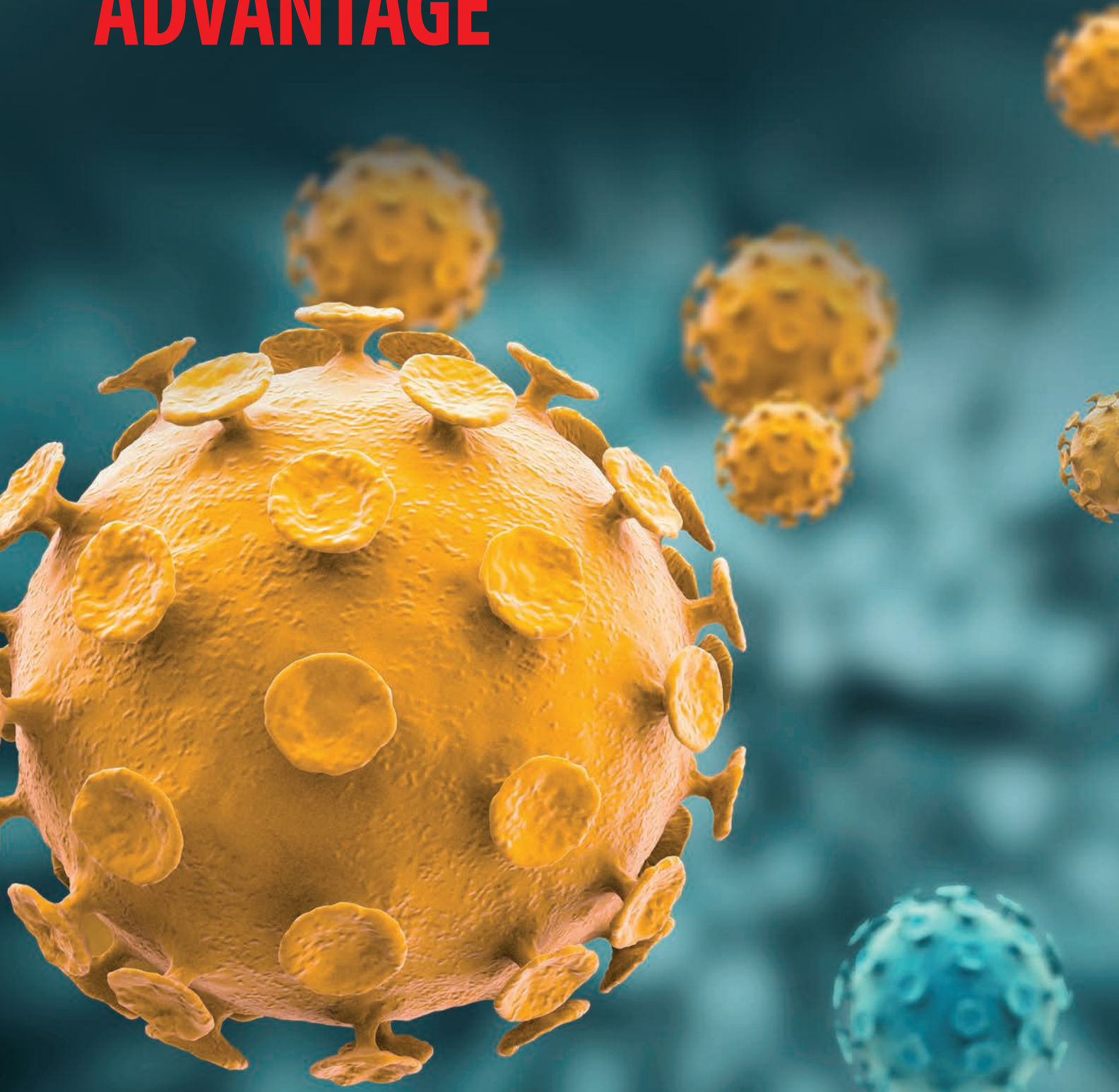


THE SCREENING ADVANTAGE



SANGER ARRAYED LENTIVIRAL CRISPR LIBRARIES

Two leaders in genome editing, Sigma-Aldrich and the Wellcome Trust Sanger Institute, have joined forces to make the first ever arrayed lentiviral CRISPR knockout libraries.

