# Ambion® siRNA

The best siRNAs for *in vitro* applications

RNA interference (RNAi) is the best way to effectively knock down gene expression to study protein function in a wide range of cell types. Traditional RNAi methods for gene knockdown in mammalian cells involved the use of synthetic RNA duplexes consisting of two unmodified 21-mer oligonucleotides annealed together to form short/small interfering RNAs (siRNAs). Only Ambion® *Silencer*® Select siRNA products have LNA modifications for unmatched potency and specificity. Backed by more than 20 years of experience, forward-thinking R&D, and a rigorous testing process, Ambion® siRNA products are designed to empower your research like no other.

Silencer® Select siRNA

- 100-fold more potent—more potent than any other currently available siRNA

- 90% less off-target effects—due to LNA chemical modifications

- Guaranteed—100% guaranteed to silence the best guarantee in the industry*

Search the more than 200,000 Ambion® siRNAs from Life Technologies using our siRNA Selection Tool. To learn how to use the tool, watch the video Finding the Right Ambion® siRNA at **lifetechnologies.com/sirna**.
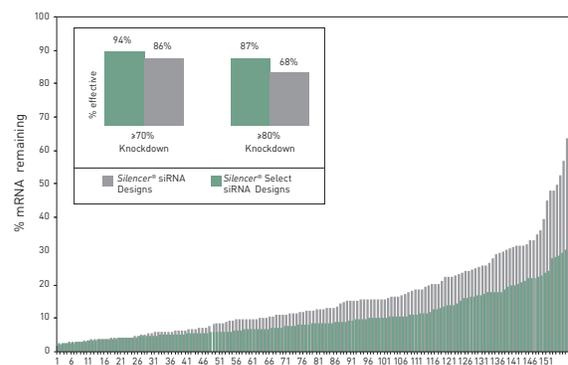
Silencer® **Select siRNA design algorithm significantly improves effective siRNA prediction accuracy.** The Silencer® Select siRNA design algorithm was used to design 155 siRNAs to 40 different targets. These siRNAs were tested side by side with siRNAs designed using the previous algorithm at 5 nM in HeLa cells. mRNA knockdown was measured 48 hr post-transfection via qRT-PCR using TaqMan® Gene Expression Assays. Results are expressed as percent of mRNA remaining compared to *Silencer*® Select Negative Control #1 siRNA–treated cells. The inset shows the percentage of siRNAs that elicited ≥70% and ≥80% mRNA knockdown.

TaqMan® siRNA Assays

TaqMan® siRNA Assays, sharing the same principle as miRNA assays, quantitate siRNAs with the specificity and sensitivity of TaqMan® Assay chemistry. A simple two-step protocol requires only reverse transcription with a siRNA-specific primer, followed by real-time PCR with

TaqMan® probes. Key product features:

- Highly specific
- Sensitive—conserve limited samples: require only 1–10 ng of total RNA or equivalent
- Fast, simple and scalable—two-step quantitative RT-PCR assay provides high-quality results in less than 3 hours

TaqMan® siRNA Assays	Cat. No.	No. of RT/PCR reactions
Extra Small (XS)	4440877	25/75
Small (S)	4440878	50/150
Medium (M)	4440879	750/750
Large (L)	4440880	2,900/2,900

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Which siRNA is right for you? Find this interactive table online at lifetechnologies.com/siRNA.

	Cost-effective siRNA	Good knockdown, low off-target	Highest knockdown, lowest off-target
	Silencer® siRNA	Stealth RNAi™ siRNA	*Silencer*® Select siRNA
Potency	100 nM recommended conc.	20 nM recommended conc.	5 nM recommended conc.
Efficacy (>70% knockdown)	2 of 3 siRNA guaranteed	2 of 3 siRNA guaranteed	2 of 2 siRNA guaranteed
Specificity	Moderate	High	Highest
Coverage	Coding RNA	Coding RNA	Coding and noncoding RNA
Target species	Human, mouse, rat (use custom tool for other species)	Human, mouse, rat (use custom tool for other species)	Human, mouse, rat (use custom tool for other species)
Recommended product	*Silencer*® Pre-designed siRNA, 5 nmol (Cat. No. AM16708)	Stealth RNAi™ siRNA Tube (Cat. No. 1299001)	*Silencer*® Select Pre-designed siRNA, 5 nmol (Cat. No. 4390771)

Ordering information

Product	Quantity	Cat. No.
Silencer® Select siRNA—highest knockdown, lowest off-target effects		
Silencer® Select Pre-designed siRNA	5 nmol	4390771
Silencer® Select Validated siRNA	5 nmol	4390824
Silencer® Select Custom-designed siRNA	5 nmol	4399665
Silencer® Select Custom-sequence siRNA	5 nmol	4390827
Silencer® Select Negative Control #1	5 nmol	4390843
Silencer® Select Negative Control #2	5 nmol	4390846
Silencer® Select GAPDH Positive Control siRNA	5 nmol	4390849
Silencer® Select MALAT1 Positive Control siRNA	5 nmol	4455877
Stealth siRNA—good knockdown, low off-target effects		
Stealth RNAi™ Pre-designed siRNA, Human	20 nmol	1299001
Stealth RNAi™ Pre-designed siRNA, Human Set of 3	20 nmol x 3	1299003
Stealth RNAi™ Pre-designed siRNA, Mouse	20 nmol	1320001
Stealth RNAi™ Pre-designed siRNA, Mouse Set of 3	20 nmol x 3	1320003
Stealth RNAi™ Pre-designed siRNA, Rat	20 nmol	1330001
Stealth RNAi™ Pre-designed siRNA, Rat Set of 3	20 nmol x 3	1330003
Stealth siRNA™ Negative Control, low GC	250 µL	12935200
Stealth siRNA™ Negative Control, medium GC	250 µL	12935300
Stealth siRNA™ Negative Control, high GC	250 µL	12935400
Block-IT™ Alexa Fluor® Red Positive Control, 20 µM	2 x 120 µL	14750100
***Silencer* siRNA—cost-effective siRNA**		
Silencer® Validated siRNA	5 nmol	AM51331
Silencer® Pre-designed siRNA	5 nmol	AM16708
Silencer® Custom-designed siRNA	5 nmol	4399670
Silencer® GAPDH Positive Control siRNA (including 2 nmol negative control)	5 nmol	AM4624
Silencer® Negative Control #1 siRNA	5 nmol	AM4611

Ambion® *Silencer*® Select siRNAs for non-coding RNA (ncRNA) now enable ncRNA researchers for the first time to easily obtain siRNAs targeting any ncRNA. Custom siRNA Libraries for non-coding RNAs (including for LincRNAs) are available. For information on all our predefined and custom siRNA libraries contact **RNAiLibraries@lifetech.com**

To learn more or place an order, go to **lifetechnologies.com/sirna**

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