

Dharmacon™

RNAi, Gene Expression & Gene Editing

siGLO™, siGenome™, and On-Targetplus™ 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:

- 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, our 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 Cat. #B-002000-UB-100). RNase-free water (for short-term storage) is also appropriate for resuspension of concentrated stocks (20-100 µM). Alternatively, an RNase-free buffer (pH 7.3-7.6) may be used such as PBS (Dharmacon 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 gelifesciences.com/dharmacon 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, click [here](#).

Publication Reference Guide:

When referencing the use of the siRNA reagents listed in this document, please include the following information: Control type, catalog number, GE Healthcare Dharmacon Inc, Lafayette, CO.

Table 1. Accession Numbers for Target Genes of Positive Control siRNA:

| 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 | — | — |



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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) | Cat. # |
|--|--|-------------|----------------------------------|
| 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) | Cat. # |
|---|--|-------------|----------------------------------|
| 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 | 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-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% (Cat. #NM_005228), Non-Targeting siRNA #2 reduces firefly luciferase mRNA by ~ 75% (Cat. #U47296), and the Non-Targeting Pool includes both Non-Targeting siRNAs. #1 and #2 and targets both genes as noted above. *When provided, sequence is of the sense strand.

Table 5. On-Target^{plus} Control siRNA:

| Product | Description* | Size (nmol) | Cat. # |
|--|--|-------------|----------------------------------|
| On-Target ^{plus} 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-Target ^{plus} 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 |

*When provided, sequence is of the sense strand.

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1.800.235.9880; 303.604.9499 if you have any questions.