Sigma Aldrich® CRISPR CAS9: empowering and advancing precise genome editing for the research community.

sigma-aldrich.com

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Sigma Aldrich- Pharma and Biotech

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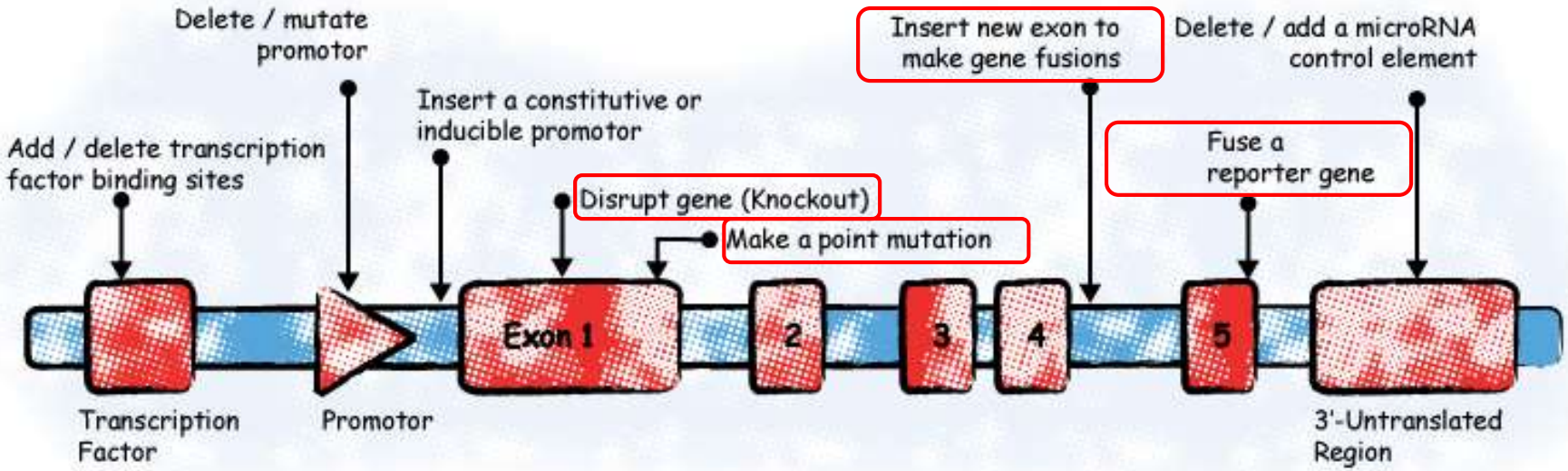
Why Sigma: CRISPR Genome Editing Possibilities

CRISPR works by generating double strand breaks at a specific target site.

Effective design is critical to avoid off target effects. Sigma Algorithm.

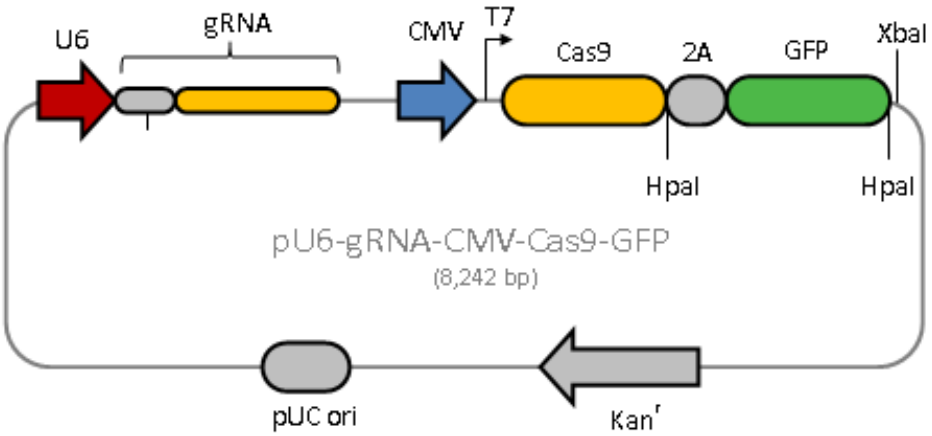
By incorporating a homology donor the following modifications are possible.



