Stealth™ RNAi Positive Control Duplexes (Human)

Cat. No. 12935-140 **Stealth™ RNAi GAPDH Positive Control**
Cat. No. 12935-141 **Stealth™ RNAi Actin Positive Control**
Cat. No. 12935-142 **Stealth™ RNAi Cyclophilin B Positive Control**

Description

Stealth™ RNAi Positive Control Duplexes (Human) are ideal for use in RNA interference (RNAi) experiments as a control for quantitatively assessing transfection efficiency and optimizing RNAi experiments following Stealth™ RNAi delivery in any human vertebrate cell line. Each Stealth™ RNAi Positive Control Duplex is functionally tested and guaranteed to knockdown their intended targets. The Stealth™ RNAi Positive Control Duplexes are supplied in a ready-to-use format. 1X RNA Annealing/Dilution Buffer is included for dilution of the Stealth™ RNAi stock solution, if desired.

Components

Item	Composition	Amount
Stealth™ RNAi Positive Control Duplex	20 µM in 1X RNA Annealing/Dilution Buffer	250 µl
1X RNA Annealing/Dilution Buffer	10 mM Tris-HCl, pH 8.0 20 mM NaCl 1 mM EDTA, pH 8.0	1 ml

Storage

Store the Stealth™ RNAi Positive Control Duplexes and the 1X RNA Annealing/Dilution Buffer at -20°C.

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Stealth™ RNAi

Stealth™ RNAi is chemically modified dsRNA developed to overcome the limitations of traditional siRNA. Using Stealth™ RNAi for RNAi analysis offers the following advantages:

- Obtain effective target gene knockdown
- Eliminates sense strand off-target effects for higher specificity
- Exhibits enhanced stability for greater flexibility in RNAi analysis
- Avoids induction of cellular stress response pathways

For more information about Stealth™ RNAi, visit www.invitrogen.com/rnai.

Amount of Stealth™ RNAi Positive Control Duplex to Transfect

The amount of Stealth™ RNAi Positive Control Duplex required to achieve quantitative knockdown should be determined experimentally for each human cell line. **As a starting point, we recommend using 40 nM Stealth™ RNAi Positive Control Duplex for transfection.** To optimize transfection conditions, vary transfection reagent concentrations and the final concentrations of Stealth™ RNAi from 10 to 200 nM, as necessary for your cell line. Use the 1X RNA Annealing/Dilution Buffer supplied with the kit to dilute the Stealth™ RNAi Positive Control Duplex stock solution, if necessary.

Handling the Stealth™ RNAi Positive Control Duplexes

- Thaw Stealth™ RNAi Positive Control Duplex stock solutions on ice or at room temperature. After use, return to -20°C storage.
- Multiple freeze/thaw cycles are permitted without loss of activity if stock solutions are handled properly.
- Ensure that the stock solutions do not become contaminated with RNase.

General Guidelines for Transfection

- Use a transfection reagent suitable for delivery of Stealth™ RNAi to mammalian cells. **For optimal results, we recommend using Lipofectamine™ 2000 Reagent (Cat. no. 11668-027) or Lipofectamine™ RNAiMax (Cat. no. 13778-075) available from Invitrogen.** For a protocol to transfect Stealth™ RNAi into cells using Lipofectamine™ 2000 or Lipofectamine™ RNAiMax, see the RNAi resource page at www.invitrogen.com/rnai; click on Protocols. **Note:** Do not use the DNA transfection protocol included with the product.
- Use low-passage cells, and make sure that cells are healthy and greater than 90% viable before transfection.
- Transfect cells at the density recommended by the manufacturer of your transfection reagent.
- Assay for target gene knockdown at a suitable time period (typically 24 to 72 hours) after transfection.
- For a convenient tool to assess transfection efficiency and Stealth™ RNAi uptake, we recommend using the BLOCK-iT™ Fluorescent Oligo (Cat. no. 2013) available from Invitrogen.

Limited Use Label License No. 196: Stealth™ RNAi

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