Content

- 2 knockout clones per human and mouse protein-coding gene
- Approximately 34,000 sequence-confirmed clones arrayed over 17,000 human and 18,000 mouse genes

gRNA Design

- Sanger clones target the first half of the protein coding region while avoiding the first 90 bp
- Genomic target sequences are highly conserved, avoiding SNPs, to ensure representation in multiple cell lines
- Stringent design rules for maximizing knock-out and eliminating possible off-target effects

Vector

- Simplify the workflow with puromycin selection
- Illuminate CRISPR-expressing cells with BFP
- Flip the expression components into and out of the genome using transposase

Additional Features

- Better, not bigger: Two optimized clones per gene reduce the time, cost, and scale of screening experiments
- Ready-to-screen: Clones are arrayed in a robotics-friendly 96-well format for high-throughput screening
- Collaborative: Real-time, library validation continues through the Sigma-Aldrich and Sanger Institute partnership

CRISPR CUSTOM POOLS

Focus on the genes essential to your research.

- Custom viral titers, volumes, and aliquoting are available (standard deliverable: 200 μ L at a minimum of 5×10^8 viral particles/mL in 4 x 50 μ l aliquots); quotes available upon request
- All pools are deep-sequenced to verify clone representation and distribution
- Turnaround time: 8-10 weeks from finalization of clone list
- DNA format also available

sigma-aldrich.com/screening

CREATE YOUR OWN
CRISPR POOL

SCREENING WITH CONFIDENCE

As a leader in Functional Genomics screening, Sigma-Aldrich is proud to offer extensive options in both arrayed and pooled Functional Genomics screening. Whether you are reducing gene expression utilizing shRNA or completely knocking out gene expression with CRISPR, we have the right library for your needs.



MISSION[®] LENTIPLEX[®] shRNA POOLED LIBRARIES

Screen thousands of human or mouse genes in a single cell culture dish. Discover novel genes or identify genes involved in important cellular pathways and processes. Eliminate the need for expensive robotics or automation. MISSION LentiPlex Pooled shRNA library screens can be done right at the benchtop, and provide enhanced delivery and long-term gene silencing. Now with even more extended gene and clone coverage, the MISSION LentiPlex shRNA libraries offer you the full-package solution at an affordable price.

New LentiPlex Contents: Human

What's new from the LentiPlex[®] 1.0? Introducing the New Human LentiPlex Complete which contains 4,000+ new additional genes spanning 45,000+ additional clones.

Product Name	Gene Contents	Clone Contents
LentiPlex [®] 1.0*	16,000+	80,000+
LentiPlex [®] 1.5	6,000+	25,000+
LentiPlex [®] 2.0	5,000+	20,000+
LentiPlex [®] 1.5 + 2.0*	11,000+	45,000+
LentiPlex [®] Complete (1.0, 1.5, 2.0)*	20,000+	125,000+

New LentiPlex Contents: Mouse

What's new from the LentiPlex 1.0? Introducing the New LentiPlex Complete which contains 6,000+ new additional genes spanning 35,000+ additional clones.

Product Name	Gene Contents	Clone Contents
LentiPlex 1.0*	15,000+	75,000+
LentiPlex 1.5	4,000+	10,000+
LentiPlex 2.0	7,000+	25,000+
LentiPlex 1.5 + 2.0*	11,000+	35,000+
LentiPlex Complete (1.0, 1.5, 2.0)*	21,000+	110,000+

