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Octet System: Monitoring Antibody Production

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Accurate antibody quantitation is critical to the selection of cell lines for development and the optimization of antibody production. FortéBio's Octet provides rapid and accurate analysis of antibody concentrations. Octet's analytical capabilities provide greater value in applications where existing methods such as HPLC and ELISA have limitations in throughput, performance, workflow, and ease of use.

Key Applications

- Early cell culture screening
- Process development
- Manufacturing
- Protein Purification

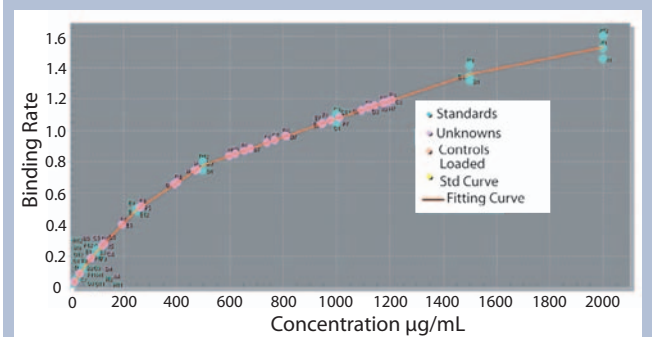
Biosensor Surface Chemistries

- Antihuman IgG Biosensors
  Typical dynamic range: 1–100 µg/mL
- Protein A Biosensors
  Dynamic rage: 1–500 µg/mL

Principle

Different protein concentrations result in different binding curves, which are plotted against their known concentrations to generate a standard curve. The concentration of unknown samples are calculated based on their binding rate from the standard curve.

Figure 1: Protein A standard curve (teal) and unknown samples (pink) as presented by Octet software



Key Features of the Octet for Antibody Quantitation

- **Real-Time and Label-Free Detection**
- **Correlates Well to HPLC**
- **Simple Assay Set-Up:** Assay crude samples without centrifugation
- **Direct Readings from Crude Sample Media:** Octet biosensors detect binding only at the sensor surface with minimal interference from biological sample media or refractive indices. Proteins can be assayed in cell culture media or crude lysates.
- **Rapid Results:** Octet runs up to eight samples in parallel and up to 96 samples in unattended operation. A full 96-well plate can be analyzed in 30 minutes.

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Figure 2: Time course for expression from a Bioreactor