

SygRNA[®] Synthetic Single Guide RNA (sgRNA)

SygRNA[®] synthetic single guide RNAs are the highest quality materials currently available on the market, and are backed by the most comprehensive guarantee in the industry. Each SygRNA[®] guide is custom synthesized to your specifications, including chemical modifications. They are purified by HPLC to remove small molecule contaminants and isomers that could negatively impact your cells or embryos and reduce the efficiency or specificity of your gene editing experiment. SygRNA[®] guides are shipped directly to your lab, anywhere in the world, within 7-10 business days and can be complemented by a wide range of Cas9 proteins and delivery reagents from our comprehensive portfolio of CRISPR products.

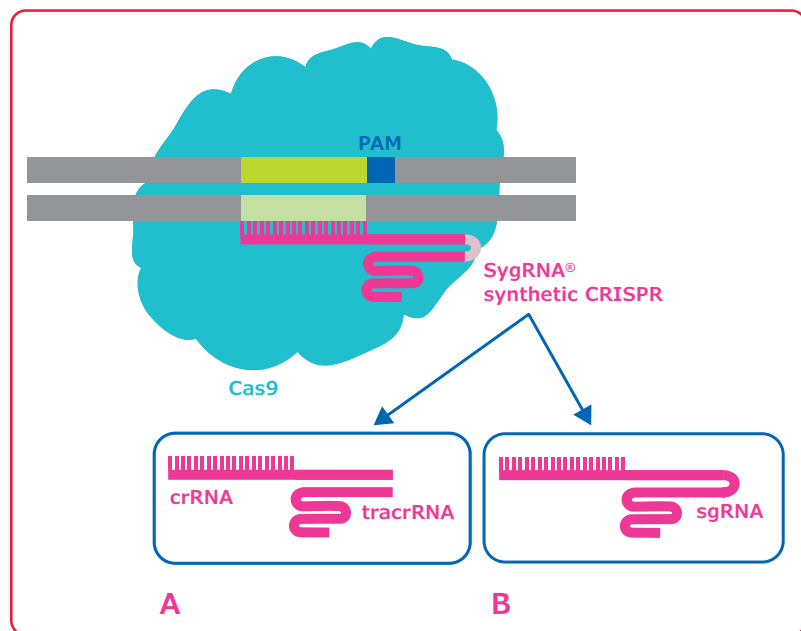
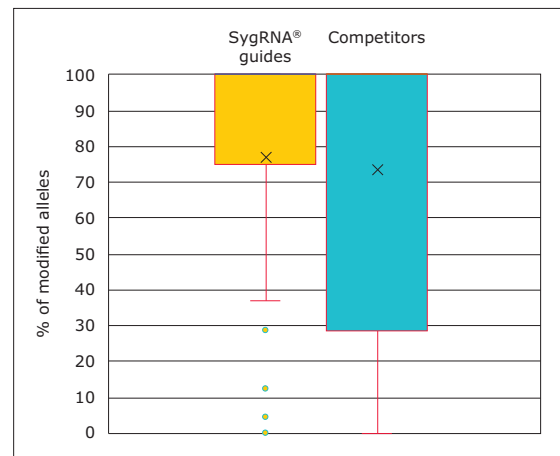


Figure 1. Structure of SygRNA[®] Guides (A) Two-part system containing a separate tracrRNA and crRNA and (B) sgRNA one-part system which has the target-specific crRNA and tracrRNA in the same molecule. The latter material is highly effective for all genome modification projects, while the former can be a cost-effective approach for screening applications.

SygRNA[®] Guides Deliver Superior Performance



SygRNA[®] guides consistently produce high editing efficiencies.

Figure 2. A comparison of 115 total experiments, including several replicates at 8 different target sites using SygRNA[®] sgRNAs (yellow) against several leading competitor sgRNAs (blue). On the y axis is the % of modified alleles in mouse embryos, determined by NGS, using identical sgRNAs from different sources.

