

Biomolecular Kinetics  Quantitation  Impurity Testing

Bio-Layer Interferometry (BLI) Technology

Label-free alternative for characterizing protein-protein and drug-protein interactions in standard microtiter plate format

What is BLI?

BLI is a label-free technology that measures molecular interactions in real time. Its fluidics-free design offers a number of advantages over traditional label-free techniques like Surface Plasmon Resonance (SPR) providing the ability to monitor binding specificity, rates of association and dissociation, or concentration, with precision and accuracy. Only molecules binding to or dissociating from the biosensor cause a detectable signal. Unbound molecules, changes in the refractive index of the surrounding medium, or changes in flow rate do not affect the measurement. This is BLI unique and extends its capability to perform in crude samples.

BLI provides the following experimental objectives



Binding Specificity:
Do the molecules interact?



Concentration Analysis:
How much analyte is there?



Binding Affinity:
How tightly do the molecules bind?



Binding Kinetics:
What is the speed of the interaction?

Monitor a huge variety of interactions


Fc receptors


Glycans


Viruses Vaccines

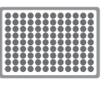

Small molecules


Whole cells


Inhibition

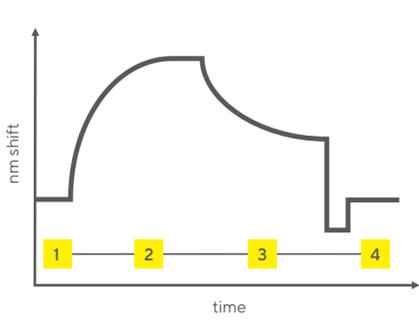

DNA/RNA binding proteins


Biosimilars


ELISA replacement


Aptamers


Bioprocessing QC



- 1** One binding partner (ligand) is immobilized onto the sensor. Aqueous buffer is used to measure a baseline.
- 2** The sensor is dipped into a solution containing the other binding partner (analyte). This then binds to the sensor surface. The binding interaction is followed over time to reveal the association kinetics.
- 3** The sensor tip is dipped back into buffer. The natural decay of the interaction molecules (dissociation) is monitored.
- 4** If the dissociation rate is slow, the biosensor surface is regenerated with a solution that will disrupt the interaction and return the signal back to the original baseline. This allows the reuse of the biosensor surface.

5 speedy reasons for fluidic-free BLI

Minimal maintenance



Ease of use



No cleaning between experiments

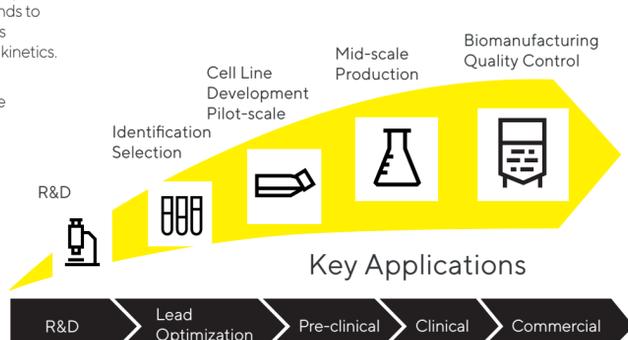


Scalable throughput



No sample loading time





Choosing a tailored system that fits your particular requirements

Advantages of label-free BLI

- Analyze unmodified molecules
- Early analytics in crude samples
- Find optimized conditions faster
- Control experiments at any time
- Reduce assay time and running cost
- Keep precious samples undamaged
- Replace individual biosensor tips
- Utilize the full range of molecular size
- Integrate automation-ready systems

Octet® R2 System

- High performance, label-free kinetics
- Upgradeable low-cost entry point
- Extent to 4 or 8 channels as needed



Octet® R4 System

- Perfect balance between cost and throughput
- High assay sensitivity with increased flexibility
- Upgrade to 8 channels at any time



Octet® R8 System

- Unmatched versatility and flexibility
- Long off-rate measurement
- Upgrade to GMP for regulatory compliance



Octet® RH16 System

- Higher levels of throughput, speed, and flexibility for small and large molecule characterization
- Automation ready and robot compatible
- GxP packages available



Octet® RH96 System

- Unprecedented throughput with 96 samples in parallel
- Ideal for epitope binning or multi-step quantitation
- Automation ready and robot compatible
- GxP packages available



Octet® N1 System

- Interaction analysis in 4 µL sample
- Portable, easy to use system
- Protein quantification in crude samples



Dip & Read Biosensors

are coated with a uniform, non-denaturing biocompatible matrix that provides minimal non-specific binding, even in crude, unfiltered samples. A broad range of surface chemistries lets you design experiments with maximum flexibility customizing the biosensor surface for unique applications. Multiple layers can be bound and detected. To date, several million biosensor assays have been run on Octet® systems, proving high reproducibility, accuracy, precision, and robustness of the platform. All biosensors are manufactured in a ISO 9001:2008 certified facility.



The Octet® family of instruments meet a broad range of application and workflow requirements.

Your local Sartorius representative can provide detailed information on system capabilities and our extensive library of Octet® application solutions to help you choose the system that's right for your lab.



Contact us and talk to a specialist today!

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