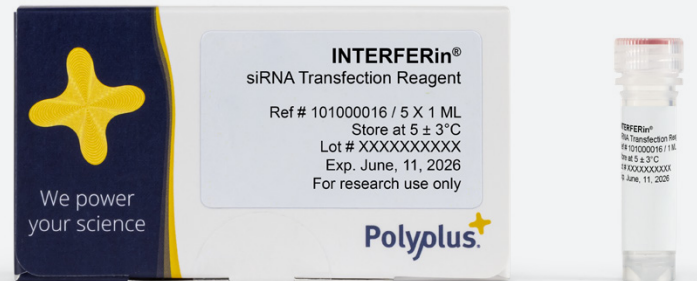


INTERFERin®

siRNA, miRNA, and
Other Oligonucleotides
Transfection Reagent



Product Information

INTERFERin® provides very high silencing efficiency already at 1 nM siRNA and can be used in a wide variety of adherent and suspension cells. Using low concentration of siRNA avoids off-target effects, and its gentle mode of action ensure more robust data and excellent cell viability. Easy to use thanks to its compatibility with serum and antibiotics, INTERFERin® is also perfectly suited for transfection of miRNA and other oligonucleotides like pre-miRNA, mimic miRNA, antimiR.

Benefits

- **Efficiency:** Over 90% gene silencing in a wide variety of cells
- **Excellent cell viability:** Suitable for transfection miRNA and other oligonucleotides
- **Versatile:** Gentle mode of action for more robust data and excellent cell viability

Introduction

Relevant Applications

- RNA interference
- Gene silencing
- Fundamental research

Relevant Process Steps

- Transfection of siRNA and other oligonucleotides

Technical Specifications

Molecule delivered	siRNA, miRNA (microRNA), and other oligonucleotides: pre-miRNA, mimic miRNA, antimiR...
Cell Types	Adherent and suspension cells
Number of transfections	1 mL of INTERFERin® is sufficient to perform 500 – 1000 transfections in 24-well plates
Storage	Store INTERFERin® at 5 °C ± 3 °C Expiry date is indicated in the certificate of analysis and on the product
Provided with	/

Capabilities

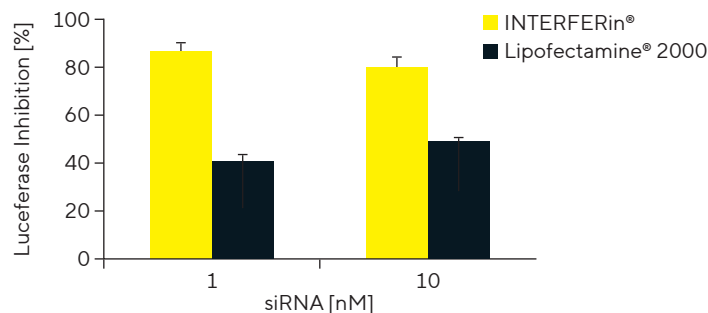
▪ Less siRNA, Less Off-Target Effects

Publications have shown that transfecting high siRNA concentrations can lead to non-specific off target effects. The reliability of the experimental data can be increased by using as little siRNA as possible. This is why INTERFERin® has been specifically designed to provide high silencing efficiency using low siRNA concentrations. INTERFERin®-mediated delivery of 1 nM of a specific siRNA shows selective and highly efficient knockdown of gene expression, while a competitor (L2K) needs at least 10 nM siRNA to reach 50% silencing efficiency.

▪ Suitable for miRNA Transfection

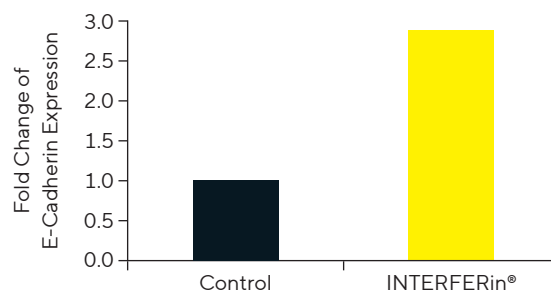
Transfection of microRNA (miRNA) oligonucleotides is increasingly being used to analyze biological effects of specific miRNAs on cell function. INTERFERin® is the reagent of choice for delivering miRNA, miRNA mimics or pre-miRNAs. INTERFERin® is the latest generation siRNA and miRNA transfection reagent, especially designed for high transfection efficiency in a wide variety of cells, resulting in high gene silencing or stimulation of gene expression. Indeed, some miRNA are also known to induce gene expression by association with the promoter of the gene of interest. For example, INTERFERin®-mediated delivery of miR-373 leads to a 3-fold increase in E-Cadherin expression.

Figure 1: INTERFERin® Only Requires 1 nM siRNA for Efficient Gene Silencing



Note. 3LL cells stably expression firefly luciferase were transfected with an anti-Luc siRNA using INTERFERin® or competitor L2K according to the manufacturer's recommendation. Luciferase expression was measured after 48 hours using a conventional assay. No inhibition was observed with control siRNA.

