Application Note 1

Protein-Antibody Interactions

Introduction

Immunoassays are tests routinely employed to detect the presence and level of biochemical markers in fields such as clinical research, diagnostic testing, and academic research. Although several format of immunoassays exist, all of them rely on specific binding interactions between an antibody and its target protein. The antibody-protein binding kinetics and strength carries unique information about the system. This crucial information can be collected using SPR as immunoassay format.

Even though SPR is a powerful analytical technique that can fast-track proteomic research and drug discoveries, its high costs and complexity has limit its deployment in academic institutions.

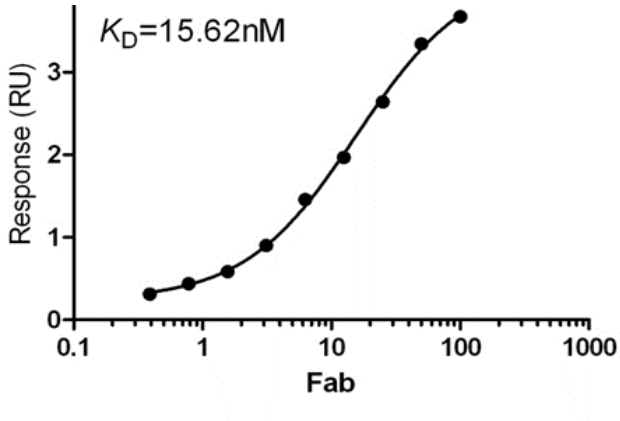
Affinité P4SPR

Affinité's P4SPR lowers these SPR adoption barriers by making the technology accessible through a simple, low cost and easy to operate device.

The compact P4SPR, which footprint is comparable to a book, can easily be setup on your lab bench and operated by anyone (undergraduate to astronaut; senior chemist to weekend scientist) within a few minutes of training. The robust design of the P4SPR offers unique flexible assay time ranging from minutes to hours to accommodate a broad array of biomolecular interaction kinetics.

Affinité's technology has been validated with a series of protein-antibody interactions for prostate cancer (PSA / anti-PSA), enzyme detection (β-lactamase), immunoglobulins and more. It is applicable to ELISA-type assays in a label-free format. Our anti-fouling technology provides high signal-to-noise in complex biological fluids including serum and plasma. Your protein-antibody interaction monitoring needs will be met with Affinité.

Cluster of Differentiation 64 / IgG Fab



Titration curve of CD64 on a Fab-modified SPR chip.

Key experimental steps

Affinité's peptide SPR chip

EDC/NHS crosslinking

PBS 1 X pH 7.4 buffer

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