



Cell Line Engineering Services

- | | |
|-------------------|--|
| Experience | More than 1,000 cell lines successfully generated |
| Successful | Nearly 100% historic success rate |
| Low Risk | Risk-sharing via payment in milestones |
| Fast | Competitive timelines |
| Easy | Sequencing, verification, and assays are performed in-house, avoiding shipping logistics and saving time |

→ Genetic Modification Options

- Knock Down
- Knock Out
- Knock In
- Overexpression
- Reporter Cell Lines
- HiBiT / dTAG / Halo Tag /Smash Tag

→ Large Cell Bank for an Immediate Project Start

- Over 1,100 human cell lines
- Over 110 cell lines from a variety of animal species
- Primary and normal cell lines

Techniques

CRISPRi/a

Virus Infection (Lentivirus, Retrovirus, Adenovirus, AAV)

Electroporation

Lipid-mediated

Pharmaron is a global life science service provider that offers a broad spectrum of research, development and manufacturing service capabilities throughout the entire drug discovery, preclinical and clinical development process across multiple therapeutic modalities, including small molecules, biologics and CGT products.



Laboratory Services



Chemistry, Manufacturing & Control



Clinical Development



Biologics & CGT

Tailored Cell Line Engineering Solutions for Your Research Needs

Customizable Workflow

- Plasmid design and synthesis
- Verify parental cell line identity
→ 1 to 2 weeks

- Polyclonal cell line generation
- Verify gene editing
→ 1 to 2 weeks

- Monoclonal cell line generation
- Verify cell clone
→ 4 weeks

- Functional and phenotypic assays at Pharmaron or ship cells to client
→ 1 to 2 weeks

Options

- Constitutive or inducible gene expression
- Various markers
- Plasmid design with combined or separate genetic elements
- One or multiple gene edits

Types of Cell lines Created at Pharmaron



Verification of Cell Editing

- Genome sequencing via Sanger and NGS
- Gene expression via qPCR or RNA seq
- Protein expression via Western blotting, ELISA, MSD, AlphaLISA, flow cytometry, HTRF

Application Examples

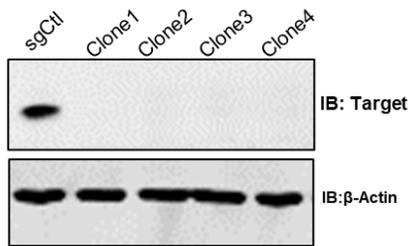
- Drug testing with functional and phenotypic assays
- CRISPR screen for target identification
- Target manipulation for target validation studies
- See our entire assay capabilities here: [Cell Biology Services](#)



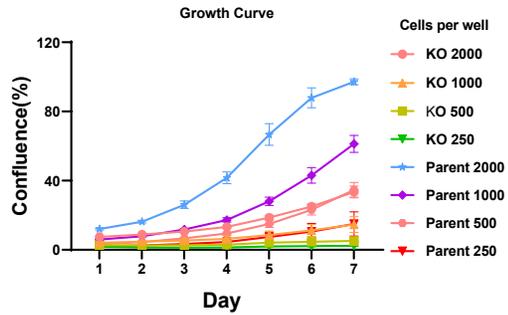
Are you looking for cell line development for biologics manufacturing?
Learn more about our [biologics CDMO capabilities](#).

Explore Cell Line Modification Options through Real-World Case Studies

Case Study: Target Knock Out



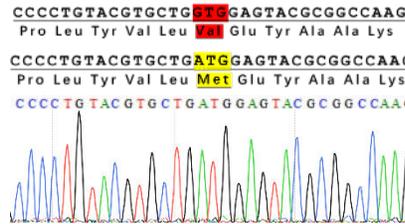
Knock out validation via western blotting



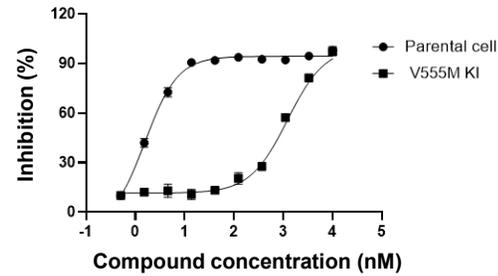
Knock out phenotype validation via cell growth assay

Internal data

Case Study: Target Gene Point Mutation by Knock In



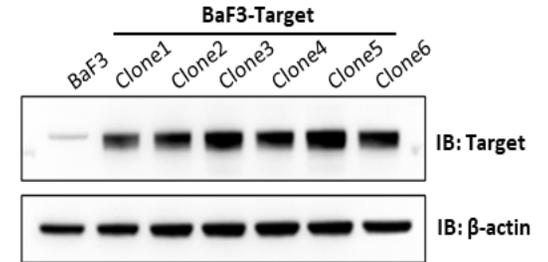
Knock in validation via sequencing



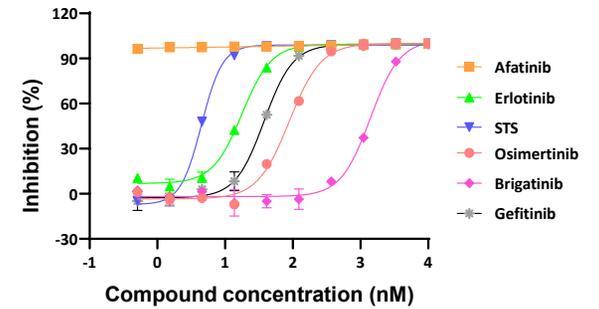
Knock in phenotype validation via compound treatment

Internal data

Case Study: BaF3 Cell Line Generation



Overexpression validation via western blotting



Baf3 cell line validation via compound treatment

Internal data

Talk to our scientists about your cell line engineering needs today