CUSABIO®

everon life sciences

# One-stop Cell Line Development Services

- Overexpression Cell Line Development
- Reporter Gene Cell Line Development

## Overexpression Cell Line

Overexpression stable cell lines refer to cell lines generated from a specific cellular lineage with the capability for sustained overexpression or interference of a particular gene. Their defining characteristic lies in their ability to continuously express specific genes, in contrast to transient transfection, which allows only transient expression.

### Applications:

| | |
|---|---|
| 01 Gene Function Studies | 03 Disease Model Establishment |
| 02 Drug Screening | 04 Small Molecule and Antibody Drug Development |

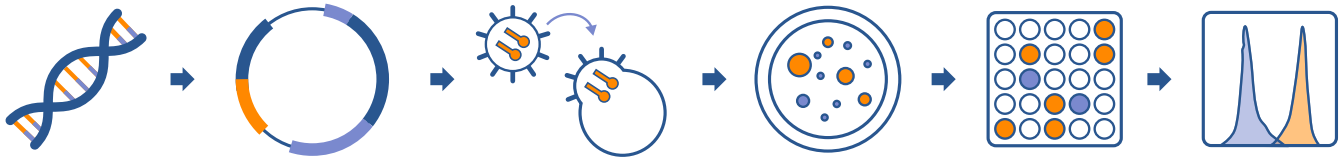
## Reporter Gene Cell Line

Reporter gene cell line construction involves the molecular biology cloning technique, where a specific reporter gene (e.g., luciferase) is inserted into the chromosome of the target cells. Through selection and cultivation processes, a cell line capable of stably expressing the reporter gene is obtained.

### Applications:

| | |
|---|---|
| 01 Gene Expression Regulation Studies | 03 Protein Interaction (Signaling Pathway) Research |
| 02 ADCC/ADCP Functional Validation | 04 Evaluation of Cross-linking Drugs |

## ◎ Service Processes:



Gene Synthesis → Lentiviral Expression Vector Construction → Cell Transfection → Cell Pool Screening and Validation → Monoclonal Screening and Validation → Cell Line Quality Control

## ◎ Service Advantages:

### Mature Stable Cell Line Development Platform

Equipped with comprehensive service platforms for cells, antibodies, proteins, etc., it can provide one-stop service from stable cell line construction to recombinant protein production.

### Strict Quality Control System

Double detection of microorganisms such as bacteria and mycoplasma, ensuring 100% contamination-free, and cell viability testing is conducted to guarantee delivery quality.

### Stable Cell Passage

High quality delivery standards ensure stable passage of cells for more than 20 generations.

### Professional Technical Support

Professional technical personnel regularly report on project progress to ensure smooth progress of the project.

**Our Commitment: No charges if it doesn't pass the flow cytometry detection.**

## ◎ Service Content and Cycle:

### Overexpression Cell Line Development (Total 8-14 Weeks)

**I Host Cell Detection (1-2 Weeks)**

- Cell viability assessment.
- Cell count measurement.
- Bacteria and fungi detection.
- Mycoplasma detection.

**II Lentiviral Expression Plasmid Construction (2-3 Weeks)**

- Codon optimization.
- Whole gene synthesis.
- Construction of lentiviral expression plasmid.

**III Lentivirus Packaging (1-2 Weeks)**

- Co-transfection of expression plasmid and helper plasmids into host cells for lentivirus packaging.

**IV Cell Pool Screening and Validation (1-2 Weeks)**

- Positive cell selection.
- Measurement of cell pool expression levels.

**V Monoclonal Screening and Validation (2-3 Weeks)**

- Single-cell plating and validation of monoclonal expression.

**VI Cell Line Quality Control (1-2 Weeks)**

- Expansion cultivation of monoclonals, cryopreservation.
- Recovery viability assessment.
- Bacteria, fungi, and mycoplasma detection.

### Reporter Gene Cell Line Development (Total 13-21 Weeks)

**I Host Cell Detection (1-2 Weeks)**

- Cell viability assessment.
- Cell count measurement.
- Bacteria and fungi detection.
- Mycoplasma detection.

**II Reporter Gene Expression Plasmid Construction (2-3 Weeks)**

- Codon optimization.
- Whole gene synthesis.
- Construction of lentiviral expression plasmid.

**III Transient Transfection of Cells (1-2 Weeks)**

- Transient transfection of host cells with the prepared reporter gene expression plasmid.

**IV Cell Pool Screening and Functional Activity Validation (1-2 Weeks)**

- Positive cell selection.
- Measurement of cell pool expression levels.
- Drug-induced detection of signaling pathways.

**V Monoclonal Screening and Validation (7-10 Weeks)**

- Single-cell plating and validation of monoclonal expression.

**VI Cell Line Quality Control (1-2 Weeks)**

- Expansion cultivation of monoclonals, cryopreservation.
- Recovery viability assessment.
- Bacteria, fungi, and mycoplasma detection.

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