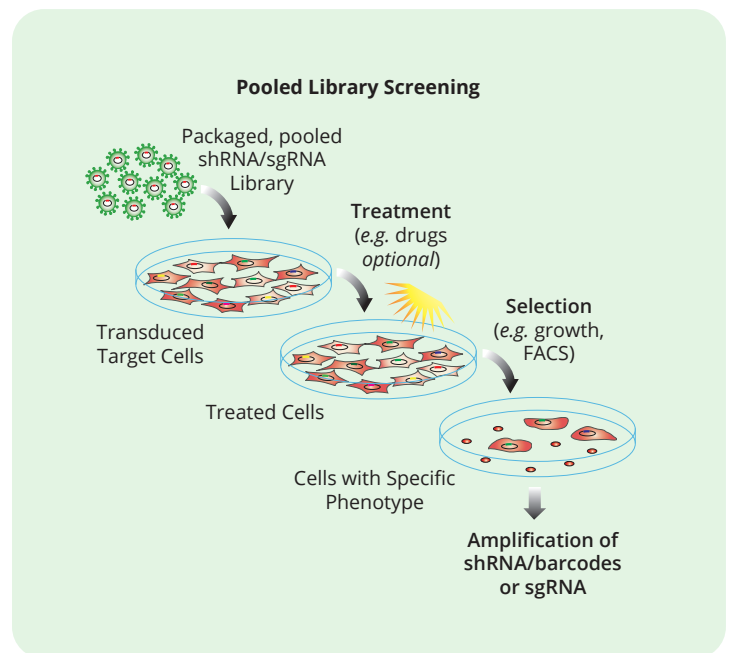# Cellecta Technology Overview

Cellecta is a trusted provider of functional genomics products and services. With over 15 years' experience working with the world's leading pharma, biotech and academic institutions, we can put our expertise to work for you.

CRISPR/RNAi Loss-of-Function or Gain-of-Function Genetic Screens

· **Identify genes** essential for growth and proliferation

· **Find genes** responsible for resistance or sensitivity to compounds or treatments

· **Look for** synthetic lethal interactions

· **Elucidate** the mechanism of action or target pathway for a compound or drug, and more.

We carry out all the steps for a genome-wide or targeted functional genetic screen with pooled lentiviral sgRNA and shRNA libraries in your cell lines or model systems.

Pooled Library Screening

Packaged, pooled shRNA/sgRNA Library

Transduced Target Cells

Treatment (*e.g.* drugs *optional*)

Treated Cells

Selection (*e.g.* growth, FACS)

Cells with Specific Phenotype

Amplification of shRNA/barcodes or sgRNA

DriverMap™ Expression (EXP) & DriverMap™ Adaptive Immune Receptor (AIR) Profiling Assays

Combine the sensitivity and specificity of RT-PCR with the precise quantitation of next-generation sequencing (NGS) technology for expression and immune receptor profiling applications.

· **DriverMap EXP Assay** for high-performance, targeted single-tube expression profiling of up to 19,000 human protein-coding genes.

· **DriverMap AIR Assay** enables comprehensive adaptive immune receptor profiling for all immune sample types

· **Both assays** are available in a variety of kit formats or as a turnkey service

DriverMap™ AIR
Clonotypes Heatmap

DriverMap™ EXP
Biomarkers Heatmap
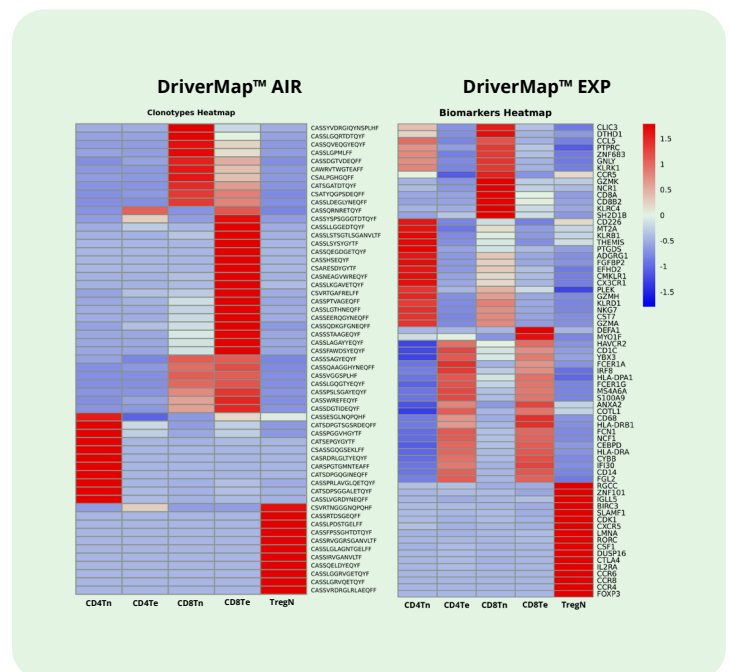
CloneTracker™ Barcode Libraries and Kits

