Alt-R™ CRISPR-Cas9 Libraries

Perfect for researchers looking for easy design of their Cas9 libraries and custom configurations for CRISPR screening applications

- Easy online design tool
- Order in minutes
- Integrated on-and-off target analysis
- Flexible and customizable

Tailored libraries. Powerful results.

Our intuitive design and ordering tool saves critical time in your CRISPR screening by allowing you to easily select from common gene family panels or upload your gene targets for immediate online custom design and ordering—and your personalized dashboard automatically saves completed designs for future orders. These libraries were developed to address the need for better CRISPR screening solutions. They are chemically modified guide RNAs (gRNAs) synthesized on the IDT proprietary high-fidelity RNA manufacturing platform to provide high quality, reliable gRNA libraries with fast delivery.

Skip the consultations and emails—design and order from your desk

Benefits

Features	Benefits
Option to select from predesigned gene families	No need to identify the genes of interest
Completed library designs are auto-saved in your dashboard and can be downloaded	Always have access to your designs even when logging off
Easy options to customize pooling strategy, plate layout, normalization and formulation	Customize your library and integrate into your workflow
Clear visual of your individual plate maps and their wells	Easier to confirm that everything is correct and make final adjustments prior to ordering
Option to integrate rhAmpSeq™ design to your library design, synchronized to your library plate layout	Reduces hurdles for on and off-target analysis after editing

Alt-R CRISPR-Cas9 sgRNAs provide highly efficient editing in jurkat cells

To highlight the editing efficiency of sgRNAs, we designed sgRNAs targeting 255 sites across the human genome and delivered them to Jurkat cells (a human T-lymphocyte-derived cancer cell line) along with Alt-R *S.p.* WT Cas9 Nuclease V3. The result of this experiment shows that Alt-R CRISPR-Cas9 sgRNAs provide high levels of editing (**Figure 1**).

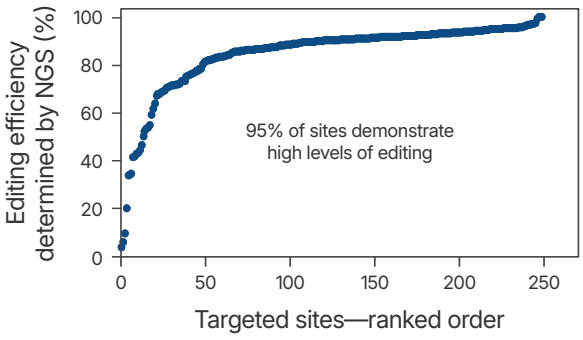

Figure 1. High levels of editing with Alt-R CRISPR-Cas9 sgRNAs. Ribonucleoprotein (RNP) complexes were formed with Alt-R *S.p.* WT Cas9 Nuclease V3, combined with Alt-R Cas9 sgRNAs synthesized for 255 randomly selected Cas9 guide RNA sites across the human genome. RNP complexes (4 µM) were delivered into Jurkat cells via a Nucleofector™ system (Lonza) in the presence of Alt-R Cas9 Electroporation Enhancer. Genome editing efficiencies were determined by target amplification followed by next generation sequencing (NGS) on an Illumina™ instrument.

Library Specs

Features	Options
Design	Cas9 design available with design tool, custom and user-provided designs also accepted
Guaranteed yield	0.1–10 nmol per oligo, delivered dry or formulated
Cas9 gRNA formats	sgRNA crRNA (without tracrRNA)
gRNA lengths supported	19–20 nt (sgRNA or crRNA)
Chemical modifications	2′-O-methyl RNA, PS linkages, end-blocking Alt-R modifications
Plate Types	0.2 mL PCR 96P, 0.5 mL V bottom 96P, 1.2mL deep well 96P, 0.12 mL V bottom 384P, 0.24 mL deep square well 384P
Formulation types	Arrayed format, multi-guide per well (pooled by gene) Arrayed format, single guide per well Custom formulations upon request
QC	Individual ESI/MS
Buffers	RNase-free water IDTE Buffer pH 7.5
Quantity	0.1–10 nmol per oligo
Volume	20–800 µl
Concentration	0.125–500 µM
Available predesigned gene families	Druggable genome, drug targets, transcription factors, ubiquitin enzymes, ion channels, proteases, protein kinases, GPCRs, phosphatases

Library solutions for other CRISPR systems

Don’t see what you’re looking for above? We are continually expanding our CRISPR library products, and we may have what you need. If you are interested in other chemically modified gRNAs (such as CRISPR on/off systems) targeting any sequence from any species, or other custom needs we’re happy to help, email our CRISPR experts today to discuss customized solutions for your research at **CRISPR@idtdna.com**.

For more information, visit **idtdna.com/CRISPRlibraries**