GenScript
Scripting Possibilities

GenCRISPR sgRNA Design Tool Protocol

Enabling Easy & Precise Design

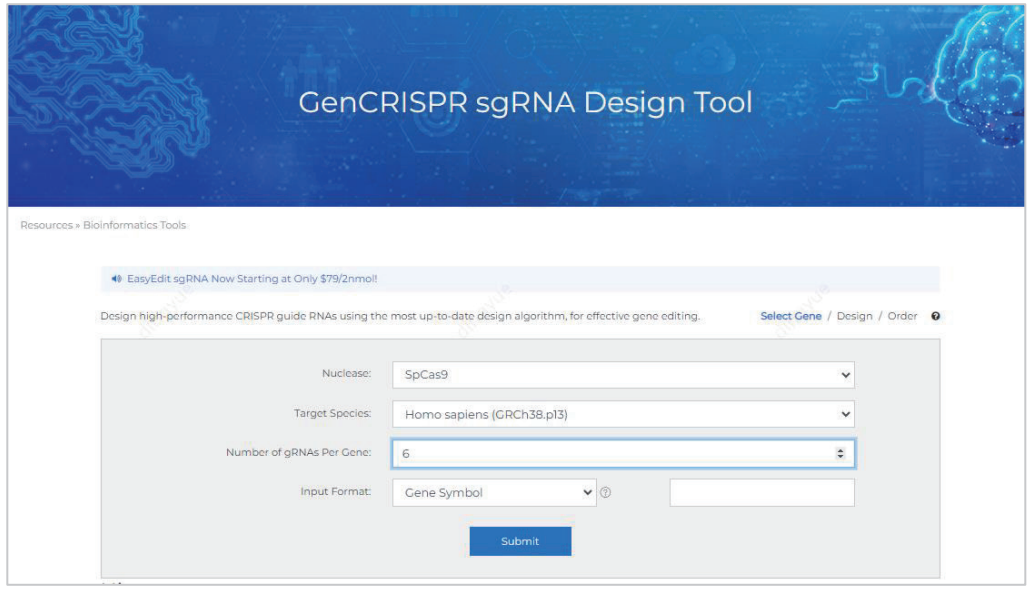
Presenter:

Date:

Applications & Advantages – sgRNA design tool

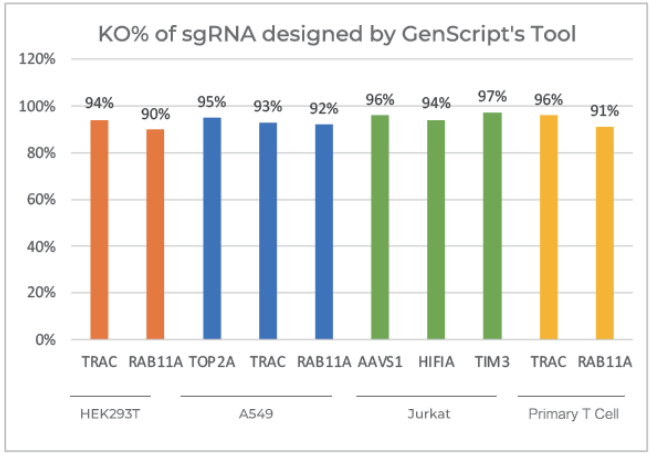
What is sgRNA design tool?

