

Hudson Robotics and ForteBio Introduce a New Label-Free WorkCell

Integrating Hudson's PlateCrane EX, Micro10x, and Barcode Scanner with ForteBio's Octet™ reader provides researchers with a novel Label-Free WorkCell. This system enables real-time, fully automated label-free analysis of biomolecular interactions and provides information on affinity, kinetics and concentration.

To date, a majority of screens used in early stage drug discovery require some type of labeling to report the binding of a ligand to its receptor. Whether it be fluorescence or radio labeling, this costly and time consuming "extra" step can interfere with the molecular interaction and lead to false negatives by closing off a binding site. Inversely, false positives are a potential problem with fluorescent compounds due to background binding.



This workcell utilizes ForteBio's **Octet** platform that provides instruments, biosensors, reagents and assay kits for analyzing biomolecular interactions in 96- and 384-well microplate formats. The false readings, cost, and time associated with labeling are eliminated with the **Octet** platform which utilizes **BioLayer Interferometry (BLI)** technology.

BLI is an optical analytical technique that analyzes the interference pattern of white light reflected from two surfaces: a layer of immobilized protein on the biosensor tip, and an internal reference layer. Only molecules binding to or dissociating from the biosensor can shift the interference pattern and generate a response profile on the **Octet** System. Unbound molecules, changes in the refractive index of the surrounding medium, or changes in flow rate do not

affect the interference pattern. This is a unique characteristic of BLI and extends its capability to perform in crude samples used in applications for protein:protein binding, quantitation, affinity, and kinetics. Any change in the number of molecules bound to the biosensor tip causes a shift in the interference pattern that can be measured in real-time.

Using Hudson's **SoftLinx** scheduler to run all the instruments, this system employs Hudson Robotics' **PlateCrane EX** robot arm which ensures the highest level of accuracy and repeatability of plate delivery. Hudson's **Micro10x** robotic reagent dispenser prepares sample plates immediately prior to reading. The **Barcode Scanner** is used to place the microplate's barcode into the reader's output data file. **SoftLinx** controls all three Hudson devices plus instructs ForteBio's software to load and run the appropriate measurement protocol as soon as a plate is loaded into the **Octet**.

For more information please visit Hudson's website at <http://hudsonrobotics.com/> or ForteBio's at <http://www.fortebio.com/>.