Epigenetic inactivation of Popeye 3 occurs frequently in gastric tumors and may promote gastric cancer cell migration and invasion. Popeye 3 also may play an important role in heart development. Popeye 3 is encoded by a gene that maps to human chromosome 6q21, which is associated with age at menarche, adult height and body fat.

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CHROMOSOMAL LOCATION

Genetic locus: Popdc3 (mouse) mapping to 10 B2.

PRODUCT

Popeye 3 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 Popeye 3 shRNA Plasmid (m): sc-152390-SH and Popeye 3 shRNA (m) Lentiviral Particles: sc-152390-V as alternate gene silencing products.

For independent verification of Popeye 3 (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-152390A, sc-152390B and sc-152390C.

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

Popeye 3 siRNA (m) is recommended for the inhibition of Popeye 3 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 Popeye 3 gene expression knockdown using RT-PCR Primer: Popeye 3 (m)-PR: sc-152390-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.