



# A100

Balancing power and simplicity in  
molecular interaction studies



**attana**  
sensor technologies

[www.attana.com](http://www.attana.com)  
Understanding molecules®



Molecular interaction studies are becoming increasingly important for selecting and characterizing antibodies and other proteins. Offering label-free, real-time analysis of kinetics and affinity, biosensors are now established as valuable tools for developing clinical assays and therapeutics.

Biosensors based on quartz crystal microbalance (QCM) technology have been used for many years in numerous applications. When combined with micro-scale fluidics, QCM allows real-time monitoring of biological molecular interactions. And being a micro-scale balance, it is not dependent on specific optical properties, thereby facilitating interaction studies on a wide variety of surfaces.

Attana AB, a pioneer in the development of continuous-flow based QCM systems, now offers affordable and user-friendly access to molecular interaction studies.

## Features & Benefits

### **A100 Label free on-line kinetics... plus much more**

The A100 system is optimized for label-free, cost-efficient, on-line kinetic studies (on/off rates and affinity), which provides considerable advantages over end-point assays such as ELISA. In addition, you can analyze crude samples without purification, making it easier to characterize and select monoclonal antibodies directly from cell culture media. A100 system also features integrated and accurate temperature control. This both enables thermodynamic studies and optimizes the environment when working with temperature-sensitive reagents.

### **A100 Unique polystyrene sensor surface**

Attana offers a wide variety of sensor surfaces, including a unique polystyrene surface. With no specific preparation needed, this polystyrene surface offers unparalleled convenience. Assay set-up, which mimics an ELISA coating procedure, is fast and simple and does not compromise the kinetic performance of subsequent interaction analyses. In addition to gathering detailed kinetic data, you can also use the polystyrene surface for fast and convenient optimization of ELISA conditions such as pH, salt concentration and buffer conditions.

### **A100 C-Fast autosampler maximizes productivity**

The enhanced features of the A100 C-Fast system maximize productivity by allowing unattended analysis of up to 192 samples. The A100 C-Fast system can screen 200 combinations of antibody sandwich pairs in less than a day. Fast and intuitive set-up includes pre-programmed methods and templates further demonstrating the system's efficiency.

### **A100 Proven, reliable and versatile technology**

The A100 is based on the proven, reliable and versatile QCM technology. Featuring user-friendly Attester® software for instrument control, data collection, data selection, reference subtraction, and data preparation for kinetic analyses, A100 delivers high quality data.

### **A100 Cost effective research**

The A100 is a cost-effective alternative for accessing in-depth analyses of molecular interactions, delivering high quality data for a variety of applications.

