

# Thermo Scientific Dharmacon<sup>®</sup> siGENOME<sup>®</sup> and ON-TARGET<sup>plus</sup><sup>™</sup> Control siRNA Kits

## Product Description

- Double-stranded, chemically synthesized oligonucleotides
- Mass of each strand confirmed by MALDI-TOF mass spectrometry
- Duplex integrity confirmed by non-denaturing polyacrylamide gel electrophoresis

## Shipping and Storage

- Dharmacon RNAi controls 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 control reagents should be stored at –20°C to –80°C. In addition, store siGLO<sup>®</sup> siRNAs in the dark to avoid exposure to strong light. Under these conditions, the siRNAs 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 Documents

- Basic siRNA resuspension protocol

## Supplemental Documents

Go to [www.thermo.com/DharmaconProtocols](http://www.thermo.com/DharmaconProtocols) to find:

- Basic and cell-line specific transfection protocols

## Related Products

- DharmaFECT<sup>®</sup> 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](http://www.thermo.com/DharmaFECT).

Table 1. Spectral properties of siGLO<sup>®</sup> siRNAs

siGLO Red & Green Control siRNAs	Fluorophore Absorption/Emission Max	Extinction Coefficient	Filter
siGLO Green	6-FAM (494 nm /520 nm)	75,000 M <sup>-1</sup> cm <sup>-1</sup>	FITC
siGLO Red	DY-547 (557 nm /570 nm)	150,000 M <sup>-1</sup> cm <sup>-1</sup>	Cy <sup>™</sup> 3, Rhodamine and PE

Table 2. Target Genes of Positive Control siRNAs

Control siRNA	Human Target	Mouse Target	Rat Target
siGENOME Cyclophilin B Control siRNA	NM_000942	NM_011149	NM_022536
siGENOME Lamin A/C Control siRNA	NM_005572, NM_170707, NM_170708 (Targets all three isoforms)		001002016
ON-TARGET <sup>plus</sup> Cyclophilin B Control siRNA	NM_000942	NM_011149	NM_022536
ON-TARGET <sup>plus</sup> GAPD Control siRNA	NM_002046	NM_000942	XM_575242

Table 3. Individual siGENOME Control siRNA Reagents

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 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
siGLO Green transfection indicator	Modified, fluorescent RNA duplexes that provide reliable visual assessment of transfection success. Chemically labeled with 6-FAM (see Table 1).	5 20	D-001630-01-05 D-001630-01-20
siGLO Red transfection indicator	Modified, fluorescent RNA duplexes that provide reliable visual assessment of transfection success. Chemically labeled with Pierce NuLight™ DY-547 fluorophores (see Table 1)	5 20	D-001630-02-05 D-001630-02-20

\*\*Both strands contain UU for 3'-overhang, and the antisense strand contains 5'-phosphate.

^ Non-targeting siRNA #1 reduces EGFR mRNA by ~50% (NM\_005228), Non-Targeting siRNA #2 targets firefly luciferase (U47296), and Non-targeting Pool #1 includes both Non-targeting siRNAs #1 and #2 and targets both genes as noted above.

Table 4. Individual ON-TARGET<sup>plus</sup> Control siRNA Reagents

Product	Description*	Size (nmol)	Catalog #
ON-TARGET <sup>plus</sup> 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 <sup>plus</sup> Cyclophilin B control siRNA • human • mouse	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
ON-TARGET <sup>plus</sup> 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 <sup>plus</sup> 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 <sup>plus</sup> 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 <sup>plus</sup> 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 <sup>plus</sup> 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
siGLO Green transfection indicator	Modified, fluorescent RNA duplexes that provide reliable visual assessment of transfection success. Chemically labeled with 6-FAM (see Table 1).	5 20	D-001630-01-05 D-001630-01-20
siGLO Red transfection indicator	Modified, fluorescent RNA duplexes that provide reliable visual assessment of transfection success. Chemically labeled with Pierce NuLight™ DY-547 fluorophores (see Table 1)	5 20	D-001630-02-05 D-001630-02-20

\*Both strands contain UU for 3'-overhang, and the antisense strand contains 5'-phosphate.

