

sgRNA Library Services

Synbio Technologies has extensive experience in gene editing. Using our proprietary Syno[®] 3.0 Synthesis Platform, we can construct knockout libraries, interference libraries and activation libraries. Currently we have successfully designed and synthesized 100+ high-quality sgRNA libraries. Additionally, we offer services including lentivirus packaging, sgRNA bioinformatics, ready-to-use sgRNA and sgRNA panel.

Why Us?

- Design Experience for Various Species

>20 species

100+ sgRNA libraries

Customized design

- High Quality Library

Accuracy >85%

Coverage of NGS >99%

Uniformity index of NGS <10

- Comprehensive Synthesis Platform

High throughput

High accuracy

Low cost

- One-Stop Solution

sgRNA library design & synthesis

Lentivirus packaging

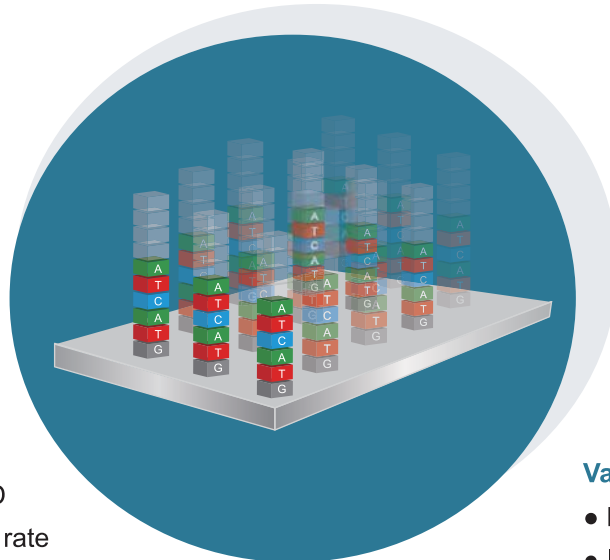
sgRNA bioinformatics

sgRNA Library Design

Synbio Technologies provides professional single sequence sgRNA design and whole-genome sgRNA library design for gene knockout, repression and activation. We are highly skilled in designing sgRNA libraries for various species with high efficiency.

For >20 Species

- Animals
- Plants
- Microorganisms



Customized Platform

- No gene restrictions
- No species restrictions
- Custom vector construction

High Efficiency

- Designed in 1~3BD
- Reduced off-target rate
- High editing efficiency

Various Libraries

- Knockout libraries
- Interference libraries
- Activation libraries

sgRNA Library Process



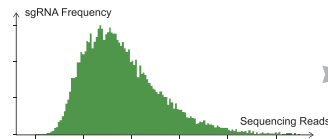
Oligo Synthesis



Plasmid Construction



Plasmid Purification



NGS & Data Analysis



Shipping

Service Specifications

Services	Turnaround Time (Weeks)*	Price*
sgRNA Library Design	1	Quote
sgRNA Library Synthesis	2-3	
sgRNA Library Construction	2-3	
sgRNA Library Plasmid Extraction	1	
sgRNA Library NGS Confirmation	2-4	
sgRNA Library Lentivirus Package	2-3	
sgRNA Bioinformatics	1	

*: sgRNA library service is highly customized. Price and turnaround time will vary depending on the sgRNA library type and size.

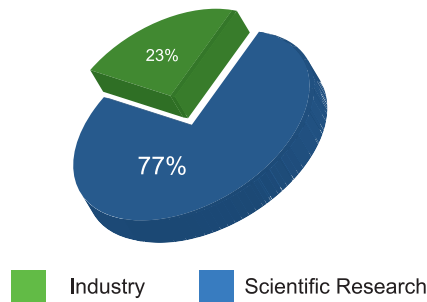
Please contact quote@synbio-tech.com to quote for your specific project.

Global Customer Distributions

The global gene editing market has been growing rapidly since the discovery of the cutting-edge tool CRISPR. The CRISPR technology market is expected to grow from \$551 million in 2017 to \$3,087 million by 2023, at a CAGR of 33% during the forecast period.

