

Overcome Barriers of Gene Editing in iPS Cells

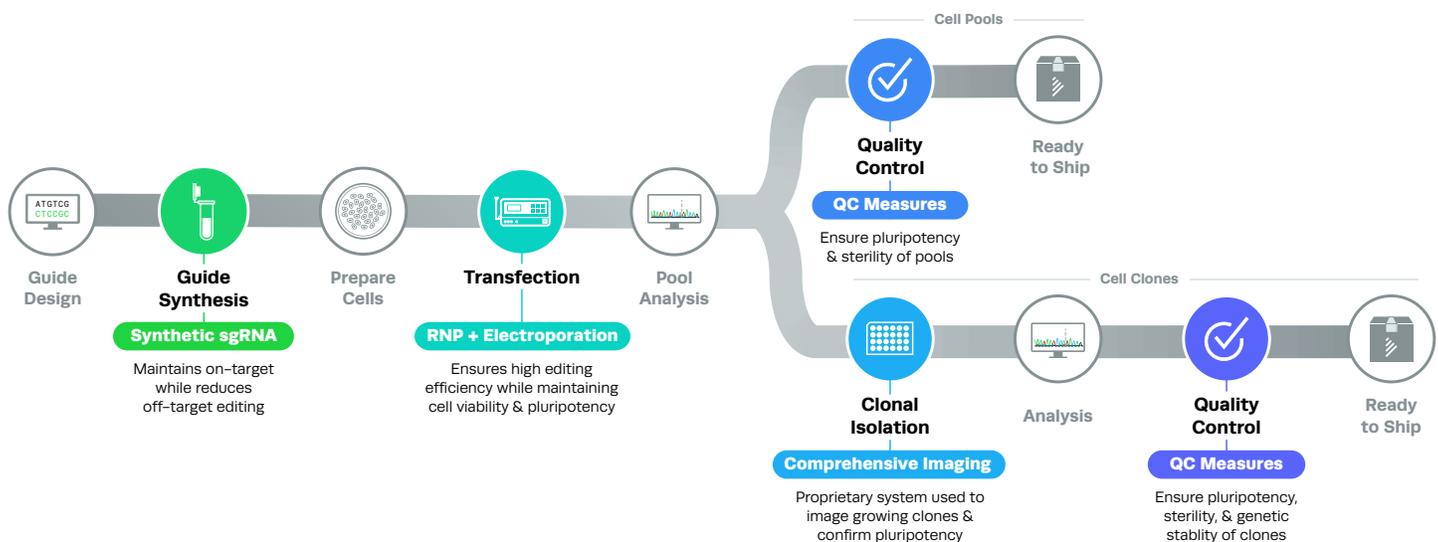
With the capability to differentiate into virtually any cell type, **induced pluripotent stem (iPS) cells** have given researchers unprecedented access to cells that resemble primary tissues. Coupled with the power of CRISPR, the creation of diploid, genetically stable models is now more feasible than ever before.

Researcher's Challenge

Despite the potential that iPS cells offer, they are notoriously difficult to work with and keep in a pluripotent state. Furthermore, generating precise edits with CRISPR often requires optimization, and generating clones of your model can take weeks to months.

The Synthego Solution

You can save a considerable amount of time and frustration by letting Synthego edit iPS cells for you. Our workflow leverages automation and stringent quality checks to ensure that edited cells contain the desired modification, maintain pluripotency and genomic stability, and are free of contaminants.



Synthego's Proven Process for Successful iPS Cell Editing

We understand the challenges of CRISPR editing in iPS cells. From design to delivery, our streamlined process, as illustrated above, for generating pools (mixed population) and clones is optimized to deliver the edit you want. We use the highest quality reagents and techniques to ensure high editing efficiency and employ stringent quality checks to confirm pluripotency and genetic stability.



I am very familiar with Synthego—their genome engineering expertise has accelerated our research. When I heard they were doing CRISPR-engineered iPS cells, I knew it was a perfect match for us.

Lisa Ellerby Ph.D.
PROFESSOR, BUCK INSTITUTE

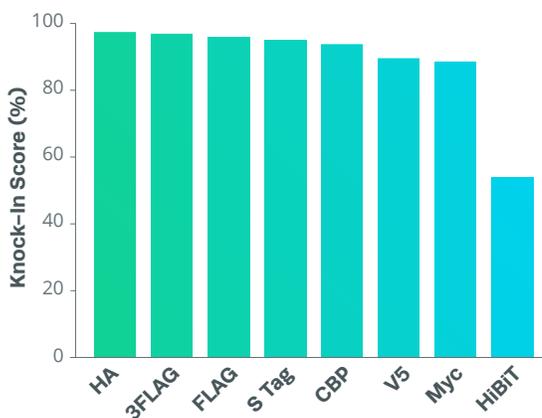


Leveraging Our Expertise in Automated High-throughput Genome Engineering, Synthego Offers Three Types of Edits in iPS Cells:



Using customer-supplied iPS cells or our in-house cell line (PGP-1), we can provide edits in pool or clone formats. **All projects are 100% guaranteed to contain your desired edit** (pending feasibility).

Precise, High-Efficiency Edits Possible in Hard to Optimize iPS Cells



Synthego can insert small gene tags or reporters to your gene of interest via optimized homology-directed repair. These tags were inserted at the N-terminus of the GAPDH locus utilizing RNP transfection. Knock-in Score refers to the percentage of sequences in a cell pool containing the desired insert.



Explore Additional Data on iPS Cells

Checkout examples on functional analysis, SNVs, and tags, download our free Tech Note, the *Precision CRISPR Editing of Induced Pluripotent Stem (iPS) Cells*.

[Synthego.com/resources/crispr-ips-cells](https://synthego.com/resources/crispr-ips-cells)



CRISPR Experts Trust Synthego's Edited iPS Cells: A Case Study

An interview with Dr. Lisa Ellerby, Professor at the Buck Institute for Research on Aging, regarding her work on neurological disease modeling in iPS cells, the need for outsourcing CRISPR, and why she trusted Synthego with her editing needs.

[Synthego.com/blog](https://synthego.com/blog)

Skip the Tedious Lab Work, Rely on Synthego for High-quality Edited iPS Cells

Two monumental breakthroughs—iPS cells and CRISPR editing— have opened the door to an exciting new era of biological discovery. However, keeping iPS cells undifferentiated is difficult, and CRISPR optimization and clonal expansion can take months of valuable time. **We deliver your desired edit, so you can move forward with your research with confidence.**

[Synthego.com/IPS](https://synthego.com/ips)

20200527