^ Non-targeting siRNA #1 reduces EGFR mRNA by ~50% (NM\_005228), Non-Targeting siRNA #2 targets firefly luciferase (U47296), and the Non-targeting Pool includes both Non-targeting siRNAs #1 and #2 and targets both genes as noted above.

Table 4. siGENOME and ON-TARGET<sup>plus</sup> Control siRNA Kits\*

Product	Size (nmol)	Catalog #
<b>siGENOME Basic Kit – HUMAN , MOUSE, and RAT</b>		
siGENOME Lamin A/C control siRNA (human/mouse/rat)	2	K-003000-G1-01 (Green)
siGENOME Cyclophilin B control siRNA (human/mouse/rat)	2	K-003000-R1-01 (Red)
siGENOME Non-targeting siRNA #2 ^		
siGENOME Non-targeting siRNA #5		
siGENOME RISC-Free control siRNA		
siGLO Green or Red transfection indicator (choose one)		
<b>siGENOME Complete Kit – HUMAN , MOUSE, and RAT (Basic Kit plus the following siRNAs)</b>		
siGENOME Non-targeting siRNA #3	2	K-003500-GR-01
siGENOME Non-targeting siRNA #4		
siGENOME Non-targeting Pool #1 ^		
siGENOME Non-targeting Pool #2 ^		
siGLO Green andr Red transfection indicator (both)		
<b>ON-TARGET<sup>plus</sup> Basic Kit – HUMAN or MOUSE</b>		
ON-TARGET <sup>plus</sup> Lamin A/C control siRNA (human or mouse)	2	K-004000-R1-01 (Red, Human)
ON-TARGET <sup>plus</sup> Cyclophilin B control siRNA (human or mouse)	2	K-004000-R1-01 (Red, Mouse)
ON-TARGET <sup>plus</sup> Non-targeting siRNA #1	2	K-004000-G1-01 (Green, Human)
ON-TARGET <sup>plus</sup> Non-targeting siRNA #2	2	K-004000-G1-02 (Green, Mouse)
siGLO Green or Red transfection indicator (choose one)		
<b>ON-TARGET<sup>plus</sup> Complete Kit – HUMAN or MOUSE (Basic Kit plus the following siRNAs)</b>		
ON-TARGET <sup>plus</sup> Non-targeting siRNA #3	2	K-004500-GR-01 (Human)
ON-TARGET <sup>plus</sup> Non-targeting siRNA #4	2	K-004500-GR-01 (Mouse)
ON-TARGET <sup>plus</sup> Non-targeting pool		
siGLO Green andr Red transfection indicator (both)		

\*all kits include 1.5 mL 5X siRNA Buffer

^ Non-targeting siRNA #1 reduces EGFR mRNA by ~50% (NM\_005228), Non-targeting siRNA #2 reduces firefly luciferase (U47296), and the Non-targeting pool includes both Non-targeting siRNAs #1 and #2 and targets both genes as noted above.

#### Publication Reference Guide

When referencing the use of Dharmacon RNAi Controls, please include the following information: control type, catalog number, Thermo Fisher Scientific, Lafayette, CO.

#### Contact Information

For technical questions regarding the use of siRNA reagents, please contact Dharmacon Products Technical Support at:

In America/Asia	In Europe/Israel	In Other Countries
800-235-9880	00800 73724648	Please contact your appropriate distributor as listed on
303-604-9499	32-53-85-71-84	www.thermo.com/dharmacondistributors
dharmacon.lab@thermofisher.com	perbio.eurotech@thermofisher.com	

The product(s) described herein (“Products”) are protected by patents, pending patents and other intellectual property owned or licensed by Dharmacon Inc. as set forth in Dharmacon’s Terms and Conditions (found at [www.thermo.com/dharmacon](http://www.thermo.com/dharmacon) or included with the Products when sold). By using the Product(s), users accept the Terms and Conditions, which expressly govern all use of the Product(s). The Product(s) are intended solely for research use and not for diagnostic, clinical or therapeutic uses. All other trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries.

Literature Code: 00086-06-F-03-U

Copyright © 2008 Thermo Fisher Scientific Inc. All Rights Reserved.