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



Advantages of sgRNA design tool

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



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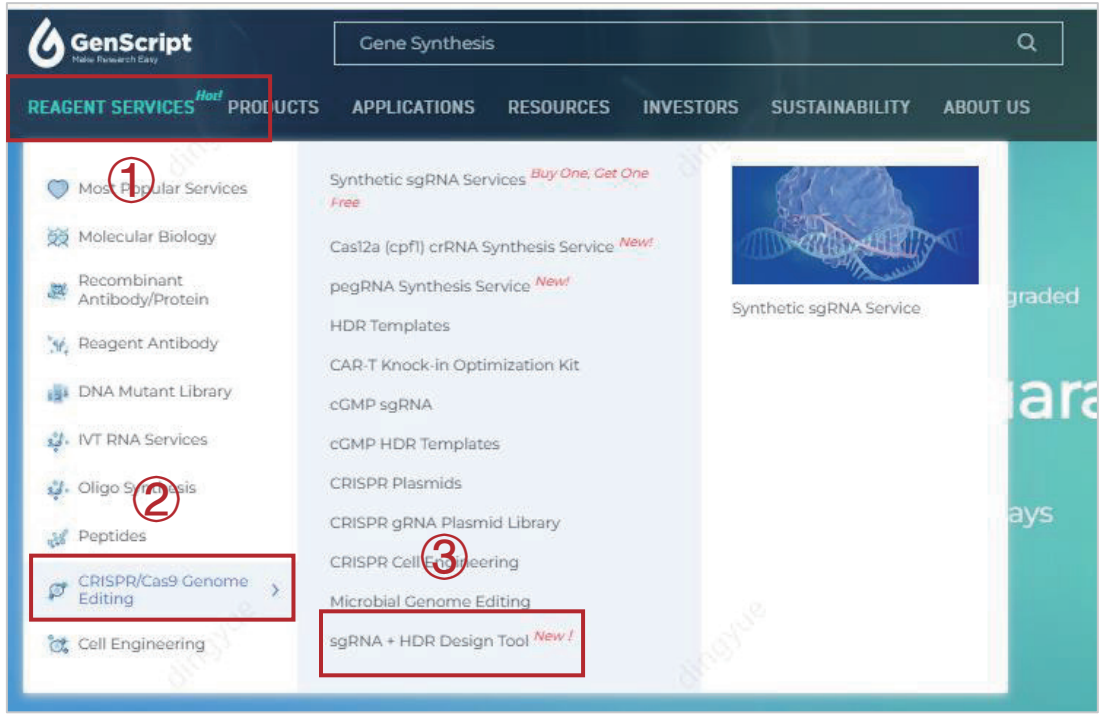
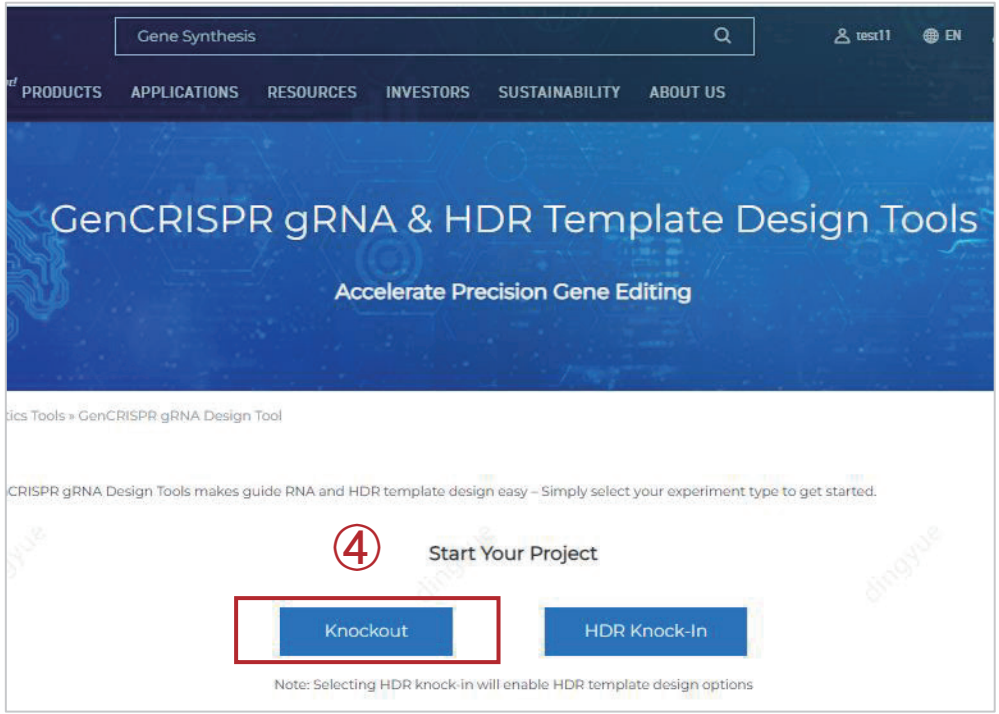
Design Process – sgRNA design tool

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:





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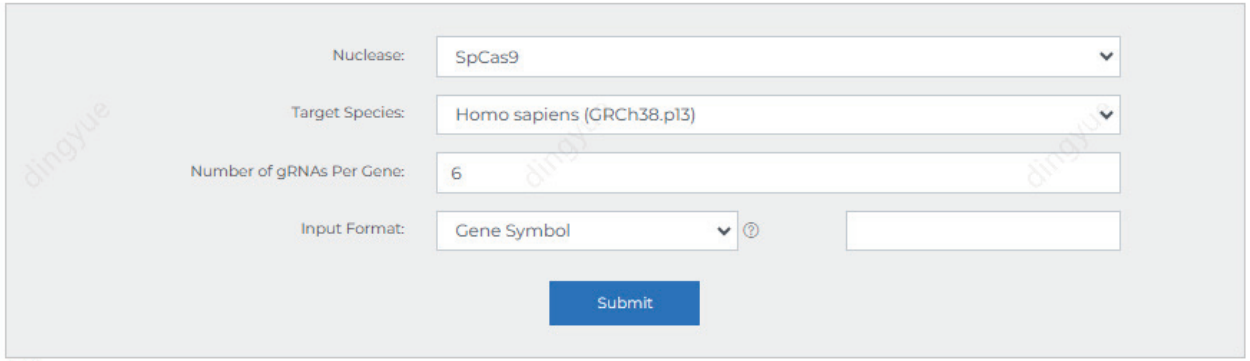
Design Process – sgRNA design tool

