

Thermo Scientific Dharmacon[®] siGLO[®] siGENOME[®], and ON-TARGET[®]*plus*[®] Control Reagents

Product Description

- Double-stranded, chemically synthesized oligonucleotides
- Both sense and antisense strands contain UU for 3'-overhangs
- Antisense strands are modified with 5'-phosphate
- siGLO reagents are labeled with a fluorophore (see Table 2) on the sense strand
- Mass of each strand confirmed by MALDI-TOF mass spectrometry
- Duplex integrity confirmed by non-denaturing polyacrylamide gel electrophoresis

Shipping and Storage

- Dharmacon RNAi Control reagents are shipped as dried pellets at room temperature (23°C). Under these conditions, they are stable for at least four weeks.
- Upon receipt, Dharmacon RNAi Controls and siGLO reagents should be stored at –20°C to –80°C. In addition, store siGLO siRNAs in the dark to avoid exposure to strong light. Under these conditions, the reagents are stable for at least one year.
- siRNA should be resuspended in RNase-free solutions. We recommend 1X siRNA buffer (diluted from 5X siRNA buffer – Dharmacon Products Cat. # B-002000-UB-100). RNase-free water (for short-term storage) is also appropriate for resuspension of concentrated stocks (i.e., 20-100 µM). Alternatively, an RNase-free buffer (pH 7.3-7.6) may be used such as PBS (Fisher Cat. # NC9826748).

- Upon resuspension, aliquot the siRNA into small volumes and store at –20°C to –80°C. For best results, limit freeze-thawing of each tube to no more than five events. Under these conditions, the siRNA is stable for at least 6 months.

Handling Precautions

Oligonucleotides are susceptible to enzymatic degradation by nucleases and to chemical degradation by extreme pH and temperature. We recommend wearing gloves and maintaining nuclease-free conditions when handling the oligonucleotides.

Accompanying Document

Basic siRNA resuspension protocol

Supplemental Documents

Go to www.thermo.com/DharmaconProtocols to find basic and cell-line specific transfection protocols

Related Products

DharmaFECT[®] siRNA Transfection Reagents are available in four formulations that are optimized for transfecting siRNA into a wide variety of cell lines. For more information, go to www.thermo.com/DharmaFECT.

Publication Reference Guide

When referencing the use of the siRNA reagents listed in this document, please include the following information: Control type, catalog number, Thermo Fisher Scientific, Lafayette, CO.

Table 1. Accession Numbers for Target Genes of Positive Control siRNAs

Target Gene	Human	Mouse	Rat
Cyclophilin B	NM_000942	NM_011149	NM_022536
Lamin A/C	NM_005572, NM_170707, NM_170708 (Targets all three isoforms)	NM_019390, NM_001002011 (Targets both isoforms)	NM_001002016
GAPD	NM_002046		

Table 2. Spectral Properties of siGLO Reagents

Absorption Max	Emission Max	Extinction Coefficient	Excitation Filters
557 nm	570 nm	150,000 M ⁻¹ cm ⁻¹	Cy3™ or Rhodamine

Table 3. siGLO Reagents

Product	Description*	Size (nmol)	Catalog #
siGLO Cyclophilin B Control siRNA • human/mouse/rat	Dual purpose silencing control targeting Cyclophilin B with fluorescent label for human, mouse and rat cells. MW ~ 14,000 g/mol	5 20	D-001610-01-05 D-001610-01-20
siGLO Lamin A/C Control siRNA • human/mouse/rat	Dual purpose silencing control targeting Lamin A/C with fluorescent label for human, mouse and rat cells. MW ~ 14,100 g/mol	5 20	D-001620-01-05 D-001620-01-20
siGLO Lamin A/C Control siRNA • human • mouse • rat	Dual purpose silencing control targeting Lamin A/C with fluorescent label for human cells. MW ~ 14,100 g/mol	5 20	D-001620-02-05 D-001620-02-20
	Dual purpose silencing control targeting Lamin A/C with fluorescent label for mouse cells. MW ~ 14,100 g/mol	5 20	D-001620-03-05 D-001620-03-20
	Dual purpose silencing control targeting Lamin A/C with fluorescent label for rat cells. MW ~ 14,100 g/mol	5 20	D-001620-04-05 D-001620-04-20
siGLO RISC-Free® Control siRNA	Non-targeting siRNA with fluorescent label and impaired ability for RISC interaction; a useful co-transfection marker.	5 20	D-001600-01-05 D-001600-01-20

* When provided, sequence is of the sense strand

Table 4. siGENOME Control siRNA

Product	Description*	Size (nmol)	Catalog #
siGENOME Lamin A/C Control siRNA • human/mouse/rat	Positive silencing control for guaranteed silencing of Lamin A/C mRNA in human, mouse and rat cells. MW ~ 13,400 g/mol	5 20	D-001050-01-05 D-001050-01-20
siGENOME Cyclophilin B Control siRNA • human/mouse/rat	Positive silencing control for guaranteed silencing of Cyclophilin B mRNA in human, mouse and rat cells. MW ~ 13,400 g/mol	5 20	D-001136-01-05 D-001136-01-30
siGENOME GAPD Control siRNA • human	Positive silencing control for guaranteed silencing of GAPD (GAPDH) mRNA in human cells. MW ~ 13,300 g/mol	5 20	D-001140-01-05 D-001140-01-20
siGENOME Non-Targeting siRNA #1	Negative control siRNA with at least 4 mismatches to any human, mouse or rat gene. Microarray tested. [^] MW ~ 13,400 g/mol	5 20	D-001210-01-05 D-001210-01-20
siGENOME Non-Targeting siRNA #2	Negative control siRNA with at least 4 mismatches to any human, mouse or rat gene. Microarray tested. [^] MW ~ 13,400 g/mol	5 20	D-001210-02-05 D-001210-02-20

