



Octet[®] BLI Systems

Enterprise-Ready,
Label-Free Biomolecular
Interaction Analysis for Drug
Discovery and Beyond

Simplifying Progress

SARTORIUS

Why Octet® BLI?

Trusted Performance, Fluidic-Free Simplicity

Octet® biolayer interferometry (BLI) systems deliver a powerful combination of performance, flexibility, and simplicity—setting the benchmark for real-time, label-free interaction analysis. Trusted by biopharma leaders worldwide, these systems support the full spectrum of drug discovery and development, from early screening to regulated QC environments.



No fluidics, no complexity

Dip and Read biosensors simplify assay setup and reduce maintenance



Crude sample compatibility

Analyze unpurified lysates, serum, and crude supernatants with confidence



Fast time to results

Quantitate 96 samples in 30 minutes on an 8-channel system



Throughput flexibility

From 2 to 96 channels, Octet® BLI systems scale with your workflow



Easy to use and maintain

Intuitive systems are easy to learn and built for worry-free, around-the-clock use



Non-destructive assay

Samples stay intact for reuse so you can get more data from every experiment



Octet® R2

Octet® R4

Octet® R8

Octet® R8e

Octet® RH16

Octet® RH96

Drive Discovery with Real-Time Kinetics

The Octet® BLI platform empowers you to explore tough questions with scalable, flexible, open-format assays and a versatile range of biosensors. From complex binding studies to deep structure-function analysis, now you can push discovery further and faster.

Antibody and antibody fragment characterization

- Determination of k_a , k_d and K_D for antibody-antigen binding
- Affinity and off-rate ranking in crude supernatants
- Antibody engineering and affinity maturation

Protein-protein and protein-peptide interactions

- Structure | function and mechanism-of-action studies
- Kinetic analysis of structural variant panels
- Wild-type versus mutant analysis

Protein DNA | RNA interactions

- Transcription factor interaction studies
- RNA regulation by RNA binding proteins
- Translational control mechanisms

Protein DNA | RNA interactions

- Protein-liposome interactions
- Kinetic analysis of membrane proteins

Virus and vaccine research

- HIV envelope protein research
- Evolution of virus binding selectivity
- Antiviral antibody development

Protein-small molecule interactions

- Detection down to > 100 Da
- Binding constants including k_a , k_d and K_D
- Rapid, label-free library screening



Octet[®] R8e: The Best BLI Can Offer

The 8-channel Octet[®] R8e system sets a new standard for label-free interaction analysis by delivering the highest sensitivity available in a BLI platform. With advanced optics, evaporation control, and 384-well compatibility, the R8e combines SPR-like performance with the speed, throughput, and simplicity Octet[®] BLI systems are known for.



Best-in-class sensitivity

Higher signal-to-noise ratio for precise detection of weak binders, low-abundance analytes (>10 pM), and small molecules (>100 Da)



384-well plate compatibility

Supports high-sample capacity workflows, maximizing lab efficiency



Reduced sample volume

Achieve reliable results with as little as 40 μ L, conserving precious samples and cutting costs



Evaporation control

Maintains analyte concentrations for 16+ hours, boosting data accuracy and precision over long runtimes



Scalable Solutions for Every Lab

The Octet® BLI family offers scalable solutions for every lab, whether you're running early discovery screens or enterprise-scale biologics workflows. All systems deliver intuitive software and a shared biosensor platform for seamless method transfer. Your Sartorius representative can guide you to the right model based on your application needs, throughput goals, and regulatory requirements.



Octet® R2
2-channel, entry-level system for small and large molecule characterization in early-stage research



Octet® R4
4-channel system offering greater automation and flexibility for small- to mid-throughput applications



Octet® R8
8-channel system with assay flexibility for kinetic, quantitation, and screening workflows



