

# Early Phase Bioassays & Analytics

## Reliable Assays that De-risk Your Product

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Bioassays play an essential part in the early stages of the drug development process. These assessments provide critical insights into a drug's potency, efficacy, and safety, that help drug developers ensure that only the most promising compounds progress onward toward the clinic. By accurately measuring how a drug interacts with biological targets, bioassays help to identify potential therapeutic benefits and safety risks early on. This streamlines the development process and aids in making informed decisions throughout the journey of bringing a new drug to market.

At Abzena, we have decades of expertise in delivering a range of bioassays and analytics that help our customers streamline and de-risk their complex biologic or bioconjugate development programs. Our unique approach focuses on developing phase-appropriate assays that are tailored to your program, giving you tools to make effective decisions during your drug development journey to IND and beyond.

## Modalities Supported

- Antibodies
- Conjugates
- Multi-specifics
- Fusions
- Fragments
- Agonist & Antagonist Activities

## Our Broad Array of Assay Platforms

- Luminescence, fluorescence, absorbance plate-based assays
- Biacore™
- Flow cytometry
- Incucyte® live cell imaging (and other microscopy techniques)
- Cytokine analysis (Luminex®, FluoroSpot)

## Comprehensive Bioassay Solutions

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Our comprehensive bioassay solutions include both established assays and customized assays that are matched to your individual needs. From discovery-themed assay applications that support target validation and hit-to-lead screening through design, development and manufacturing, our full suite of analytical assessments help you start smart and finish fast.



## Discovery

- In vitro/gene protein expression
- Functional analysis
- Biomarker profiling: Surface markers, cytokine production
- Target binding and affinity
- Functional activity: reporter assays and primary cell assays

## Design & Developability

By providing fully integrated design and developability strategies under a single organization, Abzena works from a lens of adaptability by streamlining both upstream and downstream processes that have traditionally presented time-stealing challenges to our customers. Our team of expert scientists, utilize the full toolkit of assessments in order to help rapidly identify and progress your most promising candidate onward to your next inflection point.

## Specificity and Tissue Profiling

- On-target binding to cell lines or primary disease tissue
- Off-target binding to primary immune cells or normal tissue
- Polyspecificity assessment

## Mode of Action (MoA)

- Ligand binding and competition
- Internalization and trafficking
- Viability assessment — 2D/3D viability assay, cell cycle arrest, apoptosis, bystander effect, co-culture cell killing
- Gene and protein knockdown
- Fc effector function — ADCC, ADCP & CDC
- MLR & superantigen proliferation and cytokine analysis
- PK & PD assessment

## Immunogenicity and Safety Assessment

### Immunogenicity risk assessment of proteins using:

- EpiScreen™ 2.0 time course assay
- EpiScreen™ 2.0 DC:T cell assay

### Identification of immunogenic sequence “hot spots” using:

- In silico assessment by iTope-AI
- MHC Class II associated peptide proteomics (MAPPs)
- EpiScreen™ 2.0 T cell epitope mapping
- Safety assessment of proteins with potential to induce cytokine storm
- Cytokine Release Assay

## Manufacturing and Potent Batch Release

- Development of ELISA or cell-based binding assays
- Development of MoA-reflective potency assays
- Assay pre-qualification and transfer

## Summary

**Abzena leads with an adaptive approach to assay development and immunogenic-centric projects. We operate from a place that shortens the discovery phase and getting from the bench-to bedside faster, and with greater success. Additional efforts are put in place to minimize compliance errors working in tandem with existing risk mitigation strategies. Our goal is to ensure your overall success in delivering vital medicines to patients.**



“I had the pleasure of working with Abzena’s Cambridge UK team on a variety of in vitro pharmacology projects, ranging from cell-based assays to Biacore kinetic analysis. I found the team to be professional, reliable, and excellent partners. Given the virtual nature of the company I work for, we rely on strong partnerships in order to produce quality data to allow us to make strategic program decisions. The Abzena team was instrumental in providing timely, high-quality data that impacted our decision-making. I would highly recommend this team for all your preclinical pharmacology needs.”