Figure 2: Transfection of miR-373 With INTERFERin® Enhanced E-Cadherin



Note. PC-3 cells were seeded in a 6-well plate and transfected with miR-373 (25 nM) using 8 µL per well of INTERFERin®. 72 hours after transfection, E-cadherin mRNA expression level was determined by RT-qPCR. The assay was normalized with HPRT-1 gene expression.

▪ **Over 90% Gene Silencing**

For many adherent cell lines or primary cells, 1 nM siRNA is sufficient to obtain more than 90% gene silencing. For suspension cell lines, 80% silencing can still be reached by INTERFERin® using 5 nM siRNA.

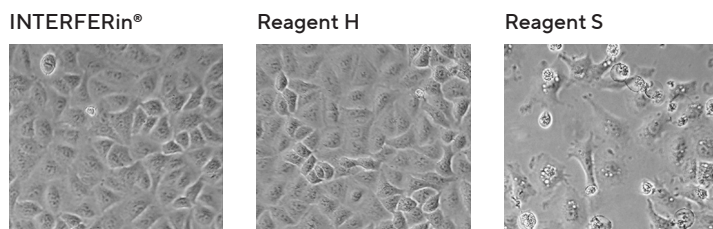
Table 1: Successfully Transfected Cell Lines and Silencing Efficiencies Obtained With INTERFERin®

Adherent cell lines (1 nM siRNA)		
A549	Luciferase	
HeLa	GADPH/Lamin A/C	
CaSki	GADPH/Lamin A/C	
MCF7	GADPH/Lamin A/C	> 90%
NIH-3T3	Vimentin	
RAW	Eg5	
SiHa	GADPH/Lamin A/C	
HepG2	GADPH	60 - 70%
Primary cells (1 nM siRNA)		
MEF Murine Embryonic Fibroblast	GADPH	
Primary Human Fibroblast	GADPH/Lamin A/C	> 90%
Primary Human Hepatocytes	GADPH	
Suspension cell lines (5 nM siRNA)		
K562	GADPH	> 80%
THP-1	GADPH	

▪ **Excellent Cell Viability and Simplified Standard Protocol**

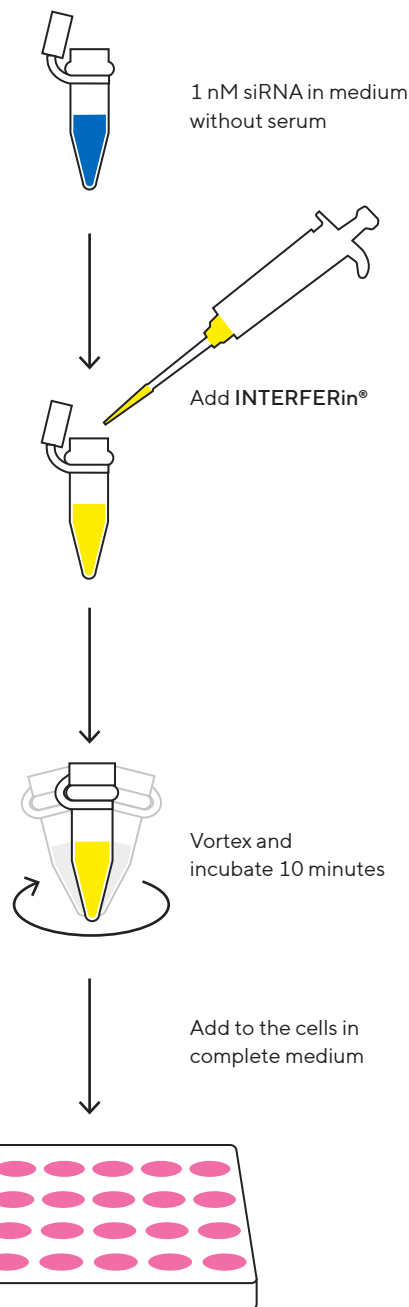
When it comes to cell viability, INTERFERin® outperforms other transfection reagents. 48 hours after transfection with 1 nM siRNA, cells transfected with INTERFERin® appear healthy, while toxicity is clearly observed with reagent S.

Figure 3: INTERFERin® Is Extremely Gentle on Cells, as Shown in this Comparison of Cell Morphology 48 hours After siRNA Transfecting Using INTERFERin® or Competitor Reagents



Note. A549-GL3Luc were transfected in the presence of serum with 1 nM Luciferase siRNA using INTERFERin® or competitors S or H according to the manufacturer's protocol.

Figure 4: INTERFERin® Protocol



Ordering Information

Item	Description	Package Volume Quantity Size	Order Number
INTERFERin® 0.1 mL	siRNA, miRNA, and other	0.1 mL Vial	101000036
INTERFERin® 1 mL	oligonucleotides	1 mL Vial	101000028
INTERFERin® 5x1 mL	transfection reagent	5x1.5 mL Vial	101000016

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