RoukenBio

Unlock advanced cell line development capabilities with custom approaches

Engineering with the application in mind

hello@rouken.bio

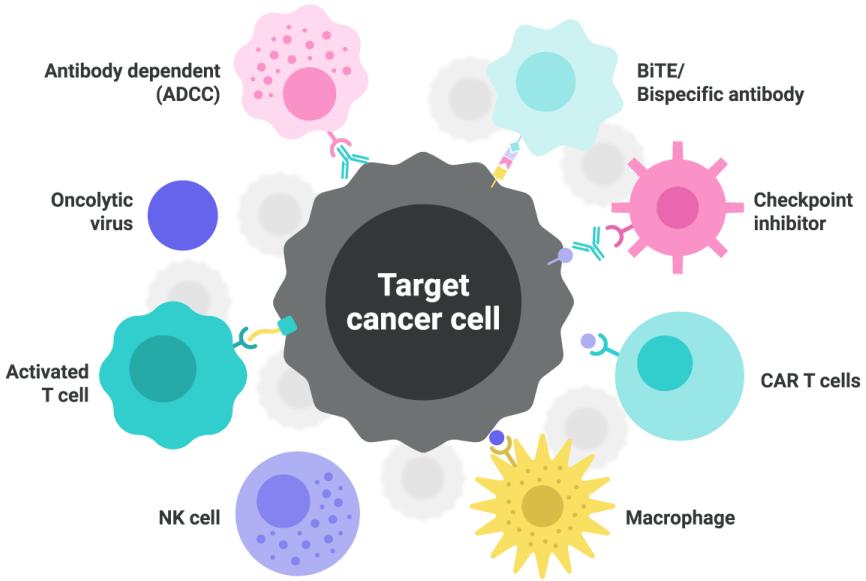
We specialise in creating cell lines for cell-based functional assessments

RoukenBio

Our expertise

We are skilled at developing custom solutions for new challenges

- **Disease models for advanced therapeutics can be complex**
  - Engineered cell lines can help elucidate mechanistic information
- **Essential tools in early drug discovery and clinical development**
  - Early validation of novel targets, cell-based screening platforms, potency and lot release assays
- **Tools that can be used throughout the drug discovery journey**



Our services cover four stages of delivery

Engineered pool

- ✓ Stable integration
- ✓ Fast and affordable
- ✓ 10 vial bank

Engineered pool & clone

- ✓ Defined expression level
- ✓ Homogenous expression
- ✓ Cell bank of clone (and pool)

Pool & clone stability study

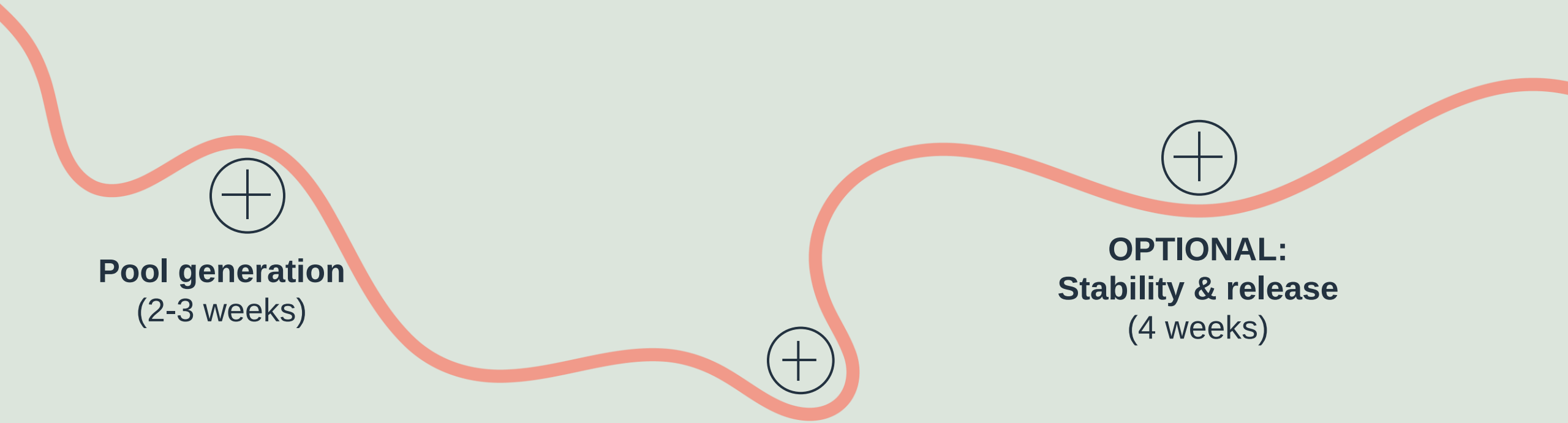
- ✓ Monitor expression over time
- ✓ Gain confidence in cell behaviour
- ✓ Better results in bioassays

