

## **Cellecta, Inc. Introduces CRISPRa and CRISPRi Genome-Wide sgRNA Libraries and Mouse Genome-Wide CRISPR Knockout Library to Expand Functional Genomics Screening Portfolio**

*Launch of new human and mouse genome-wide CRISPR gene activation and inhibition libraries and new mouse knockout library will provide greater insights into gene function and accelerate drug target discovery efforts*

MOUNTAIN VIEW, CA—(PRNewswire)—October 2, 2017—Cellecta, Inc. today introduced CRISPRa (for activation) and CRISPRi (for inhibition) genome-wide, human and mouse pooled screening libraries to its extensive portfolio of CRISPR products and services. Cellecta also supplemented its current portfolio of CRISPR gene knockout libraries by adding a Mouse Genome-Wide CRISPR Knockout Library.

These new additions to Cellecta's CRISPR industry-leading, screening portfolio enable researchers to study enhanced gene activation (CRISPRa) or gene inhibition (CRISPRi) without modifying genomic DNA. The gene-regulating CRISPRa and CRISPRi variations make use of an altered CRISPR protein to enhance or inhibit gene expression, rather than inducing mutational changes in a gene's coding sequence. Modulating--rather than permanently knocking out--target genes with mutations offers several advantages for different screening applications. For example, it is possible to reverse the knockdown or upregulation effects of CRISPRi and CRISPRa activities. Access to these new libraries provides researchers with new tools to identify potential drug targets or biomarkers, and elucidate mechanisms of drug action.

The library designs are based on recent publications from Dr. Jonathan Weissman's lab at the University of California, San Francisco<sup>1</sup>. Key features of the new Cellecta CRISPRa and CRISPRi libraries include:

- Single-module format, with each library expressing some 106,000 sgRNAs (human) and 109,000 sgRNAs (mouse) averaging five sgRNAs per gene promoter region
- CRISPRa and CRISPRi libraries targeting approximately 19,000 human genes and almost 20,000 mouse genes
- Approximately 4,000 non-targeting sgRNA controls

The new CRISPR Mouse Genome-Wide Knockout Library, based on the canonical CRISPR/Cas9 system, extends knockout screening capability to mouse model systems. The Cellecta CRISPR mouse knockout library targets all mouse protein-coding genes and features:

- Approximately 80,000 constructs comprise the single-module library
- Four sgRNAs target functional domains and conserved transcript regions in each of 19,600 mouse genes
- Complete panel of standard, non-targeting controls

"With the launch of our new genome-wide human and mouse CRISPRa and CRISPRi libraries, many more researchers will now have access to state-of-the-art technology for functional genetic analysis, which can help accelerate their in-house therapeutic discovery efforts. Cellecta is pleased to offer these resources to all scientists seeking novel, effective ways to study gene function and to model disease," said Paul Diehl, Ph.D., Cellecta chief operating officer.

In addition to a variety of off-the-shelf and custom libraries, constructs and controls, Celecta is a highly respected provider of end-to-end genetic screening services. A complete product catalog is available online at [www.celecta.com/product-catalog/](http://www.celecta.com/product-catalog/)

<sup>1</sup>Horbeck, et al., eLife. 2016 Sep 23:5 doi: 10.7554/eLife.19760.

About Celecta:

Celecta, Inc. is the first commercial provider of a lentiviral-based CRISPR library targeting all 19,000+ human protein-coding genes. Celecta is an industry leader in RNAi and CRISPR technologies for the discovery and characterization of novel therapeutic targets, and targeted gene profiling for biomarker discovery. Numerous scientific papers have been published citing Celecta's functional genomics portfolio offering gene knockout and knockdown screens, custom and genome-wide RNAi and CRISPR libraries, cell engineering, RNAi and CRISPR construct services, and targeted expression profiling and biomarker discovery in disease samples.

Celecta, Inc. is headquartered in Mountain View, California. Further information about the company and its functional genomic products and services may be found online at [www.celecta.com](http://www.celecta.com)

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