siGENOME Non-Targeting siRNA #3	Negative control siRNA with at least 4 mismatches to any human, mouse or rat gene. Microarray tested.^ MW ~ 13,400 g/mol	5 20	D-001210-03-05 D-001210-03-20
siGENOME Non-Targeting siRNA #4	Negative control siRNA with at least 4 mismatches to any human, mouse or rat gene. Microarray tested.^ MW ~ 13,400 g/mol	5 20	D-001210-04-05 D-001210-04-20
siGENOME Non-Targeting siRNA #5	Negative control siRNA with at least 4 mismatches to any human, mouse or rat gene. Microarray tested.^ MW ~ 13,400 g/mol	5 20	D-001210-05-05 D-001210-05-20
siGENOME Non-Targeting siRNA Pool #1	Pool of 4 non-targeting siRNAs. Useful control for experiments with SMARTpool reagents.^ MW ~ 13,400 g/mol	5 20	D-001206-13-05 D-001206-13-20
siGENOME Non-Targeting siRNA Pool #2	Pool of 4 non-targeting siRNAs. Useful control for experiments with SMARTpool reagents.^ MW ~ 13,400 g/mol	5 20	D-001206-14-05 D-001206-14-20
siGENOME RISC-Free® Control siRNA	Non-targeting siRNA with impaired ability for RISC interaction.	5 20	D-001220-01-05 D-001220-01-20

^ Non-targeting siRNA #1 reduces EGFR mRNA by ~50% (NM_005228), Non-Targeting siRNA #2 reduces firefly luciferase mRNA by ~75% (U47296), and the Non-Targeting Pool includes both Non-Targeting siRNAs #1 and #2 and targets both genes as noted above.

Table 5. ON-TARGETplus Control siRNA

Product	Description*	Size (nmol)	Catalog #
ON-TARGETplus Cyclophilin B Control siRNA • human • mouse • rat	Positive silencing control for guaranteed silencing of Cyclophilin B mRNA in human cells. MW ~ 13,400 g/mol	5 20	D-001820-01-05 D-001820-01-20
	Positive silencing control for guaranteed silencing of Cyclophilin B mRNA in mouse cells. MW ~ 13,400 g/mol	5 20	D-001820-02-05 D-001820-02-20
	Positive silencing control for guaranteed silencing of Cyclophilin B mRNA in rat cells. MW ~ 13,400 g/mol	5 20	D-001820-03-05 D-001820-03-20
ON-TARGETplus Cyclophilin B Control Pool • human • mouse • rat	Pool of 4 positive silencing control siRNA for guaranteed silencing of Cyclophilin B mRNA in human cells. Useful control for experiments with SMARTpool® reagents. MW ~ 13,400 g/mol	5 20	D-001820-10-05 D-001820-10-20
	Pool of 4 positive silencing control siRNA for guaranteed silencing of Cyclophilin B mRNA in mouse cells. Useful control for experiments with SMARTpool reagents. MW ~ 13,400 g/mol	5 20	D-001820-20-05 D-001820-20-20
	Pool of 4 positive silencing control siRNA for guaranteed silencing of Cyclophilin B mRNA in rat cells. Useful control for experiments with SMARTpool reagents. MW ~ 13,400 g/mol	5 20	D-001820-30-05 D-001820-30-20

ON-TARGET ^{plus} GAPD Control siRNA • human • mouse	Positive silencing control for guaranteed silencing of GAPD (GAPDH) mRNA in human cells. MW ~ 13,300 g/mol	5 20	D-001830-01-05 D-001830-01-20
	Positive silencing control for guaranteed silencing of GAPD (GAPDH) mRNA in mouse cells. MW ~ 13,300 g/mol	5 20	D-001830-02-05 D-001830-02-20
ON-TARGET ^{plus} GAPD Control Pool • human • mouse	Pool of 4 positive silencing control siRNA for guaranteed silencing of GAPD (GAPDH) mRNA in human cells. MW ~ 13,300 g/mol	5 20	D-001830-10-05 D-001830-10-20
	Pool of 4 positive silencing control siRNA for guaranteed silencing of GAPD (GAPDH) mRNA in mouse cells. MW ~ 13,300 g/mol	5 20	D-001830-20-05 D-001830-20-20
ON-TARGET ^{plus} Non-Targeting siRNA #1 • human, mouse, and rat	Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested. MW ~ 13.400 g/mol	5 20	D-001810-01-05 D-001810-01-20
ON-TARGET ^{plus} Non-Targeting siRNA #2 • human, mouse, and rat	Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested. MW ~ 13.400 g/mol	5 20	D-001810-02-05 D-001810-02-20
ON-TARGET ^{plus} Non-Targeting siRNA #3 • human, mouse, and rat	Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested. MW ~ 13.400 g/mol	5 20	D-001810-03-05 D-001810-03-20
ON-TARGET ^{plus} Non-Targeting siRNA #4 • human, mouse, and rat	Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested. MW ~ 13.400 g/mol	5 20	D-001810-04-05 D-001810-04-20
ON-TARGET ^{plus} Non-Targeting Pool • human, mouse, and rat	Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested. 5MW ~ 13.400 g/mol	5 20	D-001810-10-05 D-001810-10-20

Troubleshooting

For technical information or troubleshooting contact Thermo Scientific Genomics Tech Support:

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Literature Code: 00013-05-B-05-U