Performance of bioassays

- ✓ Cells used directly
- ✓ In-house bioassay expertise
- ✓ Including ADCC, CDC, ADCP, TDCC

A typical custom project

From request to characterised custom engineered cell line clone in 6 to 11 weeks*



Pool generation
(2-3 weeks)

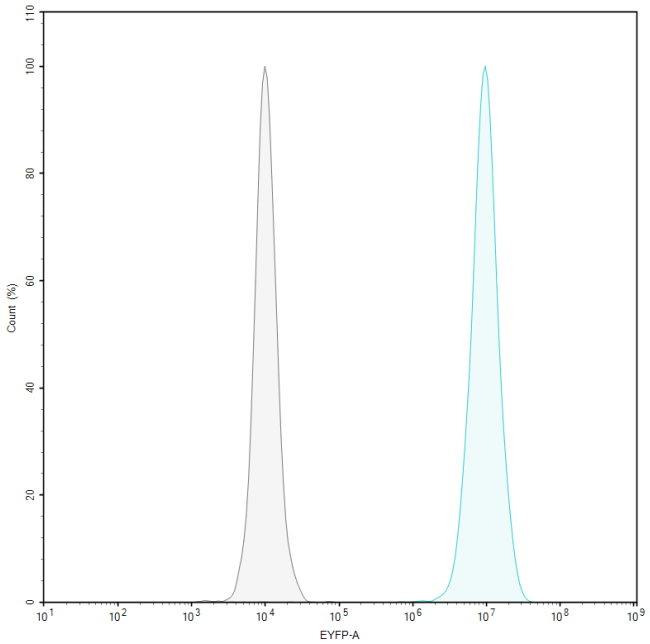
Clone generation
(4 weeks)

OPTIONAL:
Stability & release
(4 weeks)

Cell pool expression profile by FACS

Pool generations (2-3 weeks)

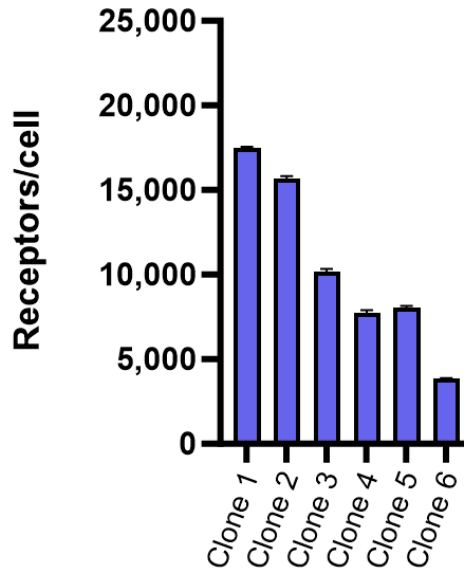
- Expression of an engineered receptor protein compared to parental (null) cell line by flow cytometry. Pools can be sub-cloned using cell sorting or dilution-based methods.
- **Express your target of interest for proof-of-concept studies quickly**