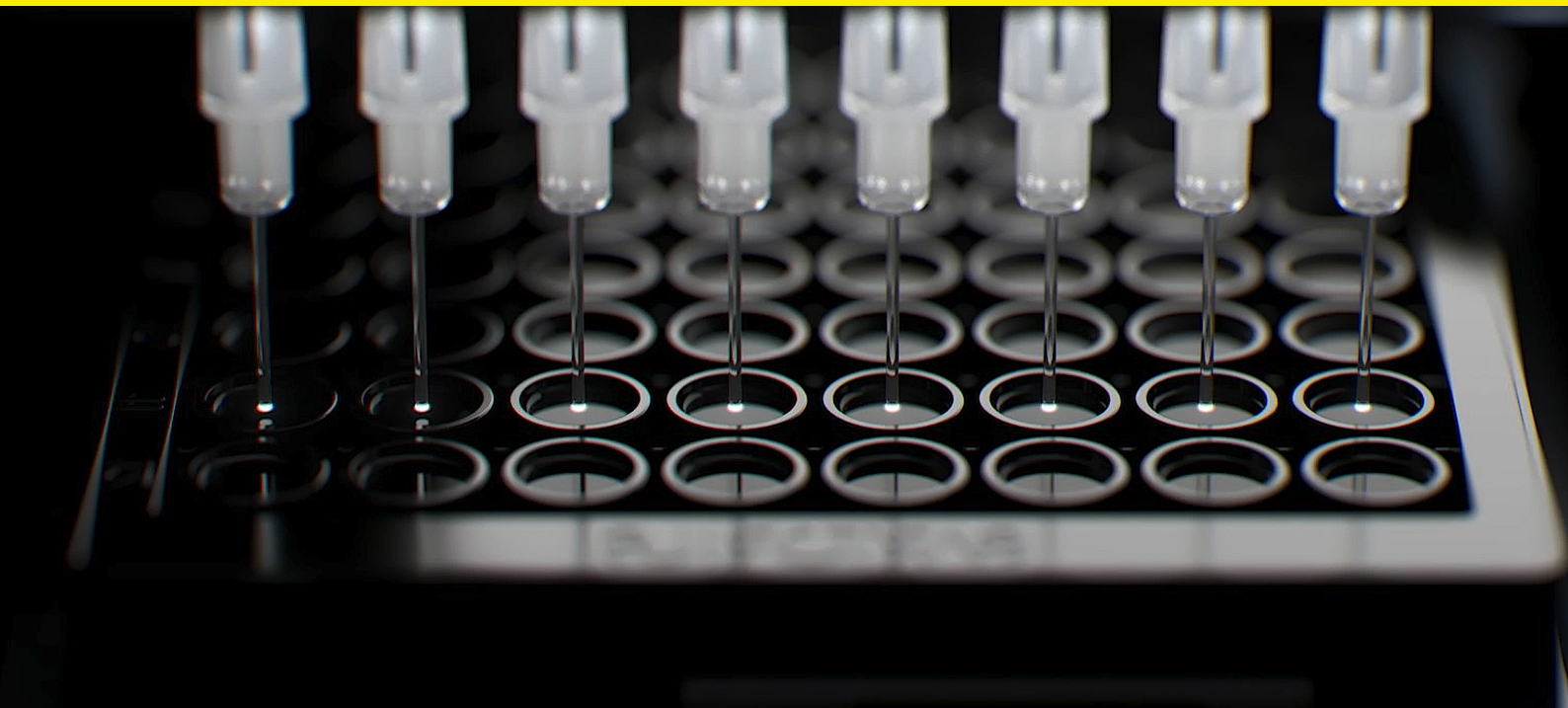
Octet® R8e
8-channel system with the highest sensitivity for complex biologics analysis



Octet® RH16
16-channel system designed for high-throughput interaction analysis in development and core lab environments



Octet® RH96
96-channel powerhouse enabling the highest throughput binding studies with minimal hands-on time



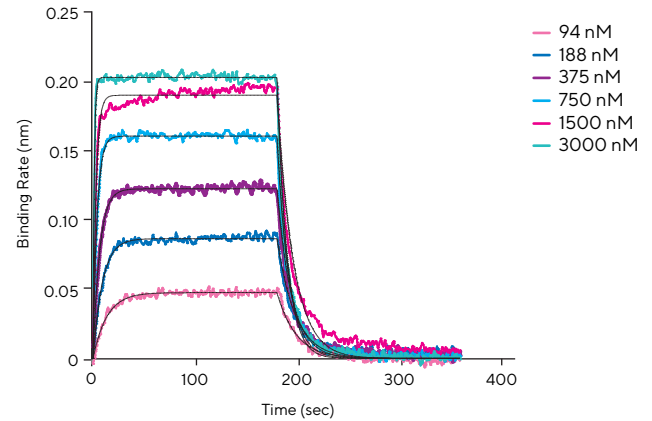
Confident Decisions

From First Hit to Final Candidate

Target Identification

Gain real-time insight into binding events to uncover novel therapeutic targets and dissect key signaling interactions.

- Analyze ligand | receptor and pathway dynamics
- Reveal aberrant interactions driving disease

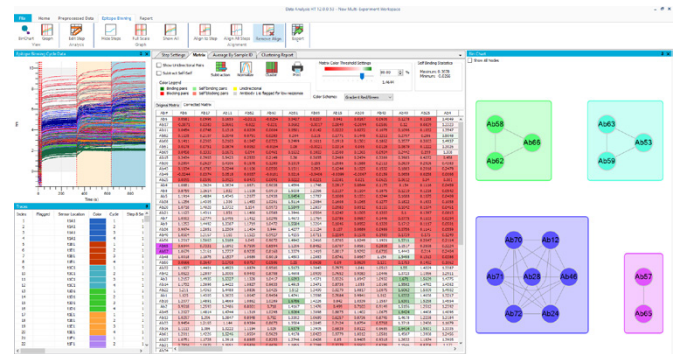


Small molecule kinetics: Get fast, label-free kinetic data for small molecule-protein interactions

Lead Optimization

Advance your best candidates with detailed kinetics, automated workflows, and powerful engineering tools.

