CELLECTA

Custom Engineered Cell Lines

Cellecta has the technology and expertise to engineer a range of cell lines for specific experimental needs. We provide custom knockout, knock-in, knockdown, protein expression, CRISPR Cas9 expression, and reporter cell lines for use in various applications.

- **Reporter cell lines** for compound screens
- **Gene knockout cell lines** for CRISPR or RNAi screens
- **Expression cell lines** to analysis gene function and gene-drug association
- **Validated Cas9 expression cell lines** for targeted CRISPR knockout or sgRNA screening

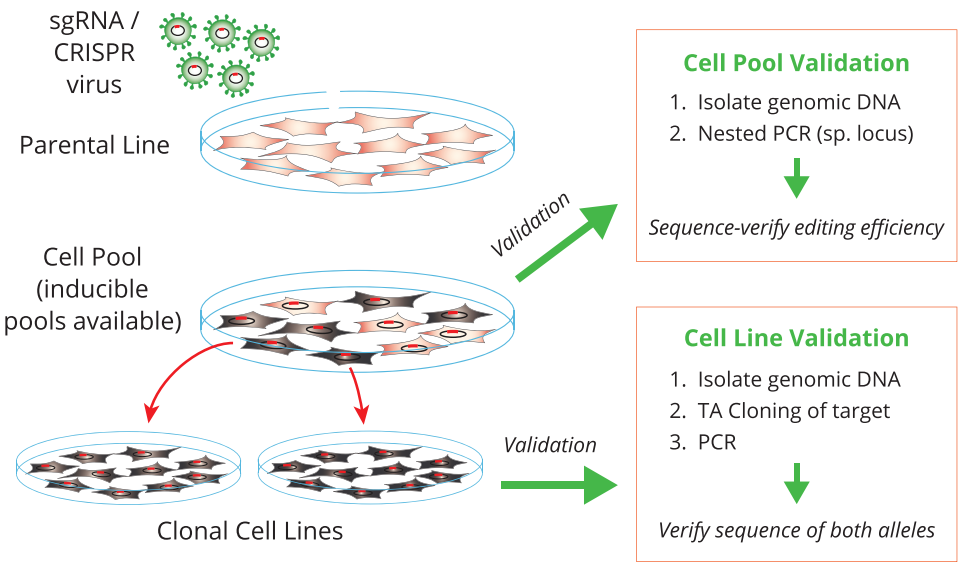
Depending on the specific needs of the project, Cellecta uses a variety of techniques to knock out, insert, mutate, or introduce other genetic modifications to a parental cell line. For instance, we extensively make use of lentiviral technology to efficiently and permanently introduce genetic elements into genomic DNA. For knockout cell lines, however, we use a "zero footprint" approach where CRISPR sgRNA and Cas9 are transiently introduced into cells using episomal constructs to generate the knockout, then are lost during propagation so the only permanent alternation is disruption of the target gene.

Interested in a customized cell line?
Contact us and let us know what you need. Each project is unique and we would be happy to set up a time for our experienced scientists to discuss what you would like to do and go over the options with you.

Isogenic Cell Line Services	Format	Deliverables
CRISPR Knockdown Cells	Cell Pool	Stable cell pool, sequence verified
CRISPR Knockdown Cells	Clonal	Generate clonal cell lines. Assess knockout in (all) alleles. Expand clones(s) of choice.
RNAi Knockout Cells	Cell Pool	Stable cell pool with knock-in data for gene(s) of interest
RNAi Knockout Cells	Clonal	Generate clonal cell lines, measure shRNA knockdown activity by qRT-PCR. Expand clone(s) of choice.
CRISPR Knock-in Cells	Cell Pool	Stable cell pool with knock-in data for gene(s) of interest
CRISPR Knock-in Cells	Clonal	Generate clonal cell lines. Assess knockout in (all) alleles. Expand clones(s) of choice.
cDNA Overexpression Cells	Cell Pool	Stable cell pool, sequence verified
cDNA Overexpression Cells	Clonal	Generate clonal cell lines, measure mRNA. Expand clone(s) of choice.
Transcriptional Reporter Cells	Cell Pool	Stable cell pool, sequence verified
Transcriptional Reporter Cells	Clonal	Generate clonal cell lines, measure transcriptional activity by functional test. Expand clone(s) of choice.

Cell Types Used (some examples)
A431
A549
BT-20
BT-549
CHO-K1
DUI 45
HEK-293
HL-60
Hs 852.T
HuT 102
Jurkat
K-562
MCF-7
MDA-MB-157
MDA-MB-231
MDA-MB-436
MDA-MB-438
MDA-MB-453
MIA PaCa-2
NCI-H1048
NCI-H1395
NCI-H1435
NCI-H727
NCI-H747
NIH3T3
OVCAR-3
Panc 03.27
PANC-1
RAJI
RKO
SK-BR-3
T47D
THP-1
U-2 OS

Knockout Cell Pool and Clonal Cell Line Generation and Validation



(A) Example cell pool sequence validation. (B) Clone sequencing shows a single nucleotide insertion in clones 6,7,8 and a 3-nt deletion in clones 1-5.

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