SARTORIUS

Product Datasheet

Octet® APS Biosensors

For Hydrophobic Immobilization of Proteins

Key Features

- Hydrophobic or electrostatic immobilization of proteins for kinetic characterization
- No need to tag or covalently modify proteins for interaction analysis
- Designed for maximum compatibility with your proteins
- Biosensor flexibility allows use in any type of assay

The Octet® Aminopropylsilane (APS) biosensors, in conjunction with the Octet® system, are designed for hydrophobic immobilization of most proteins used in assaying protein:protein interactions. Using Aminopropylsilane biosensors, the Octet® system supports applications from kinetics screening to full kinetics characterization.

Quick Facts

- Method of immobilization: hydrophobic
- Baseline stability: 60 minutes

Screening Applications

The Octet® APS Biosensors allow maximum flexibility during immobilization of protein to the biosensor. The flexibility of the system allows for screening of protein:protein interactions using k_a, k_d, or K_D as the screening parameter. Properly blocked APS biosensors are minimally affected by crude samples or matrices, enabling kinetic screening of samples without having to spin down or purify them beforehand.

Kinetics Characterization Assay Using the Octet® APS Biosensors

The following data set represents the immobilization of bovine insulin (Sigma cat. no. I5500) in PBS onto the APS biosensor, followed by the binding of an anti-insulin antibody (R&D Systems cat. no. MAB1417). The assay buffer used throughout the assay was PBS. Specific binding of the antibody was shown by immobilizing bovine insulin in channels A–F and bovine serum albumin in channels G and H (dark gray and light gray) and then exposing all eight channels to the anti-insulin antibody. The antibody only shows binding to the biosensors immobilized with insulin.

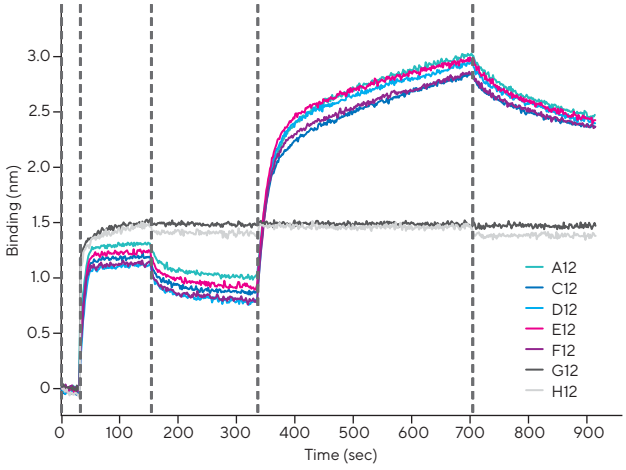

Figure 1: Binding of immobilized bovine insulin using the Octet® APS Biosensors on the Octet® system.

Immobilization of Gangliosides onto APS Biosensors

The following data set represents the immobilization of three different gangliosides (G1 — purple, G2 — teal, G3 — magenta, buffer blank — blue) onto the APS biosensors. All four surface-bound gangliosides were then exposed to a protein specific to G2. The specific binding of the protein only to G2 is clearly evident (teal).

Typical Assay Parameters

- Sample volume: 200 µL/well (post-dilution)
- Hydration solution volume: 200 µL/well
- Shake speed: 1,000 rpm
- Biosensor hydration and sample plate equilibration: 10 minutes

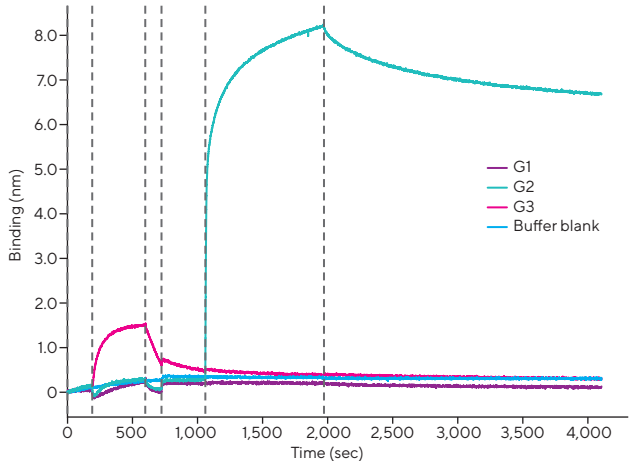

Figure 2: Specific binding to immobilized ganglioside.

Ordering Information

Part No.	UOM	Description
18-5045	Tray	One tray of 96 Octet® APS Biosensors coated with aminopropylsilane for standard kinetic analysis.
18-5046	Pack	Five trays of 96 Octet® APS Biosensors coated with aminopropylsilane for standard kinetic analysis.
18-5047	Case	Twenty trays of 96 Octet® APS Biosensors coated with aminopropylsilane for standard kinetic analysis.

Note: additional materials are required to run these assays.

Microplates: Two (2) 96-well, black, flat bottom, polypropylene microplates (Greiner Bio-one Cat. No. 655209).
Media for biosensor hydration: It is critical that the biosensors are hydrated with an appropriate solution. It is recommended to rehydrate the Octet® APS biosensors for 10 minutes in carrier-free, detergent-free buffer (e.g. PBS) or water.
Ligand for immobilization: Ligand should be free of carrier protein and free of detergent.
Buffer for immobilization: Buffer should be free of carrier protein and free of detergent.
Assay buffer: Assay buffer can be the same as the immobilization buffer. However, in some cases it may be necessary for the assay buffer to include carrier protein or detergent to minimize non-specific binding.

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