

Attana Cell™ 200 and Attana Cell™ A200 System

ATTANA: BALANCING POWER AND SIMPLICITY IN MOLECULAR INTERACTION STUDIES

Based in Stockholm, Sweden, Attana is a pioneer in the development of continuous-flow Quartz Crystal Microbalance (QCM) systems for real time, label-free molecular interaction studies. Our systems have since 2003 been employed at leading universities and biotech companies in a wide variety of research fields within the life sciences.

ATTANA CELL™ 200 AND ATTANA CELL™ A200

The Attana Cell 200 is a dual channel, label-free, temperature controlled, continuous flow system for automated (Attana Cell A200) or manual (Attana Cell 200) analysis of molecular interactions with cells. The system is delivered operation ready and includes: instrument, sensor chips, computer, software and accessories such as syringes, vials and buffer bottles.

The Attana Cell 200 system is characterised by the ability to study molecular interactions with cells grown directly on the sensor surface. Even higher biological relevance is attained through features such as continuous flow, physiological temperatures and label free detection. High data quality is achieved by direct measurements in real-time, avoiding disturbances caused by secondary detection.

The QCM core technology enables the study of biomolecules of varying species such as proteins, nucleic acids, carbohydrates, lipids and lectins and also binding moieties of vastly different sizes, ranging from peptides to cells.

STUDYING INTERACTION AT THE CELL SURFACE WITH HIGH BIOLOGICAL RELEVANCE

The key feature of the Attana Cell 200 is that it enables kinetic characterisation of interactions with cell surface carbohydrates or cell surface targets on intact cells, in real time. The all-in-one ability to cultivate, treat and analyse the cells directly on the sensor surface minimises handling and perfects cell conditioning. It is also possible to capture the cells before analysis directly from cell suspensions. As the instrument is temperature controlled, chemically resistant and uses continuous flow, interactions can also be studied at physiological conditions such as normal salinity, 37°C and under various flow rates.

As the QCM technology is label free and has no need for secondary detection, it offers a possibility to study the molecules unmodified, directly and without removing them from their natural environment.

CELL APPLICATIONS

- Detection
- Off-rate screening
- Kinetic & Affinity evaluation
- Epitope mapping

ASSAY FORMATS

- Direct
- Capture
- Competition/Inhibition

BENEFITS AND USE

The Attana Cell 200 is a QCM-based biosensor that offers the possibility to study molecular interactions in a biologically relevant environment. Current strategies for studying molecular interactions focus mainly on affinity determination whereas the continuous flow biosensor developed by Attana makes possible a complete evaluation of biomolecular interactions. The Attana Cell 200 provides a real-time, label-free solution to study association/dissociation phases as well as affinity, therefore enabling thorough evaluation of the binding properties of biomolecules interacting with cells. The newly designed sensor chip allows cultivation of cells on the sensor surface and measurement of the interaction in a simple fashion. This system generates early and biologically relevant data on potential drug candidates, making it a valuable tool for pharmaceutical laboratories. Moreover, the possibility to study protein expression level as well as glycan compositions by means of direct detection or competition assay in a cellular context makes it an exhaustive tool for both academic and pharmaceutical research laboratories.

KEY FEATURES

- Direct measurements on cells
- Quartz Crystal Microbalance (QCM) technology
- Real-time, label-free molecular interaction analysis
- Controllable at physiological temperatures
- Continuous flow



Balancing **Power** and **Simplicity**
in Molecular Interaction Studies

Attana Cell™ 200 and Attana Cell™ A200 System

PRODUCT SPECIFICATIONS

Detection technology	QCM (Quartz Crystal Microbalance)
Cell Chip features	In situ growth, Treatment and Measurement on cells
Channels	2
Flow rate	1-150 µl/min
Sample volume	100-235 µl
Molecular weight detection	≥ 1KDa
Temperature control	4-40°C ± 0.1°C
Sample capacity	192 samples
Referencing	Yes
On-the-fly analysis	Yes
Classical Applications	Detection, Kinetic & Off-rate Screening, Kinetic & Affinity Characterisation, Crude Sample Analysis, Active Concentration Determination, Thermodynamic Studies, Epitope Mapping
Cell Applications	Detection, Off-rate Screening, Kinetic & Affinity Evaluation, Epitope Mapping
Dimensions (LxWxH mm)	200x507x377 (excl. C-fast and computer)
Weight	26 kg (excl. C-fast and computer)
Computer OS	MS Windows XP
Software suite	Integrated package for operation and analysis
Autosampler (optional)	Automated sampling of 192 samples
Sample Cooling (optional)	4 - 40°C



ORDERING INFORMATION

Attana System		Item Code
Attana Cell™ 200 System: Attana Cell™ 200 instrument with temperature control, integrated degasser, software, computer, telephone and e-mail support, 1-day on-site training, 1-year warranty		3745-3001
Attana Cell™ A200 System: Attana Cell™ A200 instrument with integrated C-Fast (automated sample handling), temperature control, integrated degasser, software, computer, telephone and e-mail support, 1-day on-site training, 1-year warranty		3746-3001
Attana Sensor Chips	Item Code Pack of 3	Item Code Pack of 10
Attana LNB Carboxyl Sensor Chip	3623-3033	3623-3103
Attana Carboxyl Sensor Chip	3616-3033	3616-3103
Attana Biotin Sensor Chip	3613-3033	3613-3103
Attana Polystyrene Sensor Chip	3611-3033	3611-3103
Attana Gold Sensor Chip	3610-3033	3610-3103
Services and Upgrades		Item Code
Attana Cell 200 Premium Service, 1 Year		3745-5001
Attana Cell A200 Premium Service, 1 Year		3746-5001
C-Fast Upgrade Attana Cell 200: from 3745-3001 to 3746-3001		3741-3001
C-Fast Sample Tray Cooler		3930-3001

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