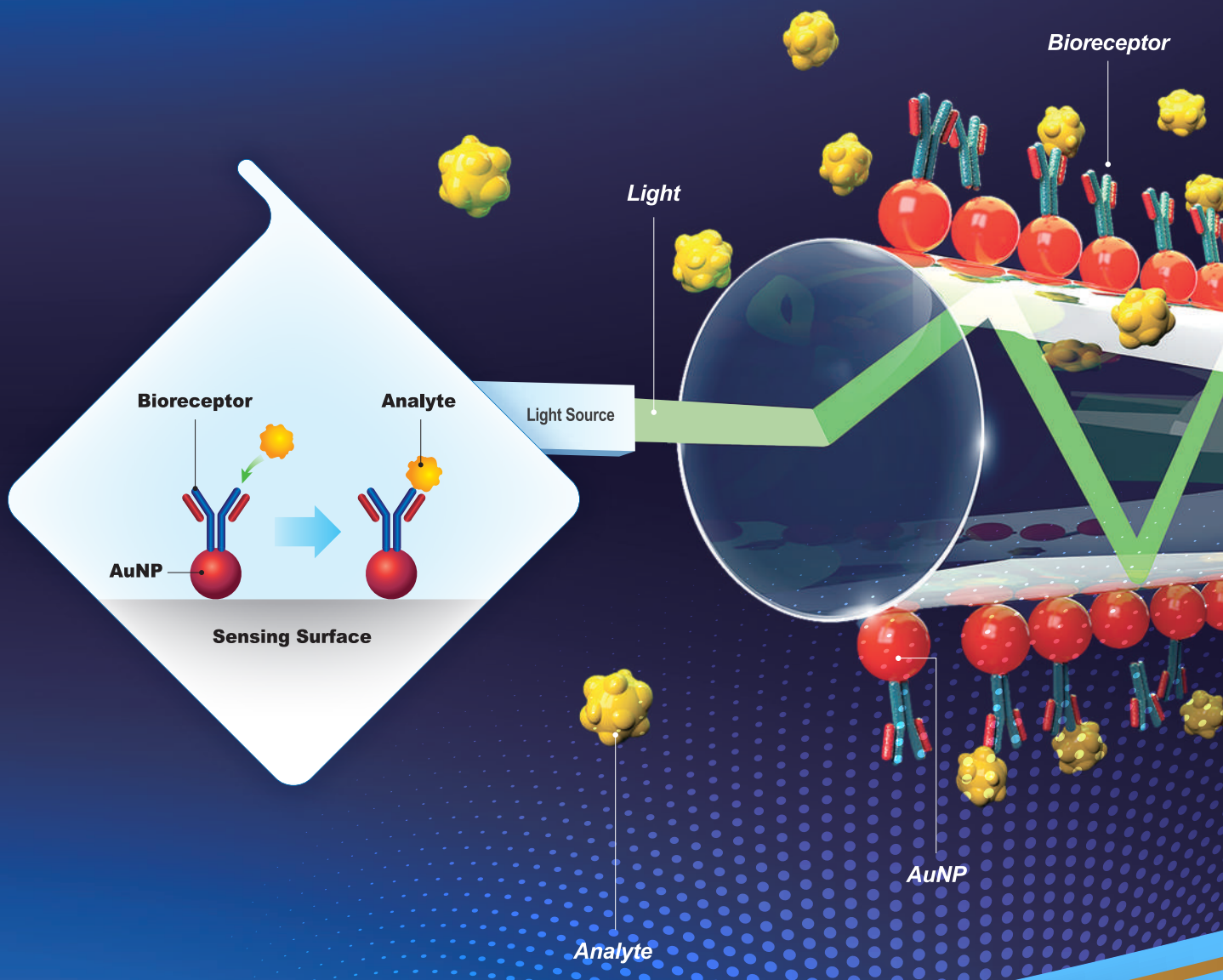
INSTANT
NanoBiosensors

IN-Ab Service

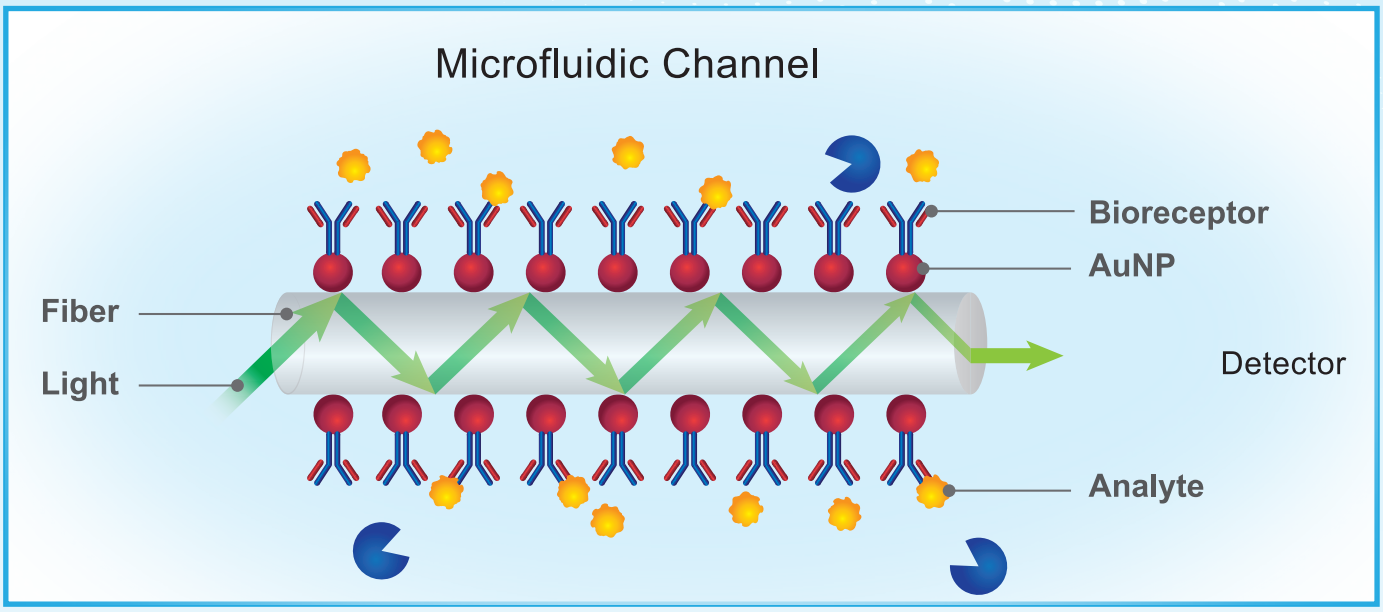
Experience the benefits of FOPPR
Fiber Optic Particle Plasmon Resonance



Antibody position analysis | Affinity database comparison | Rapid antibody detection

Technology Introduction

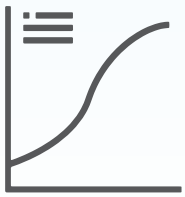
Fiber optic particle plasmon resonance (FOPPR™)



Our Light sensing biomarker analyzer utilizes the technologies of fiber optic particle plasmon resonance (FOPPR™) and microfluidic chips. By binding gold nanoparticles (AuNPs) to an optical fiber, antibodies are then able to be immobilized to this surface. Total internal reflection (TIR) occurs as light propagates within the fiber. This creates an evanescent field that induces the AuNPs to undergo particle plasmon resonance (PPR), creating an optical change that is transferred into sample data.

IN-Ab Applications

The IN-Ab antibody selection platform, utilizing our FOPPR™ Technology, provides accurate antibody affinity analysis, and antibody-antigen pair analysis before immunoassays, which improves accuracy of clinical experiments, saving time, cost and sample material while ensuring consistency and reproducibility throughout the experiment.



