Octet® AHQ Biosensors
For the Determination of Antibody Concentration

Key Features
- Direct measurement of immunoglobulins (IgG)
- Assay samples without centrifugation
- Fast turnaround of results
- Correlates to HPLC

Quick Facts
- Dynamic range: 0.01–200 μg/mL for most proteins
- Throughput: 8 samples in ~1 minute
  96 samples in ~24 minutes
- Precision/accuracy: < 10% CV
- Limit of detection: typically 0.01 μg/mL

The Octet® Anti-Human IgG (AHQ) Biosensors, in conjunction with the Octet® platform, are designed for monitoring antibody concentrations from crude lysates and cell culture supernatants. Using Anti-Human IgG Biosensors, the Octet® platform supports applications from cell culture screening to purification monitoring during the process development and production of therapeutics.
Bioprocessing Applications

Accurate antibody quantitation is critical to the selection of cell lines for development and the optimization of antibody production. Traditional methods for measuring antibody concentration include HPLC, ELISA and densitometry which have long analysis times, lack of specificity and precision.

Anti-Human IgG Biosensors can be used on Octet® systems to streamline a variety of bioprocessing applications by providing precise results which require minimal sample handling and give rapid turnaround of results.

Dynamic Range

The AHQ Biosensors have been shown to quantitate in the range of 1–100 μg/mL for polyclonal human IgGs.

Sample Types

Anti-Human IgG Biosensors have been tested on Octet® instruments with human antibodies and Fc proteins in crude cell lysates and supernatants.

Correlation to HPLC

A series of bioreactor samples were assayed both on an Octet® system using Anti-Human IgG Biosensors and HPLC.
Anti-Human IgG Assay Principle

The Octet® AHQ Biosensors determine antibody concentration based on the rate of binding of the Fc region of the antibody to the biosensor surface. Different antibody concentrations result in different binding rates. The Octet® BLI Analysis Software calculates the binding rates from standards with known values to generate a standard curve—the binding rate of each standard is proportional to its concentration. Concentrations of experimental samples are calculated based on their binding rate compared to that of the known concentrations that make up the standard curve.

Assay Parameters

- Sample volume: 200 μL
- Hydration solution volume: 200 μL
- Data acquisition: 60 seconds/8 biosensors
- Flow rate: 200 mm/second
- Precision/accuracy: <10% CV
- Biosensor hydration and sample plate equilibration: 5 minutes
- Curve fit: 4-parameter logistic

Recognition of Human IgG Isotypes

The Octet® AHQ Biosensors have been shown to recognize IgG1, IgG2, IgG3 and IgG4.

Ordering Information

<table>
<thead>
<tr>
<th>Part No.</th>
<th>UOM</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>18-5001</td>
<td>Tray</td>
<td>One tray of 96 Octet® AHQ Biosensors coated with anti-human IgG for quantitation applications.</td>
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<tr>
<td>18-5004</td>
<td>Pack</td>
<td>Five trays of 96 Octet® AHQ Biosensors coated with anti-human IgG for quantitation applications.</td>
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<tr>
<td>18-5005</td>
<td>Case</td>
<td>Twenty trays of 96 Octet® AHQ Biosensors coated with anti-human IgG for quantitation applications.</td>
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</tbody>
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Note: Additional materials are required to run these assays.
For further contacts, visit
www.sartorius.com/octet-support