

# GenCRISPR sgRNA Design Tool Protocol

## Enabling Easy & Precise Design

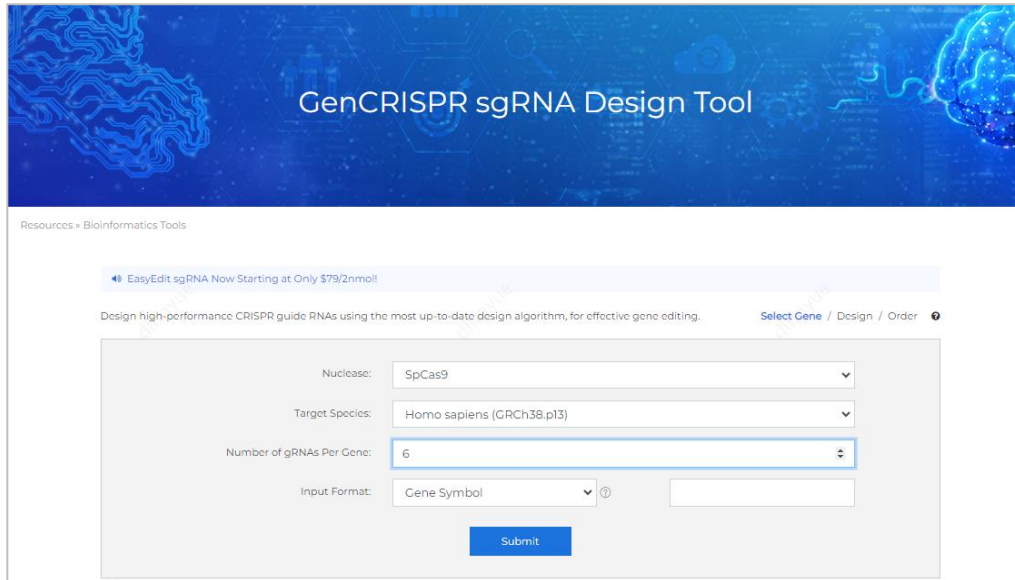
Presenter:

Date:

# Applications & Advantages – sgRNA design tool

## What is sgRNA design tool?

- Design sgRNA sequences for knock-out experiment, downstream order **EasyEdit sgRNA / SafeEdit sgRNA**



Resources > Bioinformatics Tools

EasyEdit sgRNA Now Starting at Only \$79/2nmol!

Design high-performance CRISPR guide RNAs using the most up-to-date design algorithm, for effective gene editing. [Select Gene](#) / [Design](#) / [Order](#)

Nuclease: SpCas9

Target Species: Homo sapiens (GRCh38.p13)