- Support affinity maturation and Fc engineering
- Access expert tools for epitope mapping

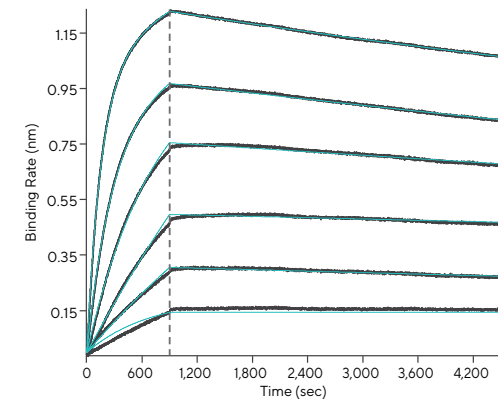


Epitope binning: Quickly visualize large datasets and automate bin assignment with intuitive tools like gradient matrices and BinCharts

Lead Identification

Screen faster with high-throughput kinetic profilin, even in crude samples, to prioritize top candidates early.

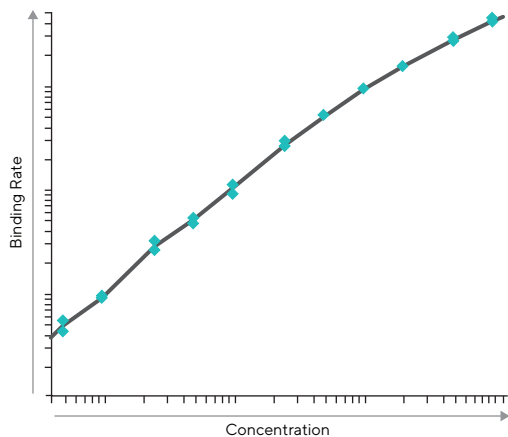
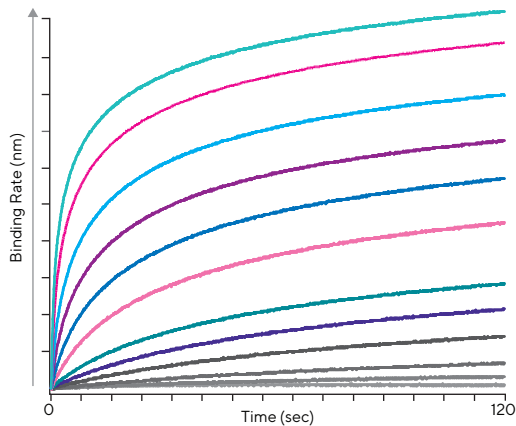
- Perform kinetic and off-rate ranking at scale
- Run epitope binning without purification



Large molecule kinetics: Measure affinity and rate constants with flexible curve fitting for both simple and complex binding models.

Accelerating Biotherapeutic Development

From Cell Line to QC



Protein quantitation: Quickly quantify mAbs and proteins with Dip and Read technology; no purification needed, just a simple standard curve.

Cell-Line Development

Speed up upstream workflows with rapid, specific titer assays and full-plate quantitation in minutes.

- Titer 96 samples in under 5 minutes
- Optimize media and growth conditions
- Screen glycosylation in crude cultures

Pharmacokinetics and Immunogenicity

Simplify PK | PD and ADA studies with fast, sensitive analysis—an efficient alternative to ELISA.

- Detect low-affinity anti-drug antibodies
- Profile isotype, specificity, and affinity in serum

Process Development

Accelerate downstream optimization with real-time quantitation and impurity detection at every stage.

- Monitor binding and elution in-process
- Detect HCPs and residual Protein A with high sensitivity

Manufacturing and QC

Ensure product quality from development to release with robust activity and stability monitoring.

- Characterize kinetics and potency
- Transfer seamlessly to GxP environments

Compliance-Ready from Day One

Octet® BLI systems are designed to fit seamlessly into GMP and GLP workflows. Optional GxP packages simplify integration and validation, helping teams meet regulatory requirements with confidence and speed.