Clone selection based on expression level

Clone generation (4 weeks)

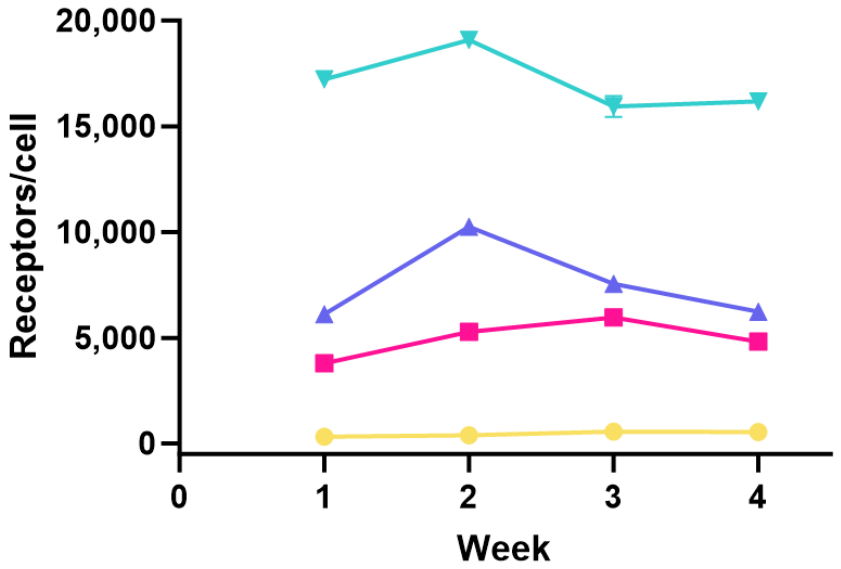
- Different expression levels of a B-lymphocyte antigen quantified by flow cytometry, using a bead-based quantification kit.
- **Select clone(s) with the desired expression levels**



Monitor target expression stability

Stability & release (4 weeks)

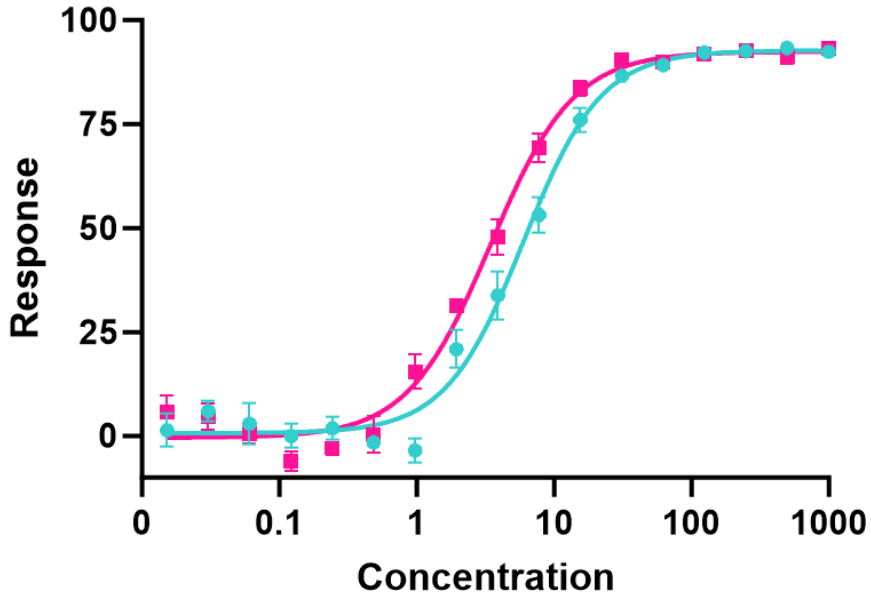
- Engineered receptor expression in a lymphoma cell line model over time. Culture passages are recorded to help determine optimal assay window.
- **Monitor expression profile over a period of 4+ weeks to determine expression stability profile and aid optimal assay performance**