Antibody selection and affinity ability analysis

Antibody affinity database set-up

Antigen quantification measurement

IN-Ab Antibody Analysis

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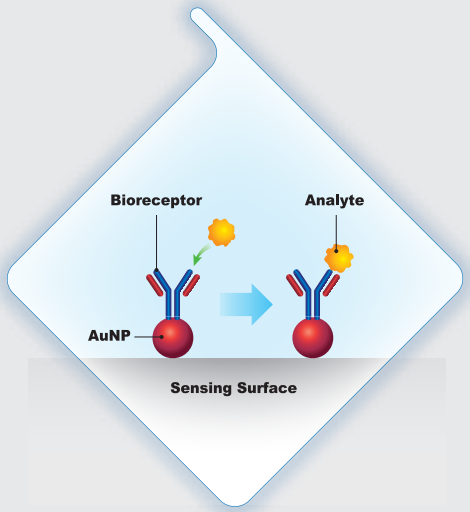
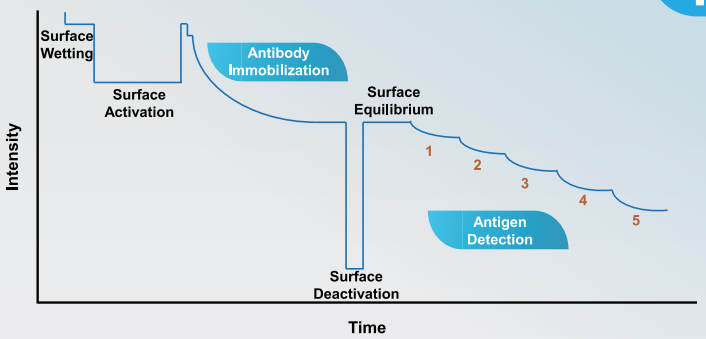


IN-Ab uses FOPPR™ Technology for real-time antibody-antigen interaction analysis, and can provide kinetic curves of antibody-antigen pairs as well as affinity analysis by data processing. This method does not require extra antibody adsorption-desorption assays thus reducing the complication of experiment process and detection cost.

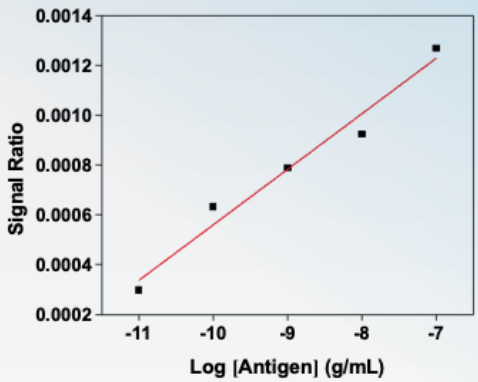
step 1



IN-Ab Experiment Process

1. Antibody immobilization:
   Antibody immobilization on optical fiber within 30 minutes
2. Immobilization verification:
   Verification of antibody immobilization status by algorithm
3. IN-curve establishment:
   Injection of selected samples from low to high concentrations on the same chip

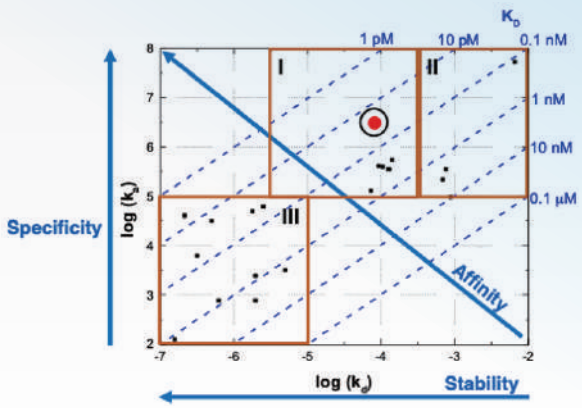
step 2



IN-curve

- ✓ Limit of detection (LOD)
- ✓ Linear dynamic range

step 3



IN-Ab Antibody Position

- ✓ Antibody selection
- ✓ Affinity ability data (ka, kd, KD)
- ✓ Affinity database comparison

IN-Ab Service Specification

Cat. No.	Service Name	Service Details
A4011-0001	IN-Ab Service Biomarker Analysis	✓ IN-curve establishment ✓ Limit of detection (LOD) calculation ✓ Linear dynamic range analysis ✓ Affinity ability data analysis (ka, kd, KD)
A4011-0002	IN-Ab Service Biomarker Detection	✓ Antigen quantification measurement ✓ Low concentration protein detection
A2011-3001	IN-Ab Service Biomarker Project Kit	✓ IN-curve establishment ✓ Limit of detection (LOD) calculation ✓ Linear dynamic range analysis ✓ Affinity ability data analysis (ka, kd, KD) ✓ Antigen quantification measurement ✓ Instant protein presence

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Instant NanoBiosensors Co. Ltd.
www.instantnano.com
BD@instantnano.com
Tel.: +886-2-2653-8655