



**CAPRION  
BIOSCIENCES**



Accelerating precision medicine through proteomics and immune monitoring™  
caprion.com

# ASSESSMENT OF RECEPTOR OCCUPANCY BY FLOW CYTOMETRY— A FAST AND EFFECTIVE METHOD TO MEASURE YOUR PHARMACODYNAMIC ACTIVITY

1

## WHY CHOOSE CAPRION TO DEVELOP A “FIT-FOR-PURPOSE” RECEPTOR OCCUPANCY (RO) ASSAY?

We efficiently guide the development of your RO assay taking into consideration critical performance parameters:

- Extensive experience developing RO assays using several approaches: FREE, OCCUPIED or TOTAL and/or FUNCTIONAL
- Caprion is able to simultaneously detect RO and other pharmacodynamic markers using MULTIPARAMETRIC FLOW CYTOMETRY (up to 18-color parameters)
- REAGENT SPECIFICITY determined by extensive screening during assay development
- In addition to PHARMACODYNAMICS (PD), Caprion is also able to measure PHARMACOKINETICS (PK)

### RECEPTOR OCCUPANCY ASSESSMENT METHODS

Free Receptor	Total Receptor	Bound Receptor	Functional RO
<b>Detection</b>			<b>Monitoring</b>
<p>Detection of the unoccupied receptor utilizing as detection reagents either a competitive antibody or the biotherapeutic</p>	<p>Detection of total receptor expression in the presence or absence of drug using non-competitive detection reagents</p>	<p>Detection of bound (occupied) receptor using an anti-drug detection reagent</p>	<p>Monitor a functional attribute (proliferation, cytokine secretion) in the presence and absence of a biotherapeutic spiked ex-vivo</p>

## 2

### HOW CAN CAPRION PARTNER WITH YOU FOR YOUR BIOLOGICS DEVELOPMENT?

#### Advanced Multiparametric Flow Cytometry

- Extensive experience with performing exploratory, secondary end-point RO assays
- “Fit-for-purpose” assay development
- Potential to monitor functional receptor occupancy

#### Proven Sample Stability

- GCLP sample handling and processing procedures
- Optimal matrix selection (whole blood, cPBMC, tissue)
- Stability assessment (sample collection, stabilizing agents for batching requirements)
- Clinical site support provided

#### Rigorous Quality Control

- Quality management system (QMS)
- GCP/GLP/GCLP in accordance with regulatory requirements

#### High Scientific Expertise

- Custom assays designed by highly trained experts
- Postdoc level scientists with diverse scientific
- Additional services available to characterize your biologics

## 3

### HOW CAN CAPRION ASSIST ME IN MAXIMIZING MY RECEPTOR OCCUPANCY ASSAY INVESTMENT?

- COSTS SAVINGS: We will work with you to develop and implement a comprehensive RO assay plan designed to meet your clinical trial goals
- COMPREHENSIVE ANALYSIS: Our team of biostatisticians can provide in-depth pharmacodynamic data analysis to accelerate the pre-clinical and clinical development of your therapeutic

## 4

### ABOUT CAPRION

Caprion is the leading provider of proteomics and immune monitoring services to the pharmaceutical and biotechnology industry. Its immune monitoring business unit, ImmuneCarta® offers proprietary multiparametric flow cytometry for functional analyses of innate and adaptive immune responses. Caprion’s proteomics business unit, ProteoCarta™, offers proprietary gel-free, label-free mass spectrometry (MS) for comprehensive, quantitative and robust comparative measurement of proteins across large sets of biological samples for the discovery and validation of protein biomarkers. Caprion has been providing large scale proteomics and immune monitoring services to over 50 major pharmaceutical and biotech clients for more than 10 years within its research sites in Montreal, Canada and Gosselies, Belgium.



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