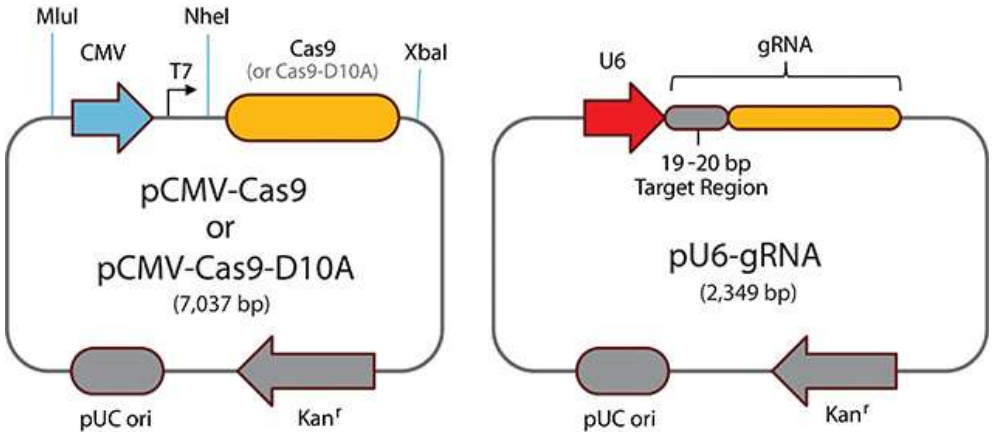
Ready to Use CRISPR Vector

CRISPR/Cas9 Vector

- Available in ready to use formats with multiple vector systems.
- Single plasmid expressing Cas9, GFP, and a customizable gRNA.
- Multiple Predesigned Guide RNAs for every Human, Rat and Mouse Gene via website.



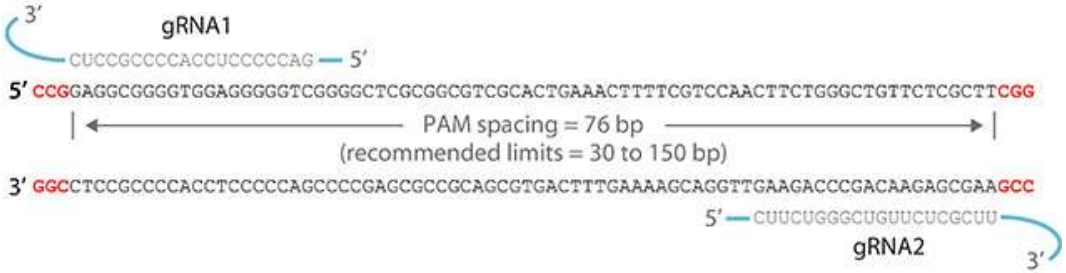
Other CRISPR formats



Double plasmid format

Purified CAS9 & Guide RNA for Microinjection

Lentiviral format for immediate transduction.



CRISPR Paired Nickase constructs

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Sanger libraries and what sets them apart:

Viral library generated in collaboration with the Sanger Institute consisting of approx 20,000 genes each with 2 gRNAs per gene.

For the first time on any library, the human library was constructed taking SNPs into account.

The human library will be available in October and the mouse library in December/January

Sigma Synthetic two part RNA

To overcome the unwanted integration & stress of transfection associated with plasmid vectors we have developed synthetic CRISPR constructs.

Use of Cas9 protein and in-vitro transcribed sgRNA solves the integration issues and improves efficiency but takes weeks to produce.

We have developed a 2 part chemically synthesized CRISPR RNA solves these problems which can be used with Cas9 protein .

3-5 days lead time - quick, cost effective and highly efficient.

Thanks for your attention!

Any questions?

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