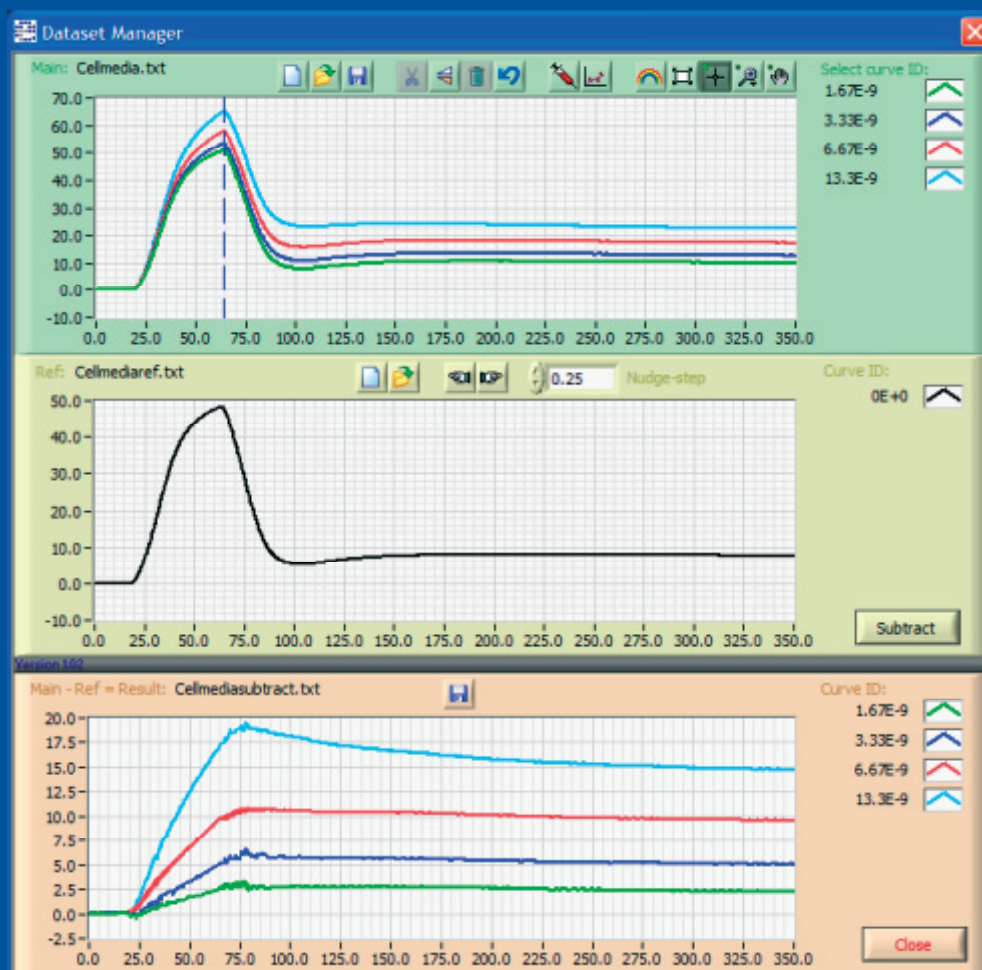


**A100 the perfect choice for advancing your research to the next level.**

# Application Example

Antibody screening procedures are often tedious and time consuming, requiring antibody purification prior to further analysis. Characterizing antibody-antigen interaction properties in the presence of cell culture media can therefore dramatically improve the screening process.

The Attester® software permits and simplifies evaluation of molecular interaction data, even when non-specific components, e.g. cell culture media, influence the binding response. In addition, Attester's Dataset Manager function compiles specific parts of the experimental data for further evaluation. One can also subtract reference and/or blank data from individual binding curves or from a complete dataset.



## Characterization of antibody kinetic properties in the presence of cell culture medium.

Top: Cell culture medium spiked with antibodies at 17, 33, 67 and 133 nM was injected over a biotinylated peptide antigen immobilized on a biotin-streptavidin surface. Association and dissociation of the antibody/antigen complex were monitored.

Middle: Cell culture medium without antibodies (reference).

Bottom: Specific antibody/antigen interaction data (after reference subtraction) ready for further kinetic evaluation.

*"The A100 is a powerful tool in our selection and characterization process for Mabs from early hybridomas. Using Attana's system, we not only considerably reduce our analysis time, but also get access to important in-depth kinetic analyses of our antibodies. This significantly increases our success rate when producing new products."*

Dr. Per Qvist, Vice President, Research and Development  
**Nordic Bioscience Diagnostics A/S**

- Cost-effective access to molecular interaction data.
- Mab characterization within one hour.
- Sandwich pair selection in less than one day.

## System Specifications

Information Provided	Kinetic parameters (on-, off-rates, affinity), selection, specificity, concentration		
Chamber volume	5 $\mu$ l		
Flow rate	0-100 $\mu$ l/min (as standard)		
Sample volumes	$\geq$ 10 $\mu$ l		
Temperature control	4-40°C $\pm$ 0.1°C		
Dimensions (mm)	height	width	depth
	337	166	503
Weight	$\approx$ 22 kg (excluding computer)		
Computer	MS Windows XP OS		
Software	Attester <sup>®</sup> & Attester Evaluation <sup>®</sup>		
Autosampler (C-Fast)	2x96 samples (other configurations and sample tray temperature control optional).		

## Ordering Information

Article no.	Product
3725-3001	Attana A100 <sup>®</sup> system: Attana A100 Biosensor with temperature control, Attester software, computer, lifetime telephone and e-mail support, 1 day on-site training and 1 year Premium service agreement.
3726-3001	Attana A100 <sup>®</sup> C-Fast system: Attana A100 Biosensor with integrated automated sample handling, temperature control, Attester software, computer, lifetime telephone and e-mail support, 1 day on-site training and 1 year Premium service agreement.
<b>Options</b>	
3727-3001	C-fast Upgrade: from 3725-3001 to 3726-3001
3930-3001	C-Fast Sample Tray Cooler
<b>Service agreements</b>	
3725-5001	A100 Premium, 1 Year
3726-5001	A100 C-fast Premium, 1 Year
<b>Sensor chip surfaces</b>	
3610-3001	Gold
3611-3001	Polystyrene
3612-3001	Gold polished
3613-3001	Biotin
3614-3001	Silver
3615-3001	Silicon dioxide
3616-3001	Carboxyl