Target cells to assess candidate therapeutics

Bioassay development

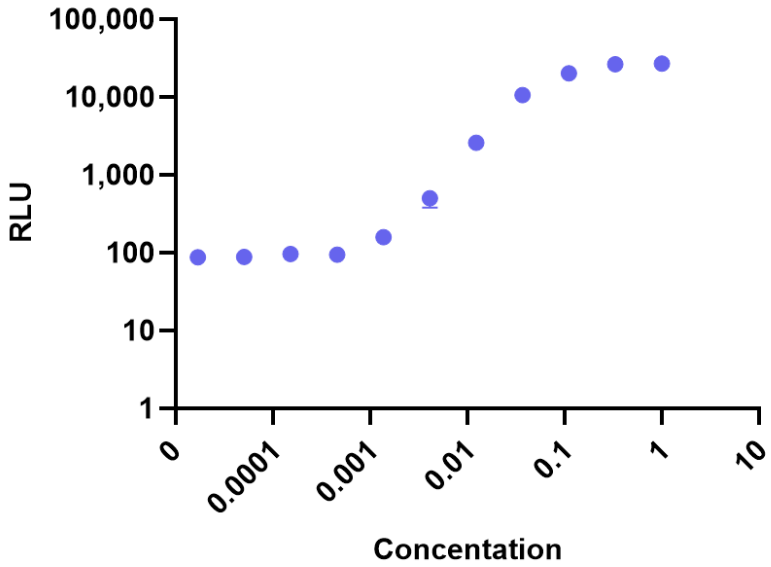
- Engineered target cells were opsonised with an antibody drug molecule and incubated with cryopreserved PBMCs to determine ADCC activity compared to a reference standard.
- **Use cells directly in functional cell-based effector function assays**



Custom made, biologically relevant reporter cell systems

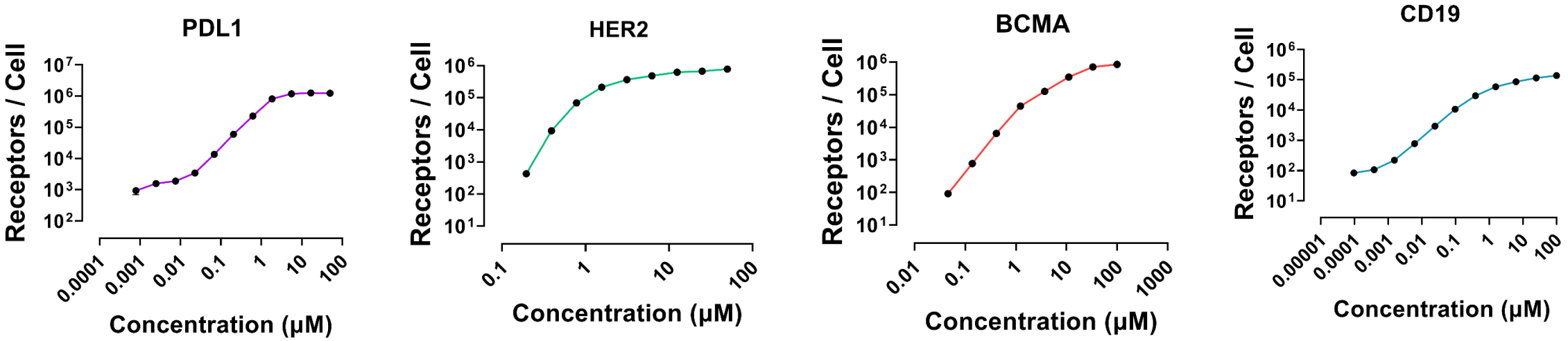
Reporter cell systems

- Reporter system engineered into HEK293 to generate HEK STAT6 RE cells for reporting IL-13 response. Data shows the reporter response to increasing doses of IL-13.
- **Engineered reporter cells used to determine biologically relevant function**



