

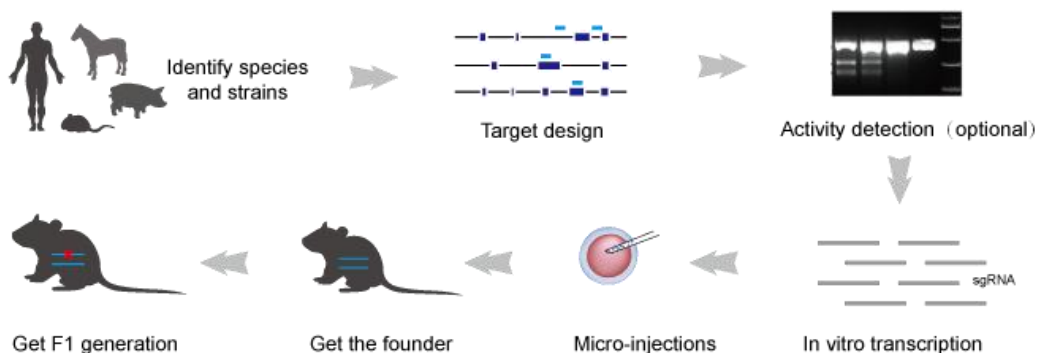
## Genome Editing in Mammalian Cells

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### Genome Editing in Mammalian Cells

CRISPR-Cas9 genome editing has had an extremely large impact on research field of life science. Depending on the effectiveness and simplicity, CRISPR-Cas9 exceeds the traditional genome editing methods, zinc finger nuclease (ZFN) and transcription activator-like effector nuclease (TALEN), becoming the most popular technology in the worldwide. CRISPR-Cas9 was shown in recent research to successfully produce a much higher on-target gene knock-out rate, as well as an economical advantage over both ZFN and TALEN. For these reasons, the CRISPR-Cas9 system has become the most commonly utilized to conduct genome editing within the research fields of life sciences, especially mammalian research. CRISPR-Cas9 can be used on animal models which are instrumental when exploring the cause of human diseases. With this combined data we hope to further our growing knowledge of human disease and mechanisms to counteract their effects. Synbio Technologies can provide genome editing in mammalian cells, including CRISPR-Cas9 sgRNA design, synthesis, activity detection, package into lentivirus, transfer into cells and specific gene knock in/out. With this combination of various services, we are confident in our ability to provide our customers with a specific approach to accomplish their research goals.

### Mammalian Genome Editing Service Process



### Advantages of Mammalian Genome Editing

Contact us

**Synbio Technologies**

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✧ **Wide range of applications:**

CRISPR-Cas9 genome editing technology has no restrictions among genomic sequences, cell types, or species.

✧ **Simple and convenient to construct:**

CRISPR-Cas9 requires only a short sequence, approximately 200bps in length, of the sgRNA sequence to complete target recognition.

✧ **Efficient turnaround time:**

Genetic stability of homozygous strains can be constructed within an efficient timeframe (Time Frame).

✧ **Multiple site knock out:**

Multiple sites can be targeted at the same time to successfully accomplish multi-site knockout.

## Mammalian Gene Editing Service Program

✧ **sgRNA Endogenous Activity Detection**

1. A variety of sgRNA endogenous activity assays guarantee the efficiency of the generated gene knock-out.
2. The methods of detection include: SSA activity detection, in vitro cleavage activity detection, and endogenous activity detection.

✧ **Lentiviral Package**

Lentiviral package services offer: transfection of mammalian cells, facilitation of stable Cas9 protein-expressing cell lines, and improving gene knock-out efficiency.

✧ **Small Animal Gene Knock-out**

With our experienced team of R&D engineers, Synbio Technologies is capable of providing gene knockout services for zebrafish, mouse, and rat genomes.

## CRISPR-Cas9 Genome Editing Frequently Asked Questions

- What Are the Advantages of CRISPR-Cas9 genome editing? [Read more](#)
- How was the CRISPR-Cas9 system found? [Read more](#)
- How to apply the CRISPR-Cas9 system? [Read more](#)

## CRISPR-Cas9 Genome Editing Related services

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- ✧ sgRNA design and synthesis:  
Well-designed sgRNA sequences with lowest off-target rate
- ✧ CRISPR Cas9 sgRNA Library Design and Screening:  
fast and efficiently construct sgRNA library with proprietary Syno® 3.0 high-throughput platform
- ✧ CRISPR-Cas9 sgRNA Panel design and construct targeting a metabolic pathway or a series of related genes.
- ✧ Yeast Genome Editing platform provides a one-step service for highly accurate editing.

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