sgRNA design tool design process



Step 1. Enter your request

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

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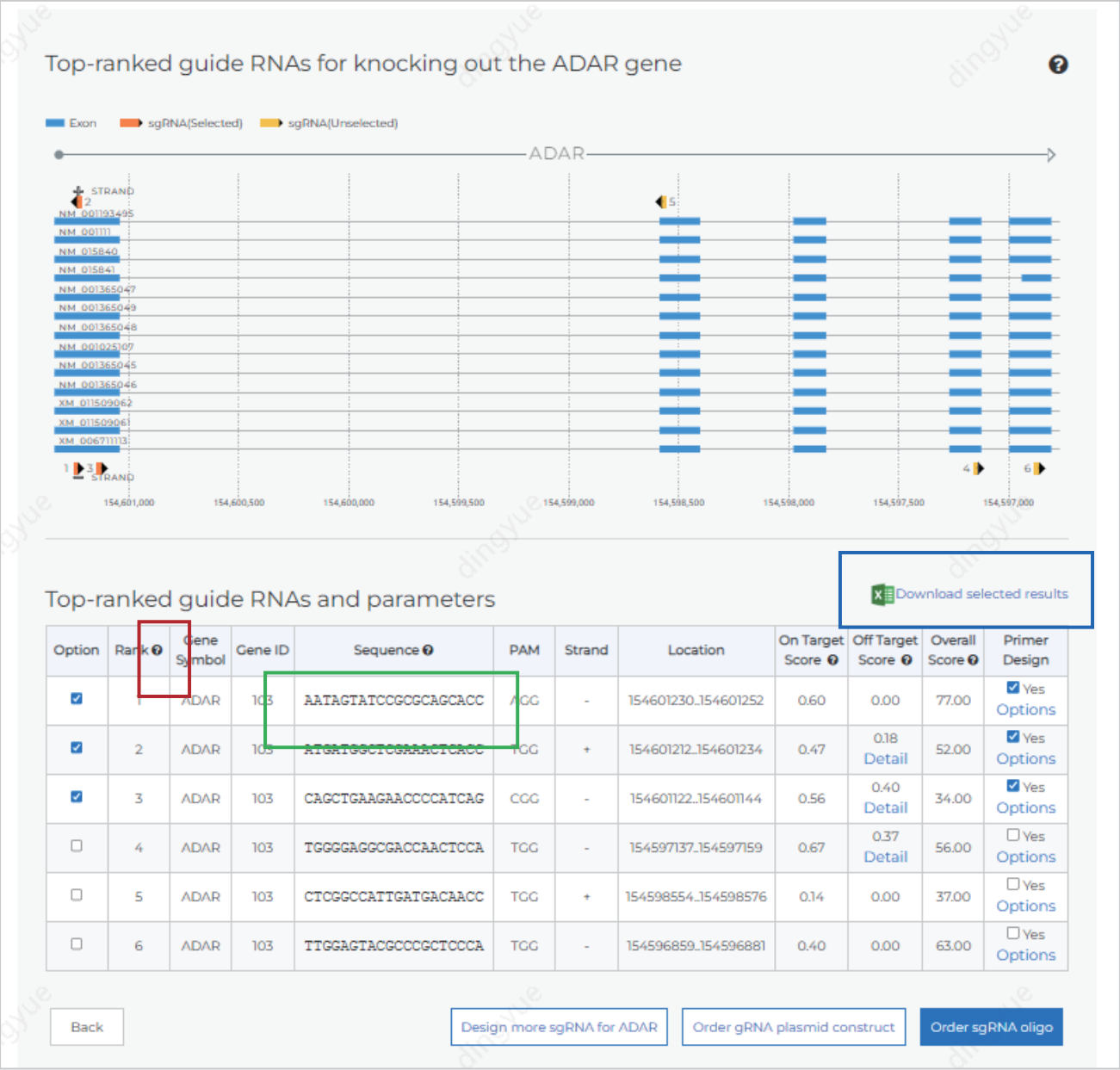
Design Process – sgRNA design tool