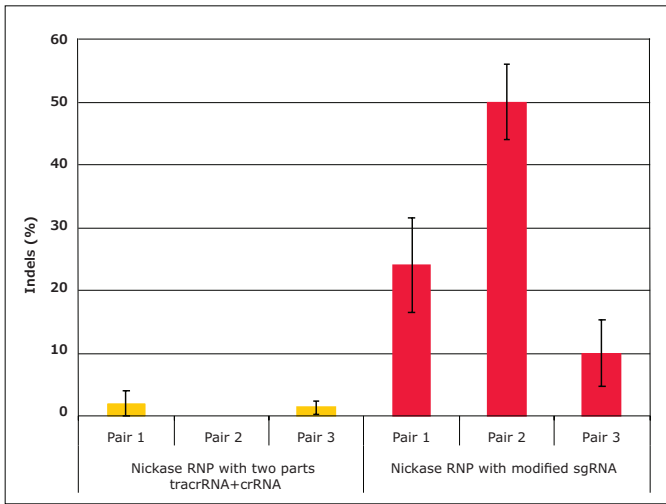


Figure 3. SygRNA® single guides significantly outperform two-part guides. Here, paired nickase RNPs containing either modified one-part sgRNAs (red) or two-part tracrRNA+crRNAs (yellow) were nucleofected into primary CD8+ T cells. Averages from three biological replicates are plotted with error bars representing one standard deviation.

Custom Quantities and Modifications

SygRNA® synthetic sgRNAs are available in a standard quantity of 3 nmol of HPLC purified material, either unmodified or with stabilizing modifications at the 5' and 3' ends. Larger quantities and customized modification patterns are available upon custom request. Please contact us for additional information.

Product Guarantee

We are so confident in the performance of our SygRNA® products, that we fully guarantee the quality and performance of any gRNA we produce, including custom sequences. If your synthetic guides do not yield detectable cleavage at the intended target site, we will provide you a one-time replacement, free of charge.

To qualify for this guarantee, please send an image or sequencing data from a single experiment demonstrating detectable cleavage using one of our positive controls, side-by-side with the negative results from your SygRNA® guide. To receive your replacement, simply email oligotechserv@milliporesigma.com and include sample data from a representative experiment (T7E1, TIDE, or NGS).

Product Availability

Product Description	Format	Quantity	Purification	Modifications	Ordering
Predesigned Synthetic RNA – single guide RNA (sgRNA)	sgRNA	2 nmol, 5 nmol	HPLC	Unmodified, 3x MS*	VC40003
Custom Synthetic RNA – single guide RNA	sgRNA	3 nmol, custom	HPLC	Unmodified, 3x MS*	VC40003
Predesigned Synthetic RNA - crRNA	crRNA	2 nmol, 5 nmol	HPLC, desalted	Unmodified, 3x MS*	VC40003
Custom Synthetic RNA – crRNA	crRNA	2 nmol, 5 nmol, custom	HPLC, desalted	Unmodified, 3x MS*	VC40003
Standard TRACR RNA for <i>S. pyogenes</i> Cas9	tracrRNA	5 nmol	HPLC	Unmodified	TRACRRNA05N
Modified TRACR RNA for <i>S. pyogenes</i> Cas9	tracrRNA	5 nmol	HPLC	3x MS*	TRACRRNAMOD
Custom TRACR RNA	tracrRNA	5 nmol, custom	HPLC	Unmodified, 3x MS*	REQUEST
96 or 384 well-plates	crRNA, sgRNA	Custom (inquire)	HPLC, desalted	Unmodified, 3x MS*	CUSTOM

* Chemically modified synthetic gRNAs containing stabilizing 2'-O-methyl and phosphorothioate linkages

Learn about the many products we can provide to help take your genome engineering & modulation experiments Beyond the Bench by visiting:

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Visit our CRISPR request form at: SigmaAldrich.com/CRISPRrequest

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