Stably introduce and express unique NGS-detectable barcodes into individual cells in a population. Barcodes can be detected in both DNA and RNA RNA analysis assays, including most scRNA platforms.
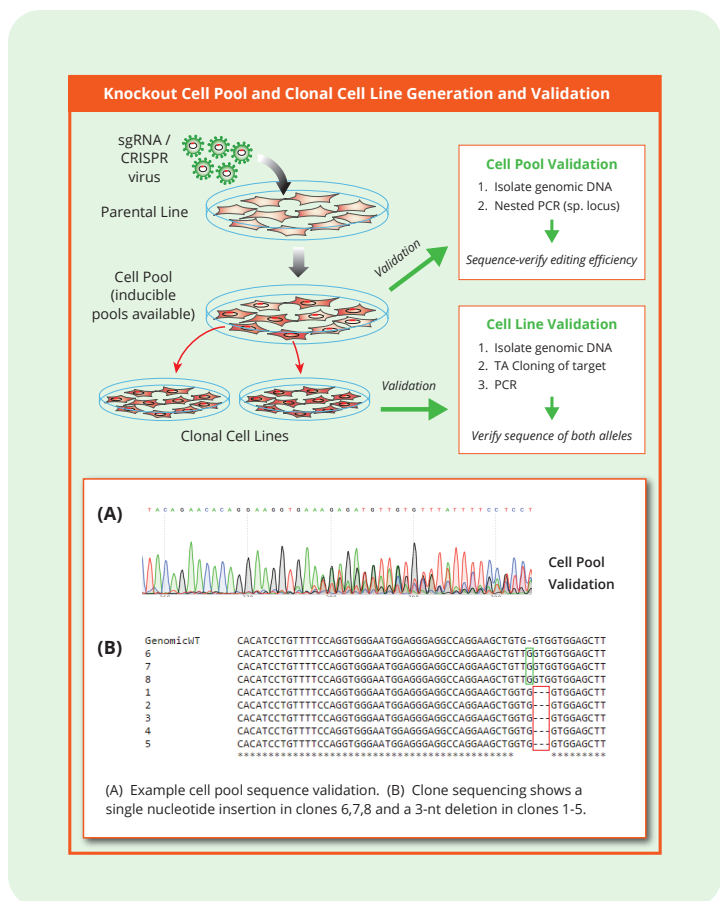
- **Assess** how cell heterogeneity changes in response to drugs or other selections
- **Analyze** which traits allow cells to survive under different conditions
- **Track** how cell diversity changes with differentiation or disease progression
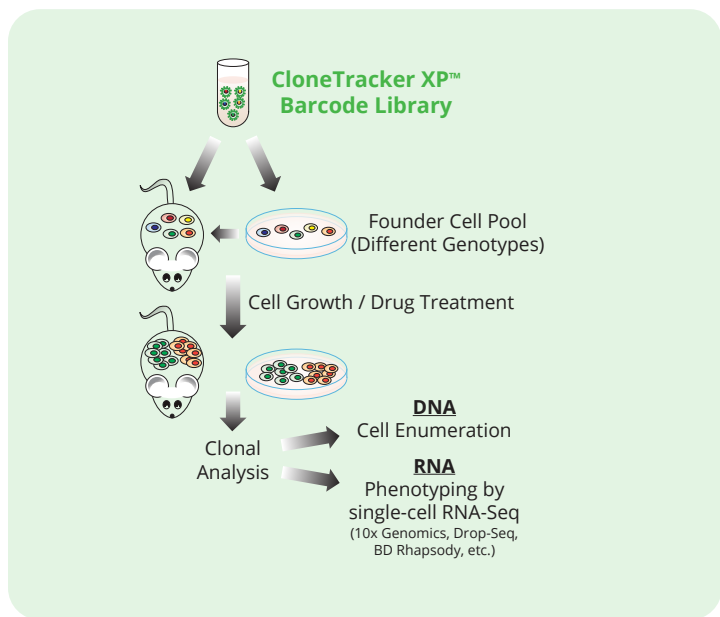
Custom Engineered Cell Lines

Cellecta offers services to make cell lines with targeted gene knockouts or specific knock-in sequences. The approach for each project can vary depending on what cell engineering is required.

- **Knockout or knockdown a gene** in your choice of cell line
- **Zero-footprint CRISPR knockout** using non-integrated sgRNA and Cas9
- **Inducible gene activation and inhibition** with CRISPRa and CRISPRi
- **Reporter cells and other non-CRISPR** mediated engineering and more

(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.

Learn how these and other Cellecta products and services can simplify your workflows and get you to reliable results more efficiently. **Visit cellecta.com or email info@cellecta.com**