Step 2. Select your sequences

1. We recommend top 3 sequences for one gene
2. Selected desired sgRNA and click "order sgRNA oligo " for chemical synthetic sgRNA or "order gRNA plasmid construct"

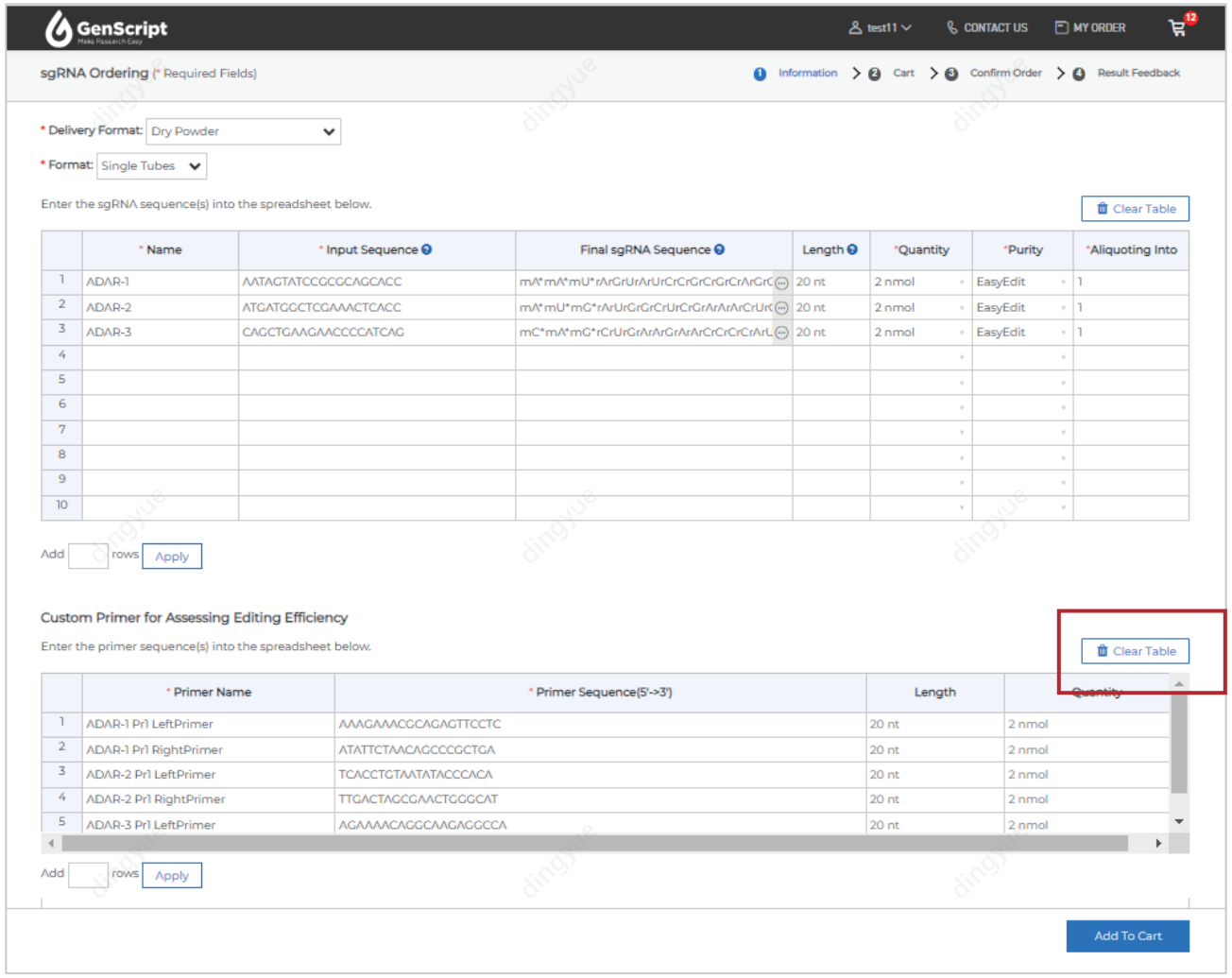
Parameters introduction

- On target score: higher score means higher editing efficiency
- Off target score: lower score means lower off target effects
- Over all score: higher score means higher on target score, lower off target score and cover more transcripts
- **Ranking (most comprehensive evaluation):** Higher over all score and target earlier exon to avoid truncated functional protein

Notes:

- Click the black question marks to see the explanations (red labeled box)
- Click the sequence to view its position in sequence map (green labeled box)
- Click "download selected results" to download the sequences (blue labeled box)

Design Process – sgRNA design tool



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)

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