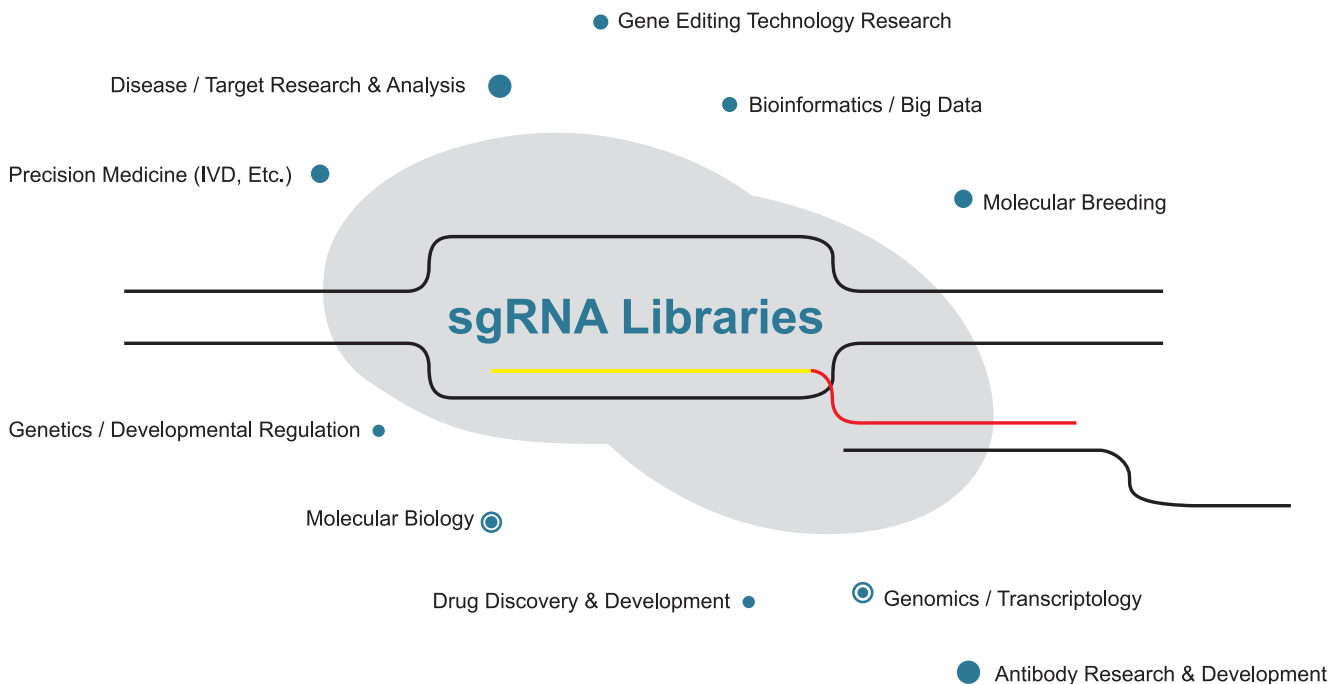
Synbio Technologies provides one-stop sgRNA library services. With our proprietary Syno[®] 3.0 DNA synthesis platform, we have provided 100+ high quality sgRNA libraries to our customers around the world in a fast and efficient manner. The sgRNA libraries not only accelerate the progress of research projects for academic researchers, but also meet the growing needs of industrial users by providing a prerequisite for commercial production.

Global Customer Distributions of sgRNA Libraries



Applications of sgRNA Libraries

sgRNA libraries have been utilized in many fields, such as gene editing technology research, drug discovery & development, gene therapy, molecular breeding, etc. The library can be used to screen genes related to human tumor growth and drug resistance, to treat diseases caused by gene defects, to improve the ability of crops to resist cold and drought, and to study the function of bacterial genome, etc.



Synbio Technologies Case Studies

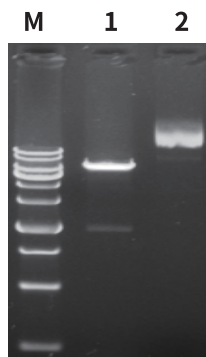
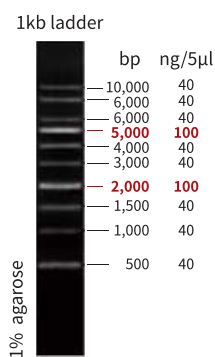
Synbio Technologies' customized sgRNA libraries can meet all of our customer's needs.

Case study

	Species	Storage Capacity	Accuracy	Uniformity Index of NGS Confirmation	Coverage of NGS Confirmation
Animal Genome Editing	Rat	10^7	89%	3.6	>99%
	Mouse	10^6	86%	3.4	
	Human	10^6	92%	5.2	
	Pig	10^7	88%	3.8	
	Goat	10^6	86%	4.3	
	Chicken	5×10^6	93%	3.8	
Plant Genome Editing	Tobacco	10^7	90%	4.7	
	Rice	5×10^6	87%	3.5	
	Cassava	10^7	86%	3.2	
	<i>Brassica napus</i> L.	10^6	96%	7.0	
Microorganism Genome Editing	<i>E.coli</i>	10^6	88%	5.0	
	Yeast	10^7	85%	4.2	
CRISPRa	Human	10^6	91%	4.4	

The following is a case in which the library capacity is 10^6 , the accuracy rate >97%, the coverage rate of NGS confirmation is 99.99%, and the uniformity index <4.6.

Restriction Digestion Map



Lane M: DNA Marker

Lane 1: Plasmid digested by KpnI and BamHI

Lane 2: Plasmid DNA

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