Installation and Operational Qualification (IQOQ)

Verifies system performance and installation at your site with certified documentation

Octet® CFR Software

Complies with 21 CFR Part 11—includes user access controls, audit trails, locked reports, and e-signatures

Biosensor Validation Service

Secure consistent results by qualifying and reserving biosensor lots for long-term use

Performance Qualification (PQ) Kits

Validate assay performance using pre-qualified quantitation and kinetics protocols

Software Validation Package

Reduces validation timelines with documentation that mirrors regulated lab processes—validated in as little as three days





Automation Built for Enterprise Labs

The Octet® RH96 and RH16 systems deliver true walk-away efficiency with easy integration into automated workflows. From titer to kinetics and epitope binning, these high-throughput platforms support 384-well formats, reduce manual steps, and scale effortlessly from discovery to manufacturing. Biosero, the preferred automation partner for Octet® BLI systems, enables fully integrated, end-to-end biologics workflows.

Fully Automation-Compatible

Supports ANSI | SLAS labware, chamfered nests, and robotic access for effortless plate handling.

384-Well Format and Small Footprint

Maximize throughput and space utilization with compact, high-capacity design.



Integrated with Biosero Software

Run end-to-end workflows with Biosero's Green Button Go, connecting multiple devices in regulated environments.

Fewer Errors, More Confidence

Reduce operator time and human variability while improving audit trails and GxP compliance.



	Octet® R2 System	Octet® R4 System	Octet® R8 System	Octet® R8e System	Octet® RH16 System	Octet® RH96 System
Performance						
Maximum simultaneous reads	2	4	8	8	16	96
Molecular weight	>150 Da	> 150 Da	>150 Da	>100 Da	>150 Da	>150 Da
On-rate (k_{on}) range ($\text{M}^{-1}\text{s}^{-1}$)	$10^1 - 10^7$	$10^1 - 10^7$	$10^1 - 10^7$	$10^1 - 10^7$	$10^1 - 10^7$	$10^1 - 10^7$
Off-rate (k_{off}) range (s^{-1})	$10^{-6} - 10^{-1}$	$10^{-6} - 10^{-1}$	$10^{-6} - 10^{-1}$	$10^{-6} - 0.1$	$10^{-6} - 10^{-1}$	$10^{-6} - 10^{-1}$
Affinity (K_{D}) range	1 mM – 10 pM	1 mM – 10 pM	1 mM – 10 pM	1 mM – 10 pM	1 mM – 10 pM	1 mM – 10 pM
Evaporation control	No	No	Yes	Yes	No	No
Minimum sample volume	200 μL	200 μL	200 μL	40 μL^*	40 μL^*	40 μL^*
Specifications						
Number of spectrometers	2	4	8	8	16	16
Temperature Control	15 – 40 °C	15 – 40 °C	15 – 40 °C	15 – 40 °C	Ambient +4 – 40 °C	Ambient +4 – 40 °C
Microplate positions	1 (96-well)	1 (96-well)	1 (96-well)	1 (96- or 384-well)	2 (96- or 384-well)	2 (96- or 384-well)
Integration with automation	No	No	No	Yes	Yes	Yes
Dimensions						
Size H × W × D (cm)	49 × 56 × 46	49 × 56 × 46	49 × 56 × 46	49 × 56 × 46	77 × 80 × 80	77 × 80 × 80
Weight (kg)	32.7	32.7	32.7	32.7	68.2	90.7

* In a 384-well tilted-bottom microplate (Sartorius, part no. 18-5080)

Octet® BLI Consumables

Optimize your assay performance with high-quality consumables that have been validated in millions of assays. From biosensors to accessories, every component is engineered to deliver reliable results across diverse applications.

Biosensors & Kits

Octet® BLI Biosensors offer consistent performance across a wide range of workflows. Sensor tips are available in a variety of surface chemistries, each specifically coated to reduce non-specific binding. This feature is particularly beneficial for early-stage analysis, even when working with crude and unpurified samples. Octet® BLI ready to use kits are available for glycosylation profiling and for analyzing bioprocess impurities such as protein A or CHO host cell residues.



Scan me!



Microplate Options

Octet® BLI systems support both 96- and 384-well plates. Use the low-volume, tilted-bottom 384-well plates to reduce sample use.

AT Transfer Tool

Octet® AT tool simplifies biosensor transfer. Its ergonomic grip and balanced design reduce fatigue and improve control.

AE Evaporation Cover

The Octet® AE evaporation cover preserves >90% of sample volume for up to 16 hours at 25 °C by maintaining a vapor barrier over 96-well plates.

Expert Service and Support

Sartorius Technical Support and Field Service Engineers help you get the best performance from your Octet® BLI system. Choose the plan that fits your lab's needs and protect your investment for years to come.

Preventive Plan



No More Worries

Enjoy uninterrupted performance with preventive care, application support, software upgrades, and comprehensive expense coverage in case of downtime.

Lightning Plan



Faster Response Time

Get fast response times and expedited on-site service for your mission-critical instruments so you can return to generating data as quickly as possible.

Compliance Plan



Always Audit-Ready

Our all-in-one package for regulated environments ensures instrument performance, timely service, and full compliance so you are always ready for the next audit.

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