



UNPARALLELED VALUE FOR ACADEMIC RESEARCHERS
IN BIOMOLECULAR INTERACTION ANALYSIS

The SensiQ® Pioneer ST breaks new ground by providing high quality affinity and kinetics data in a cost effective platform for academic researchers. The SensiQ Pioneer ST makes label-free Surface Plasmon Resonance analysis accessible to virtually any academic laboratory. Whether studying protein interaction kinetics, characterizing antibodies or screening small molecules drug candidates, the SensiQ Pioneer ST provides high-data quality and exceptional performance from a Surface Plasmon Resonance system.

ANTIBODY CHARACTERIZATION

Characterizing the affinity profile of antibody interactions is of great importance in application areas, such as:

- Biotherapeutic research
- Antibody assay kit development
- Antibody QC
- Bioprocessing

PROTEIN-SMALL MOLECULE INTERACTIONS

Interactions between proteins and small molecules are at the center of drug development research. The exquisite sensitivity of SensiQ Pioneer coupled with novel surface chemistries allow it to perform kinetics measurements on molecules as small as 95 Da. This level of quantitative data enables researchers to gain more information about new drug candidates.

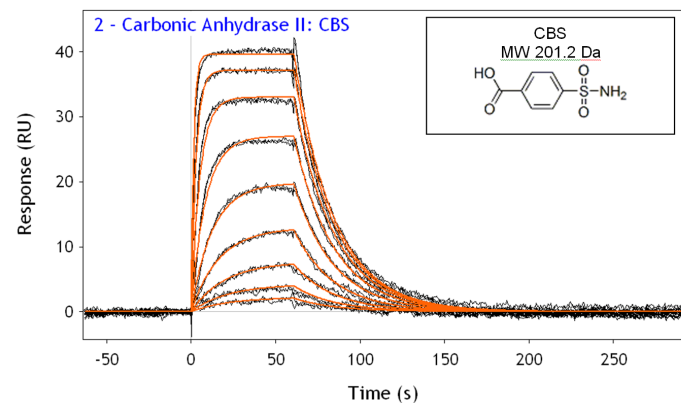
PROTEIN-PROTEIN INTERACTION KINETICS

Understanding the kinetics of protein interactions furthers research in areas such as:

- Cell signaling
- Disease mechanism studies
- Biomarker development
- Structure-function analysis



Inhibitor CBS Binding Carbonic Anhydrase II
(Nine dilutions injected in duplicate)



KEY FEATURES

- Utilizes microplates and vials
- Advanced microfluidics
 - Three sensing channels
 - Real time reference curve subtraction
 - High mass transport
- Proven SPR sensor
- Detection to < 95 Da
- Wide variety of surface chemistries
- Sophisticated, easy-to-use data analysis software
- Automated in-line buffer degassing



The value leader
in Biomolecular
Interaction Analysis

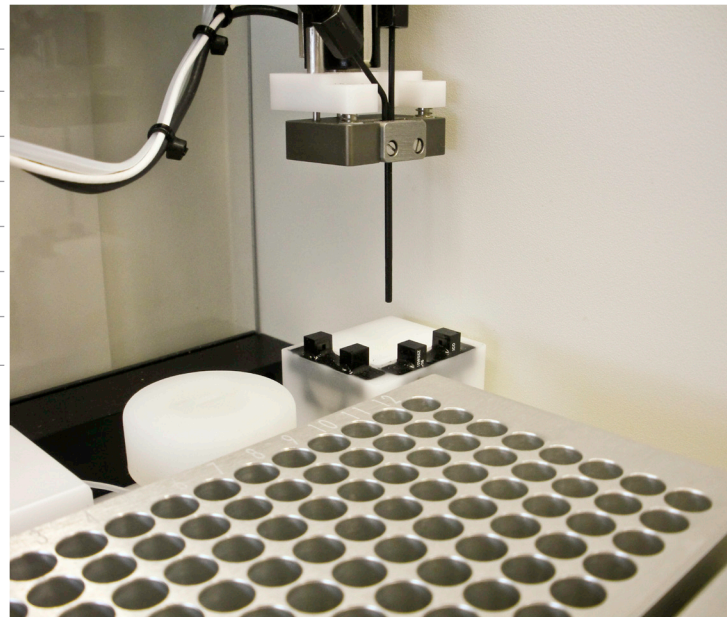
SPECIFICATIONS

Refractive Index Range	1.33-1.40
Short Term Noise	< 0.1 RU
Long Term Noise	< 0.3 RU
Molecular Weight Cutoff	< 95 Da
Working Ranges	ka 10 ² - 10 ⁸ M ⁻¹ s ⁻¹ kd 10 ⁻⁵ - 0.1 s ⁻¹
Sample Capacity	2 sample racks
Sample Configuration	96 vial, deep well and PCR formats, custom high volume
Sample Temperature Control	4 to 40°C (max 15° below ambient)
Sample Loading	Automatic
Number of Channels	3
Flow Path	1, 1-2, 1-2-3, 3, 3-2, 3-2-1
Flow Channel Volume	< 90 nL
Channel-Channel Dead Volume	< 20 nL
Real Time Reference Curve Subtraction	Yes
Injection Volume	5-480 ul
Injection Rise and Fall Time	< 0.75 second @ 25 µL/min
Simultaneous Injections	Yes, dual sample loops
Flow Rate	5-150 uL/min
Inline Buffer Degassing	Yes
System Temperature Control	4-40°C (Max 15° below ambient)
Variable Data Rate	1- 8 Hz
Automation Capabilities	> 72 hour unattended operation

SENSOR CHEMISTRIES

Immobilization by Amine Coupling	COOH1, COOH2, COOH3, COOH5 and Amino1*
Non-charged Amine Coupling	HiCap
Avidin-Biotin Based Immobilization	AvCap, BioCap and BioHiCap*
Affinity Capture	HisCap and HisHiCap*
Histidine-Tagged Proteins	
Vesicle Capture for Membrane Bound Receptor Interactions	VesCap

* Under Development



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