

# siGLO™, siGENOME™, and ON-TARGETplus™ Control Reagents

## Product Description:

- Double-stranded, chemically synthesized oligonucleotides
- 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.
- 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 one year.

## 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](http://gelifesciences.com/dharmacon) to find basic transfection and resuspension 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,<br>NM_170707,<br>NM_170708<br>(Targets all three isoforms) | NM_019390, NM_001002011<br>(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 <sup>-1</sup> cm <sup>-1</sup> | Cy3™, Rhodamine, or PE |

**Table 3. siGLO Reagents:**

| Product  | Description*   | Cat. #         |
|--|--|----------------|
| siGLO Cyclophilin B Control siRNA<br>• human/mouse/rat       | Dual purpose silencing control targeting Cyclophilin B with fluorescent label for human, mouse and rat cells.<br>MW ~ 14,000 g/mol | D-001610-01-XX |
| siGLO Lamin A/C Control siRNA<br>• human/mouse/rat           | Dual purpose silencing control targeting Lamin A/C with fluorescent label for human, mouse and rat cells.<br>MW ~ 14,100 g/mol     | D-001620-01-XX |
| siGLO Lamin A/C Control siRNA<br>• human<br>• mouse<br>• rat | Dual purpose silencing control targeting Lamin A/C with fluorescent label for human cells.<br>MW ~ 14,100 g/mol                    | D-001620-02-XX |
|  | Dual purpose silencing control targeting Lamin A/C with fluorescent label for mouse cells.<br>MW ~ 14,100 g/mol                    | D-001620-03-XX |
|  | Dual purpose silencing control targeting Lamin A/C with fluorescent label for rat cells.<br>MW ~ 14,100 g/mol                      | D-001620-04-XX |
| siGLO RISC-Free™ Control siRNA                               | Non-targeting siRNA with fluorescent label and impaired processing and uptake by RISC; a useful co-transfection marker.            | D-001600-01-XX |

\*When provided, sequence is of the sense strand.

XX=05,20, or 50 for 5, 20, and 50 nmol amounts

**Table 4. siGENOME Control siRNA:**

| Product   | Description*   | Cat. #         |
|---|--|----------------|
| siGENOME Lamin A/C Control siRNA<br>• human/mouse/rat     | Positive silencing control for guaranteed silencing of Lamin A/C mRNA in human, mouse and rat cells.<br>MW ~ 13,400 g/mol      | D-001050-01-XX |
| siGENOME Cyclophilin B Control siRNA<br>• human/mouse/rat | Dual purpose silencing control targeting Lamin A/C with fluorescent label for human, mouse and rat cells.<br>MW ~ 14,100 g/mol | D-001136-01-XX |
| siGENOME GAPD Control siRNA<br>• human                    | Positive silencing control for guaranteed silencing of GAPD (GAPDH) mRNA in human cells.<br>MW ~ 13,300 g/mol                  | D-001140-01-XX |
| siGENOME Non-targeting siRNA #1                           | Negative control siRNA with at least 4 mismatches to any human, mouse or rat gene. Microarray tested.^<br>MW ~ 13,300 g/mol    | D-001210-01-XX |
| siGENOME Non-targeting siRNA #2                           | Negative control siRNA with at least 4 mismatches to any human, mouse or rat gene. Microarray tested.^<br>MW ~ 13,300 g/mol    | D-001210-02-XX |
| siGENOME Non-targeting siRNA #3                           | Negative control siRNA with at least 4 mismatches to any human, mouse or rat gene. Microarray tested.^<br>MW ~ 13,300 g/mol    | D-001210-03-XX |

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

<sup>^</sup>Non-Targeting siRNA #1 reduces EGFR mRNA by ~ 50% (Accession 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.

