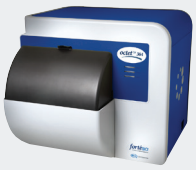
fortéBIO®
A Division of Pall Life Sciences

Octet® RED384 and Octet QK384 Systems

Label-Free Quantitation and Kinetics with Enhanced Throughput and Extended Dynamic Range

KEY FEATURES

- 384- and 96-well assay formats
- 16-well simultaneous detection
- Two plate positions on deck
- Automation compatibility
- Re-rack and reuse biosensors
- Dip and Read™ simplicity



Octet QK384 System

Octet RED384 System

Pall ForteBio's Octet RED384 and Octet QK384 systems are designed for increased throughput for label-free protein quantitation and kinetic characterization. Get accurate concentration, kinetic constants, and affinity data for protein-protein, small molecule-protein and other fast-binding interactions – all with Dip and Read simplicity.

The Octet RED384 and QK384 systems are easy to set up and offer the versatility to run assays throughout your experimental workflow, with a large dynamic range for titer determination or fine signal resolution for reliable affinity data. Both systems analyze 8 or 16 wells simultaneously and take advantage of our large menu of biosensor chemistries.

INCREASING THROUGHPUT

Two plate positions support either 96- or 384-well microplates for samples and reagents, and biosensor regeneration/reuse capabilities keep your workflow speeding along. Compatibility with crude samples and high tolerance to DMSO facilitates analysis without laborious sample preparation.

MAKING QUALITY ANALYSIS AFFORDABLE

The Octet RED384 and Octet QK384 systems cost a fraction of an equivalent SPR system, yet provide fully comparable data. Reduced sample size (40–130 µL/well in 384-well microplates) and preparation combine with virtually maintenance-free instrumentation reduce equipment and reagent costs. Optional biosensor regeneration lowers assay cost per well even further.

SIMPLIFYING YOUR WORKFLOW

The Octet RED384 or QK384 systems provide increased throughput for rapid optimization of assay conditions. Automation compatibility for plate loading enables walkaway freedom for larger experiments. Advanced software offers rapid processing of kinetic data, protein quantitation determinations, and epitope binning experiments.

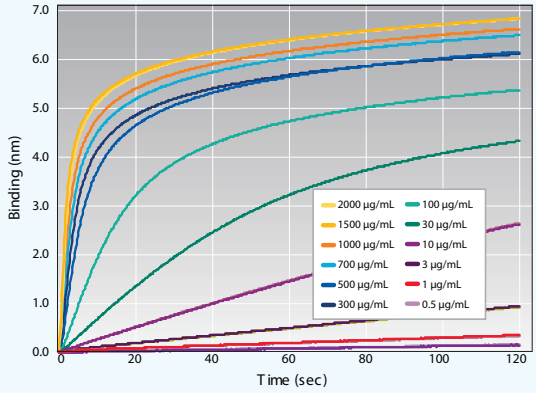


FIGURE 1: Concentration curves obtained on the Octet RED384 system for human IgG at 0.5 µg/mL to 2000 µg/mL using Protein A biosensors and two-minute incubation per well.

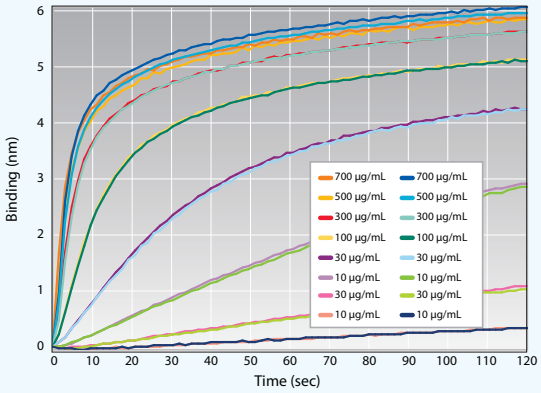


FIGURE 2: TNF-α binding from solution to anti-TNF-α antibody on Streptavidin biosensors on the Octet QK384 system. Two-fold dilution series starting at 150 nM, six replicates at each concentration. Association and dissociation run for 300 seconds each.

OCTET 384 SYSTEM SPECIFICATIONS*

Sample and Analysis	
Detection Technology	Bio-Layer Interferometry (BLI)
Biosensor Type	Disposable, single-use fiber optic biosensors with optional reuse by regeneration and/or re-racking
Information Provided	• Kinetic and affinity analysis (k_{obs}, k_a, k_d, K_D) • Kinetic screening for k_a or k_d • Binding specificity and cooperativity • Concentration monitoring of real-time binding (no need for background subtraction) • Automated concentration determinations • Epitope binning and cross-blocking matrices and trace overlays
Data Presentation	• Plots displaying kinetic binding, equation fits, and residuals of fits • Tabulated kinetic data and data charts
Sample Types	Proteins, antibodies, peptides, media containing serum, buffers containing DMSO, periplasmic fractions, untreated cell culture supernatants, and crude cell lysates
Sample Plate	Standard, 96-well and 384-well black, flat bottom microplate , and 384TW microplate
Sample Volume	• 40–100 uL/well (384TW microplate); 80–130 µL/well (384-well microplate); 180–220 µL/well (96-well microplate) • Nondestructive testing, easily recovered
Orbital Flow Capacity	Static or 100–1500 rpm
Analysis Temperature Range	(Ambient + 4°C) – 40°C, 1°C increments

Quantitation and Kinetics	
Throughput	Up to 16 assays in parallel; up to 96 assays per 96-well microplate and 384 assays per 384-well microplate
Analysis Time per Sample	• hIgG quantitation in 2 minutes for 16 samples, ≤20 minutes for 96 samples and ≤75 minutes for 384 samples in a 384-well microplate • Real-time kinetic binding experiments from 5 minutes to 4 hours
Baseline Noise	• ≤4 pm (RMS) for Octet RED384 system • ≤8 pm (RMS) for Octet QK384 system
Quantitation Range for hIgG	• Octet RED384 system: 0.5–2000 µg/mL at 400 rpm, 0.05–100 µg/mL at 1000 rpm • Octet QK384 system: 1–700 µg/mL at 400 rpm, 0.1–100 µg/mL at 1000 rpm

Physical Specs	
Dimensions	30.1″H x 31.5″W x 31.5″D (77 cm H x 80 cm W x 80 cm D)
Weight	150 lb (68.2 kg)
Electrical Requirements	• Mains: AC 100–240 V, 5.0–2.0 A, 50/60 Hz, single phase • Power consumption: 195 W (240 W peak)
Safety Standards	CE, CSA

ORDERING INFORMATION

Part No.	*UOM*	*Description*
30-5100	System	System includes Octet QK384 instrument, desktop computer, LCD monitor, accessory kit, and one-year warranty.
30-5101	System	System includes Octet RED384 instrument, desktop computer, LCD monitor, accessory kit, and one-year warranty.

**Specifications are subject to change without notice.*

For more information about Pall ForteBio's Octet platform for label-free, real-time detection of biomolecular interactions, applications, and services, visit www.fortebio.com or contact us directly.

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