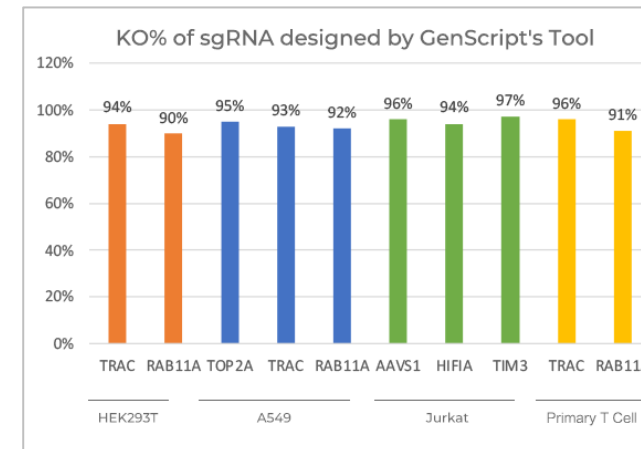
Number of gRNAs Per Gene: 6

Input Format: Gene Symbol

Submit

## Advantages of sgRNA design tool

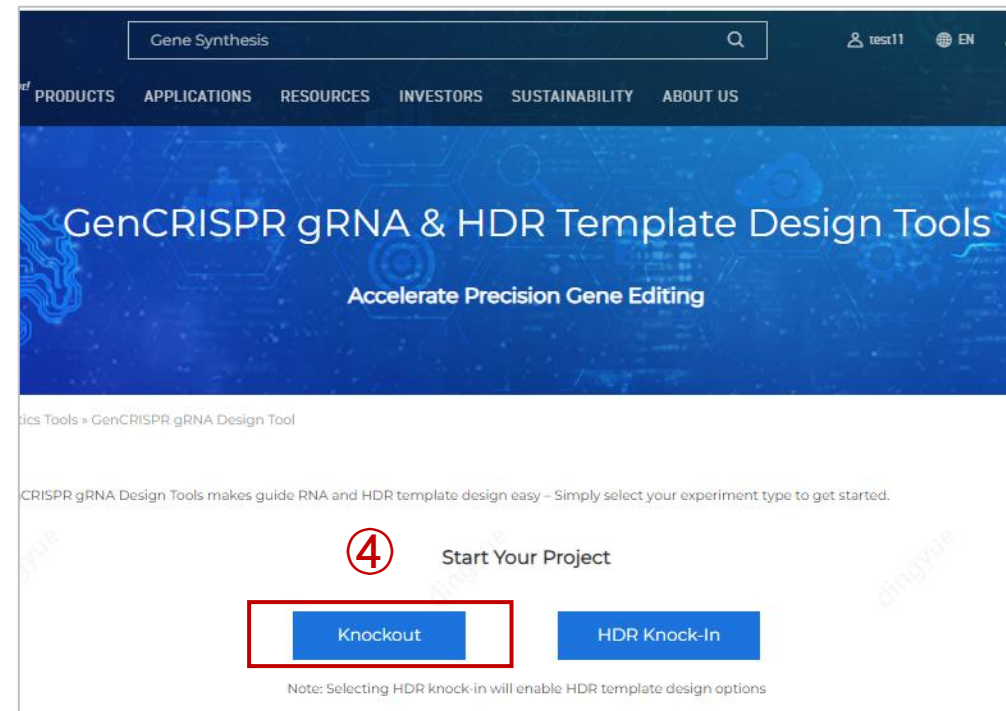
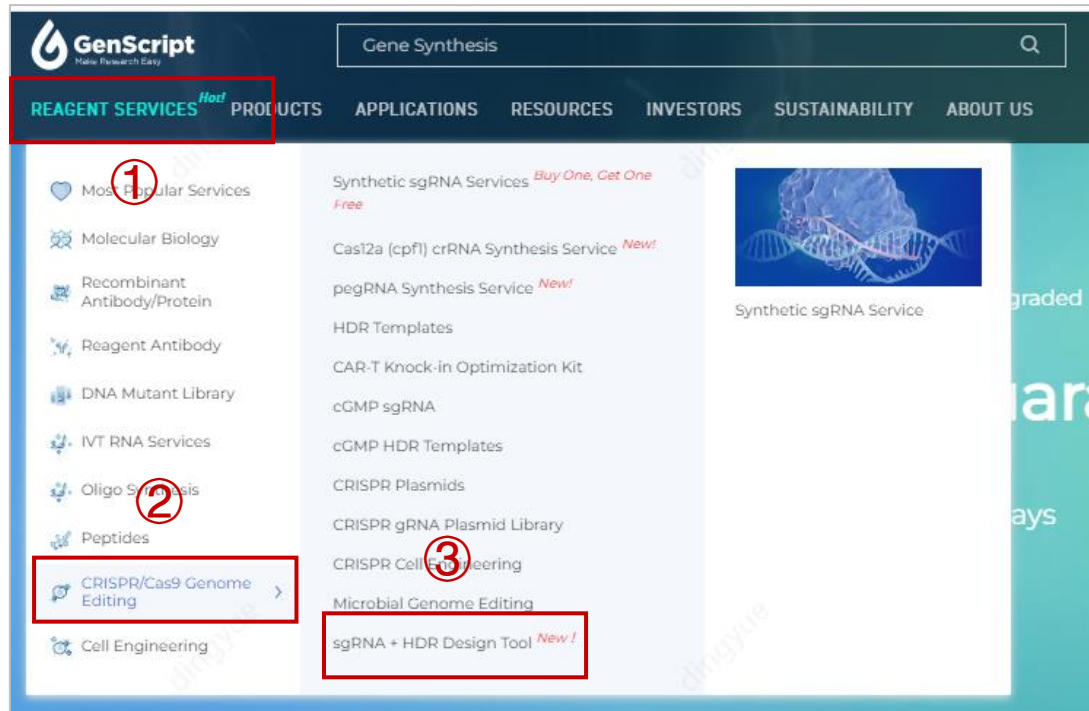
- Comprehensive applications:** Support 10 species, Cas9 and Cas12a
- More precise design:** updated on-target and off-target scores
- Enhance editing efficiency:**
  - Designs target early exons to avoid truncated functional proteins
  - Higher transcript coverage
  - Ideal GC% for sgRNA
- Validated efficiency:** Indel% up to 97% validated by experiments