XX=05,20, or 50 for 5, 20, and 50 nmol amounts

**Table 5. ON-TARGET*plus* Control siRNA:**

| Product  | Description*   | Cat. #         |
|--|--|----------------|
| ON-TARGET <i>plus</i> Cyclophilin B Control siRNA<br>• human<br>• mouse<br>• rat | Positive silencing control for guaranteed silencing of Cyclophilin B mRNA in human cells.<br>MW ~ 13,400 g/mol   | D-001820-01-XX |
|  | Positive silencing control for guaranteed silencing of Cyclophilin B mRNA in mouse cells.<br>MW ~ 13,400 g/mol   | D-001820-02-XX |
|  | Positive silencing control for guaranteed silencing of Cyclophilin B mRNA in rat cells.<br>MW ~ 13,400 g/mol   | D-001820-03-XX |
| ON-TARGET <i>plus</i> Cyclophilin B Control Pool<br>• human<br>• mouse<br>• 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.<br>MW ~ 13,400 g/mol | D-001820-10-XX |
|  | Pool of 4 positive silencing control siRNA for guaranteed silencing of Cyclophilin B mRNA in mouse cells. Useful control for experiments with SMARTpool reagents.<br>MW ~ 13,400 g/mol | D-001820-20-XX |
|  | Pool of 4 positive silencing control siRNA for guaranteed silencing of Cyclophilin B mRNA in rat cells. Useful control for experiments with SMARTpool reagents.<br>MW ~ 13,400 g/mol   | D-001820-30-XX |

|  |   |                |
|--|---|----------------|
| ON-TARGET <sup>plus</sup><br>GAPD Control siRNA<br>• human<br>• mouse<br>• rat | Positive silencing control for guaranteed silencing of GAPD (GAPDH) mRNA in human cells.<br>MW ~ 13,300 g/mol                 | D-001830-01-XX |
|  | Positive silencing control for guaranteed silencing of GAPD (GAPDH) mRNA in mouse cells.<br>MW ~ 13,300 g/mol                 | D-001830-02-XX |
|  | Positive silencing control for guaranteed silencing of GAPD (GAPDH) mRNA in rat cells.<br>MW ~ 13,300 g/mol                   | D-001830-03-XX |
| ON-TARGET <sup>plus</sup><br>GAPD Control Pool<br>• human<br>• mouse<br>• rat  | Pool of 4 positive silencing control siRNA for guaranteed silencing of GAPD (GAPDH) mRNA in human cells.<br>MW ~ 13,300 g/mol | D-001830-10-XX |
|  | Pool of 4 positive silencing control siRNA for guaranteed silencing of GAPD (GAPDH) mRNA in mouse cells.<br>MW ~ 13,300 g/mol | D-001830-20-XX |
|  | Pool of 4 positive silencing control siRNA for guaranteed silencing of GAPD (GAPDH) mRNA in rat cells.<br>MW ~ 13,300 g/mol   | D-001830-30-XX |
| ON-TARGET <sup>plus</sup><br>Non-targeting siRNA #1<br>• human, mouse, and rat | Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested.<br>MW ~ 13.400 g/mol   | D-001810-01-XX |
| ON-TARGET <sup>plus</sup><br>Non-targeting siRNA #2<br>• human, mouse, and rat | Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested.<br>MW ~ 13.400 g/mol   | D-001810-02-XX |
| ON-TARGET <sup>plus</sup><br>Non-targeting siRNA #3<br>• human, mouse, and rat | Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested.<br>MW ~ 13.400 g/mol   | D-001810-03-XX |
| ON-TARGET <sup>plus</sup><br>Non-targeting siRNA #4<br>• human, mouse, and rat | Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested.<br>MW ~ 13.400 g/mol   | D-001810-04-XX |
| ON-TARGET <sup>plus</sup><br>Non-targeting Pool<br>• human, mouse, and rat     | Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested.<br>5MW ~ 13.400 g/mol  | D-001810-10-XX |

\*When provided, sequence is of the sense strand.  
XX=05,20, or 50 for 5, 20, and 50 nmol amounts

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