## **) / Rouken**Bio

# IndEx-2: Quantification of the antigen density activation threshold for targeted immunotherapeutics

#### **INDEX-2 – KEY FEATURES**

- Rapidly customisable cell line platform
- Titratable, finely controlled induction of a nominated target antigen of interest (TAOI)
- Large dynamic range of TAOI expression in any genetic background
- Independently controlled expression of one, or two, TAOIs

#### Precise control over antigen expression levels



A) Dose dependent induction of CD19 expression. CHO-K1 cells containing an inducible CD19 construct. Inducer was added at the indicated concentrations and the cells were incubated for 48 hours. CD19 expression was detected by flow cytometry analysis and the number of CD19 receptors per cell was quantified using a Quantibrite PE bead fluorescence quantification kit (BD Biosciences). The CD19 receptors per cell for Ramos, Raji (diseased) and B cells isolated from PBMCs (healthy) are shown by way of comparison.

B) Use of CHO-K1 inducible CD19 cells for the comparison of the cytotoxicity of two CD19xCD3 bispecific T cell engagers (TCEs) across a range of CD19 receptor expression levels. Data represented as box and whiskers with min/max responses. Data analysed with Multiple Mann-Whitney tests, including multiple comparison correction (Holm-Sidak). \*\*\*\* p<0.0001, \*\*\*p<0.001, \* p<0.05.

#### Utility

IndEx-2 is an *in vitro* cell-based platform for the cost-effective determination of the precise antigen density activation thresholds of targeted candidate immunotherapies. When IndEx-2 is coupled with RoukenBio's immuno-oncology primary cell assay services, it can be used to provide a complete picture of a targeted drug candidate's mechanism of action and safety profile.

This powerful cell-based system can be used:

- To model the expression of one, or two, TAOIs over a range of biologically relevant
- expression levels e.g. healthy tissue and diseased tissues such as tumours
- To determine the therapeutic window of targeted therapies in the same genetic background
- For the pre-clinical evaluation of risks associated with 'on-target/off-tumour' toxicities

We can apply this platform to the pre-clinical discovery of any antibody-targeted therapy; CAR-engineered cell therapies, bispecifics, multispecifics, immune cell engagers, monoclonal antibodies and ADCs.

# Why choose the **RoukenBio** IndEx-2 system?



**Collaborative expertise and a consultative approach,** our in-house teams of molecular biologists and immunologists have the expertise to create custom cell lines for the specific assay in mind, all designed with your consultation.



**Defined expression levels;** pick a specific level of receptor expression to model diseases more representatively or help determine drug activation thresholds.



**Integrated expertise;** the cell line can be used immediately in our range of bioassays and translational T-cell assay.

**See IndEx-2 in action -** access our technical presentation to explore real data.



### **Rouken**Bio - The CRO redefined

Backed by our brilliant minds, we have turned the traditional CRO model on its head, by fostering a collaborative and personalised approach. Our mission is simple:

#### Solve problems. Deliver quality data. Propel your drug discovery breakthroughs.

United by a passion to make sense of complexities and overcome challenges, we apply our specialised knowledge to big-picture thinking. We will explore every option to deliver over and above for your project.

We are thought leaders with a deep understanding of immunology, bioassays, molecular biology and a track record of groundbreaking discoveries and novel cell-based tools.

Contacts