# Design Process – sgRNA design tool

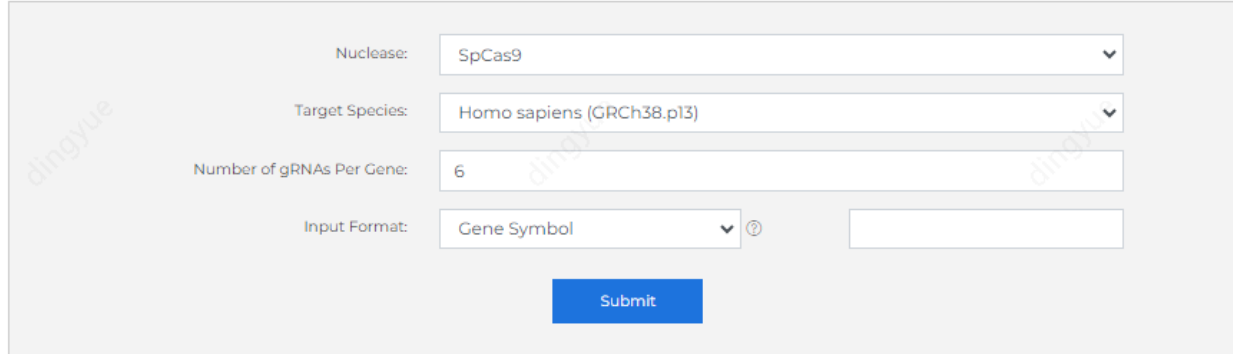
## Where can we find sgRNA design tool?

1. Visit the address: <https://www.genscript.com/tools/gRNA-design-tool>
2. Find the tool in official site:



# Design Process – sgRNA design tool

## sgRNA design tool design process



The screenshot shows the sgRNA design tool interface with the following fields and values:

- Nuclease: SpCas9
- Target Species: Homo sapiens (GRCh38.p13)
- Number of gRNAs Per Gene: 6
- Input Format: Gene Symbol

A blue "Submit" button is located below the input fields.

### Step 1. Enter your request

1. Select Nuclease / Select species / Enter Gene symbol
2. Click “submit”



# Design Process – sgRNA design tool

GenScript  
Make Research Easy

test11 CONTACT US MY ORDER 12

sgRNA Ordering (\* Required Fields) Information > Cart > Confirm Order > Result Feedback

\* Delivery Format: Dry Powder

\* Format: Single Tubes

Enter the sgRNA sequence(s) into the spreadsheet below. Clear Table

	* Name	* Input Sequence	Final sgRNA Sequence	Length	*Quantity	*Purity	*Aliquoting Into
1	ADAR-1	AATAGTATCCCGCAGCACC	m <sup>A</sup> m <sup>A</sup> m <sup>U</sup> rArGrUrArUrCrCrGrCrGrCrArGrC	20 nt	2 nmol	EasyEdit	1
2	ADAR-2	ATGATGGCTCGAAMCTCACC	m <sup>A</sup> m <sup>U</sup> m <sup>G</sup> rArUrGrGrCrUrCrGrArArArCrUrC	20 nt	2 nmol	EasyEdit	1
3	ADAR-3	CAGCTGAAGAACCCATCAG	m <sup>C</sup> m <sup>A</sup> m <sup>G</sup> rCrUrGrArArGrArArCrCrCrArL	20 nt	2 nmol	EasyEdit	1
4							
5							
6							
7							
8							
9							
10							

Add [ ] rows Apply

Custom Primer for Assessing Editing Efficiency

Enter the primer sequence(s) into the spreadsheet below. Clear Table

	* Primer Name	* Primer Sequence(5'->3')	Length	Quantity
1	ADAR-1 Pr1 LeftPrimer	AAAGAACCCAGAGTTCCTC	20 nt	2 nmol
2	ADAR-1 Pr1 RightPrimer	ATATTCTACAGCCCCTGA	20 nt	2 nmol
3	ADAR-2 Pr1 LeftPrimer	TCACCTGTATATACCCACA	20 nt	2 nmol
4	ADAR-2 Pr1 RightPrimer	TTGACTAGCGAAGTGGGCAT	20 nt	2 nmol
5	ADAR-3 Pr1 LeftPrimer	AGAAACAGGCAAGAGCCCA	20 nt	2 nmol

Add [ ] rows Apply

Add To Cart

## Step 3. Order your sgRNA

1. Select quantity, purity, aliquoting tubes
2. Click “Add to cart”
3. Click “Continue” → “Get a quote” → “Thank you for your Quotation!”

### Notes:

- Click “Clear Table” if you do not need product in the table. (red labeled box)