CREATE YOUR OWN shRNA POOL

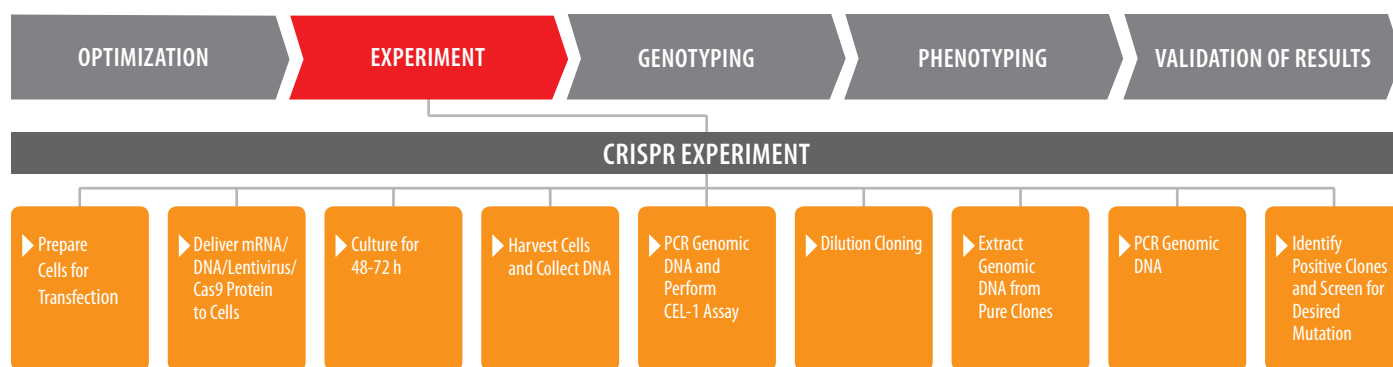
- Specifically target your genes of interest
- Customize your viral titers, volumes, and aliquoting needs for greater flexibility in your screening experiments. DNA format also available.
- Titers and volumes adequate for *in vitro*, *in vivo* and xenograft applications
- Partner with Sigma's next-generation sequencing services for data deconvolution to get the most out of your assays

Send your custom gene list to
MISSIONRNAi@sial.com

YOUR SCREEN BEGINS WITH THE RIGHT REAGENTS.

Sigma-Aldrich provides the full spectrum of products needed to perform your screen. From cell lines to oligos, and everywhere in between, we have you covered.

CRISPR Workflow



Prod. No.	Product Description
D6171	Dulbecco's Modified Eagle's Medium - high glucose
D8537	Dulbecco's Phosphate Buffered Saline
D5796	Dulbecco's Modified Eagle's Medium - high glucose
P4333	Penicillin-Streptomycin
T3924	Trypsin-EDTA solution
G7513	L-Glutamine solution
CLS430720	Corning® cell culture flasks
CLS430825	Corning cell culture flasks
CLS431082	Corning cell culture flasks
CLS430290	Corning 50 mL centrifuge tubes
G5516	Glycerol
T5574	Terrific Broth
G3169	GC5™ Competent Cells
P9620	Puromycin Dihydrochloride Ready Made Sol

Prod. No.	Product Description
T1706	TransIT®-CRISPR Transfection Reagent
NA0410	GenElute™ HP Endotoxin-Free Plasmid Maxiprep Kit
NA1020	GenElute PCR Clean-Up Kit
RTN350	GenElute Mammalian Total RNA Miniprep Kit
T9424	TRI Reagent®
D3687	DirectLoad™ PCR 100 bp Low Ladder
D7058	DirectLoad Wide Range DNA Marker
D9307	JumpStart™ Taq DNA Polymerase
P0982	JumpStart REDTaq® ReadyMix™ Reaction Mix
R2523	REDTaq ReadyMix PCR Reaction Mix
D1806	Taq DNA Polymerase from <i>Thermus aquaticus</i>
CLS4487	Corning Costar® Stripette® serological pipettes, individually paper/plastic wrapped
CLS4489	Corning Costar Stripette serological pipettes, individually paper/plastic wrapped
CLS4490	Corning Costar Stripette serological pipettes, individually paper/plastic wrapped

Acetylate, then activate.

Simplify gene activation
using CRISPR dCas9-p300

Award-winning dCas9-p300 activates endogenous gene expression at high levels using a single gRNA/dCas9-p300 complex, simplifying deployment of the gene modifying tool and opening a new path for activation-based genome wide screening.

The dCas9-p300 system enables the life science community to advance new platforms for drug screening, gene therapy and disease monitoring.

Learn more about CRISPR Epigenetic Activator at sigma-aldrich.com/geneactivator

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