IndEx-2: Inducible expression platform

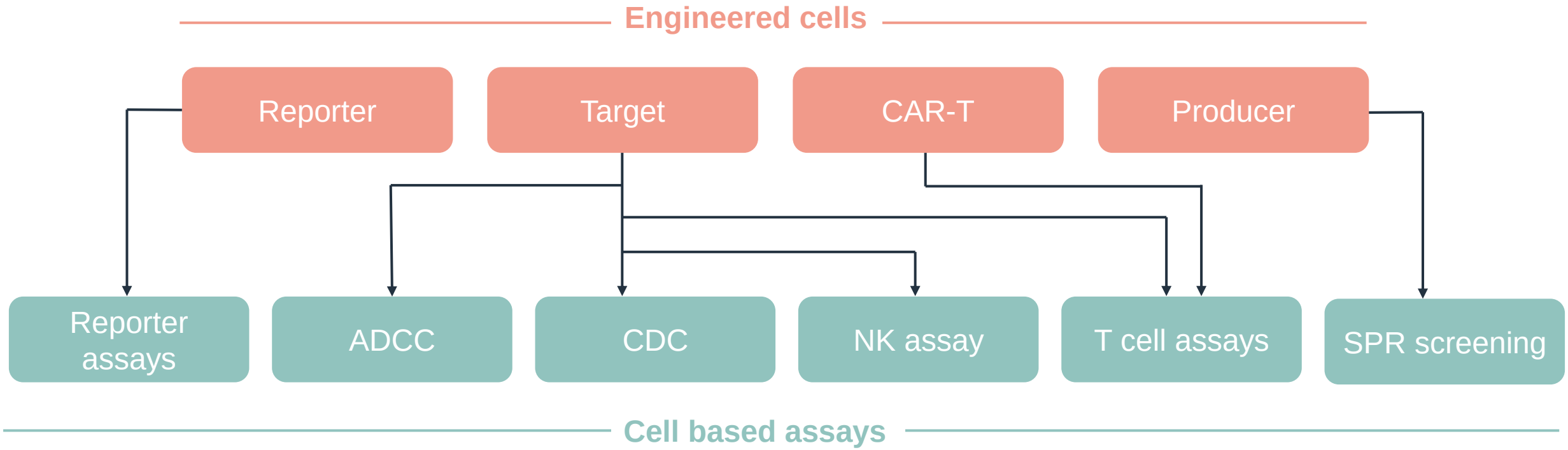
Enhance your pre-clinical data package with our transformational IndEx-2 system:



- Add your target of interest to our **IndEx-2 platform,** or
- Access our pre-developed IndEx-2 cell lines

Why work with us

Integrated solutions



We excel at problem solving

Difficult to express targets

- E.g. Class I MHC alleles, functional viral proteins

Specific or attenuated expression levels

- Inducible systems, attenuated promoters

Custom construct design, including CAR-T design

- Any gene, reporter or synthetic gene is considered

Unique reporter and reporter gene combinations

- E.g. NFAT-RE Luc, NFkB-RE Luc, etc

We are experts at applying engineered cells to functional assays

- Antibody Dependent Cellular Cytotoxicity (ADCC)
- Complement Dependent Cytotoxicity (CDC)
- NK cell cytotoxicity
- T cell cytotoxicity (TDCC)

We provide collaborative expertise

To deliver your project we will:

- Be consultative and collaborative

You will receive support from:

- Molecular biologists for genetic engineering
- Translational scientists to ensure appropriate design and use of cell lines
- Bioanalytical scientists to develop robust, sensitive and specific cell-based bioassays

You will have access to:

- Our catalogue of in-house immortalised cell lines
- Primary immune cells
- Route to access the ATCC repository *via* our pre-agreed ‘CRO-license’

Speak to our experts to accelerate your drug discovery project with our cell engineering services

We have a strong track record of designing and crafting cell lines to custom specifications.

Enhance your project with a variety of ready to use immortalised cell lines, and ready to deliver rapid and effective solutions.

Book a meeting with our cell line development team today.

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