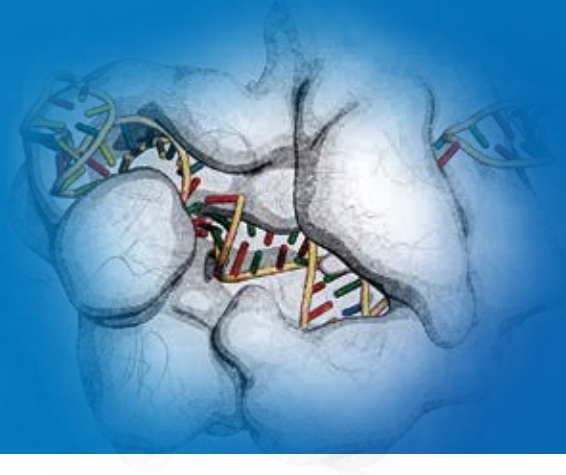
Synthetic CRISPR RNA and Cas9 Nuclease Reagents

—for the BEST genome editing results!

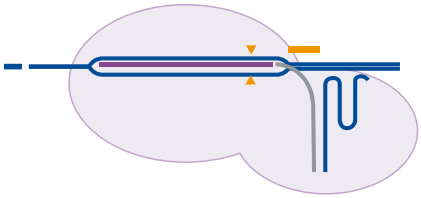


CRISPR/Cas9-mediated gene editing is a powerful technique that allows you to create knock-in/out mutations in any gene and any cell. Using the CRISPR/Cas9 ribonucleoprotein (RNP) system has many advantages over the other forms of gene editing, for example plasmids or lentivirus based methods:

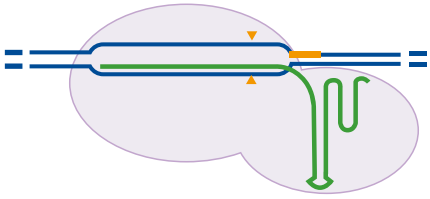
- DNA free
- Detectable at high levels shortly after transfection
- Quickly cleared from the cell for less off-target effects
- Highly efficient even in hard-to-transfect cells
- Best for *in vivo* studies

RNP Editing Using Synthetic CRISPR RNA Oligos

RNP editing using synthesized crRNA oligo



RNP editing using synthesized sgRNA oligo



Studies show that sgRNA has better stability than crRNA:tracrRNA when duplexed with Cas9[1-2].

1. Hendel, *et al.*, Chemically modified guide RNAs enhance CRISPR-Cas genome editing in human primary cells. Nat. Biotechnol., 33 (2015) 985-989.
2. Ryan *et al.*, Improving CRISPR–Cas specificity with chemical modifications in single-guide RNAs. Nucleic Acids Research, 46 (2018) 2: 792–803.

Is Your sgRNA Pure Enough for CRISPR Experiments?

*Choose **GenScript HPLC-purified** sgRNA to avoid data inconsistency resulting from sample impurities!*

- **ISO9001 certificated,** unmatchable quality assurance
  - **ESI-MS guaranteeing** mass variation less than 1‰
  - **RNase-free HPLC** results guaranteeing more than 90% purity
- Offer **modified sgRNAs** for better stability and editing efficiency
- Shipped in as short as **8 business days**
- **Fully customizable,** 97-103nt, allowing for greater flexibility in sgRNA design
- **4 nmol guaranteed delivery quantity from just $259**

GenScript
Make Research Easy

Synthetic CRISPR sgRNAs

GenScript CRISPR single-guide RNAs (sgRNAs) are 97-103 nt, fully customizable RNA oligonucleotides, allowing for greater flexibility in your CRISPR experiential design.

Product	Length	Quantity	Pricing
New! Unmodified GenCRISPR sgRNA	97-103 nt	4 nmol	$259
New! Modified GenCRISPR sgRNA*	97-103 nt	4 nmol	$359

* For modified sgRNAs, 2'-O-methyl and phosphorothioate modifications will be automatically added to the first three 5' and 3' terminal residues of the sgRNA for better stability and editing efficiency.

Synthetic CRISPR crRNAs

GenScript CRISPR RNAs (crRNAs) are short 36 nt RNA oligonucleotides which contain a short 20 nt sequence which guide the CRISPR/Cas9 complex to genomic targets for gene editing.

Product	Quantity	Pricing
GenCRISPR crRNA	2 nmol	$95
GenCRISPR crRNA	10 nmol	$125
GenCRISPR crRNA	20 nmol	$225

Synthetic CRISPR tracrRNAs

GenScript CRISPR/Cas9 trans-activating crRNAs (tracrRNAs) are 67 nt RNA oligonucleotides which together with the crRNA and Cas9 nuclease, form the activated CRISPR/Cas9 ribonucleoprotein complex.

Product	Quantity	Pricing
GenCRISPR tracrRNAs	5 nmol	$95
GenCRISPR tracrRNAs	10 nmol	$125
GenCRISPR tracrRNAs	20 nmol	$225

Cas9 Endonucleases

GenScript provides Cas9 contains a N-terminal nuclear localization signal (NLS) and C-terminal NLS for optimized nuclear compartmentalization, Cas9 with an EGFP and a 6x(His) sequence on the C terminal end, as well as Cas9 Nickase for single strand cut.

Product	Quantity	Pricing
NLS-Cas9-NLS Nuclease	100 µg (4mg/ml)	$179
NLS-Cas9-EGFP Nuclease	100 µg (3mg/ml)	$229
NLS-Cas9-D10A Nickase	100 µg (4mg/ml)	$319

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