SureGuide CRISPR Libraries

Custom Libraries

Benefits

SureGuide Custom CRISPR Libraries

- Flexibility to customize at catalog prices - Define your own libraries for the same price as a pre-configured option
- Design for any organism or application
- Fully define sets of guides and targets
- High fidelity, uniform representation
- Reliable, established DNA synthesis ensures the same quality in every library

SureGuide CRISPR Libraries

Agilent's pooled CRISPR guide libraries come in a variety of formats designed to suit your unique experimental requirements. Pooled libraries require both uniform representation and high fidelity to reduce screening, improve analysis and speed your time to results. All of our libraries, whether standard, genome-wide content or fully customized pools, are synthesized on our industry-leading DNA oligo manufacturing system, so you can be sure of getting the same quality and consistency out of every assay.

Custom Ready-to-Clone Amplified CRISPR Libraries

These libraries are delivered as pre-amplified oligo pools that are ready-to-clone into Agilent's lentiviral vector. The entire guide region can be customized to your specifications, allowing the flexibility to target new regions, design your own genome-wide or targeted screens, and even explore alternative CRISPR applications. Applications which make use of a U6 promoter can benefit from Agilent's library-based cloning technique using our proprietary SureVector technology.

Custom Ready-to-Amplify CRISPR Libraries

For full flexibility, Agilent also offers fully custom CRISPR libraries where the promoter, cloning strategy, and entire scaffold can be synthesized to your specifications. These custom libraries come in kits containing all of the reagents necessary to generate a clonable CRISPR library.

Integration of SureGuide CRISPR library in Genomics Assay Workflow

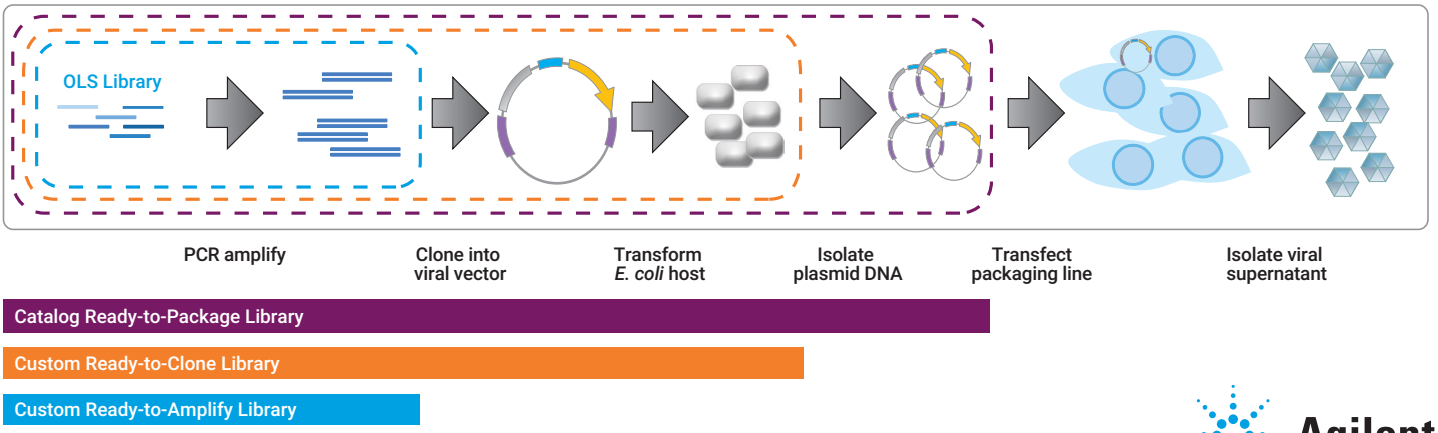

Figure 1. Agilent offers CRISPR libraries in a variety of formats, from plasmid libraries to unamplified oligo pools.

Agilent

Trusted Answers

Guide Representation Comparison with Competitor Libraries

Libraries	Missed Guides	90th/10th percentile	95th/5th percentile	99.5th/0.5th percentile
Agilent option 1	1	2.32	3.04	6.72
Agilent option 2	1	2.47	3.38	11.06
Agilent option 3	1	2.38	3.19	9.83
Agilent option 4	1	1.99	2.64	8.30
GeCKO (Broad)	?	8.73	16.00	NA
GeCKO (Competitor)	39	5.29	9.83	68.40
GeCKO (Competitor) expanded	204	6.00	11.95	333.00

Table 1. With <.01% missed guides, you can be sure the guides in your library will be present in your delivered library. The uniformity of our libraries has an average 90/10 ratio of 2.29, which is less than half that of our competitor's libraries (5.29).

Expected Error Rates in Custom Libraries

Features	Plasmid Libraries				OLS	
	average	Std Dev	average	Std Dev	average	stdev
Number of Libraries	4		4		10	
Deletion across LTR	5.1%	2.3%			NA	NA
No error	87.8%	1.1%	92.6%	1.2%	91.1%	1.5%
Point mutation	2.1%	0.4%	2.2%	0.4%	2.9%	1.1%
Deletions	4.9%	0.8%	5.2%	0.9%	6.0%	1.3%

Table 2. Agilent's synthesis platform provides the highest quality libraries, whether catalog or custom. Both quality components, guide representation and guide fidelity, are addressed by Agilent's process, assuring we deliver the best CRISPR libraries commercially available.

Instructions to Order Custom Libraries

Custom ready-to-clone libraries (G7555A) are available in three sizes, up to 10,000 guides, up to 30,000 guides and up to 60,000 guides. Promoter elements are included in the construct and are a U6 promoter optimized for human applications (alternative promoters can be ordered in an unamplified format). You will provide to your Agilent representative either: (1) a text file containing the variable sequence of the guide corresponding to your targets, (2) a list of genomic regions preferably in a .bed format or (3) a list of target gene names using the 'NCBI gene' nomenclature. Options 2 and 3 are only available for *S. Pyogenes* Cas9. Custom ready-to-amplify libraries (G7555B) are available in four sizes, up to 5,000 guides, up to 25,000 guides, up to 50,000 guides and up to 100,000 guides. To order a custom library you will provide the full sequence of the construct you will be cloning.

Ordering Information

	SureGuide GeCKOv2 CRISPR Libraries	SureGuide Amplified Custom CRISPR Libraries	SureGuide Unamplified Custom CRISPR Libraries
Part Numbers	G7553A - Human G7554A - Mouse	G7555A - Human (hU6 promoter)	G7555B - Any species
Library Format	Ready-to-package plasmid library	Ready-to-clone amplified DNA library	Ready-to-amplify DNA library
Delivery	Lentivirus	Designed for lentivirus, user choice	Users choice
Number of Guides	Human - 123,411; Mouse - 130,209	Up to 60,000	Up to 100,000
User Supplies	Lentivirus packaging, delivery, screening	Cloning, viral packaging, delivery screening	Amplification, cloning, viral packaging, delivery, screening
Sequence Verified	Yes	No	No
Quantity	200 ug of plasmid DNA split into A and B libraries	125 ng of linear, amplified, pooled library	10 pmol of linear, unamplified, pooled library
Also Included	N/A	N/A	Amplification kit
Custom Design Input	None	Up to 50 nt sequence for each guide	Complete sequence up to 200 nt
Control	Mal1-C	User designed	User designed

www.agilent.com/genomics/CRISPR

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