

Study to Self Assembly Monolayer Film Effects on Streptavidin-Biotin System using Surface Plasmon Resonance Analyzer

장대호*, 구수진, 유규상
케이맥주식회사 연구소
(dhjang@kmac.to*)

Self-assembly monolayers (SAM) of alkanethiolates have been widely used as platforms for the studies of protein adsorption and cell adhesion due to their simplicity and flexibility. They are used to control nanoscale surface properties, such as surface charge, wettability, and topography. Thus, the quality of these SAMs is very important.

Surface plasmon resonance (SPR) is optical biosensors that are widely gaining recognition as a valuable tool to investigate biological interactions. SPR is a phenomenon which involves variable absorption of light by the surface electron plasma of a metal film under specific resonance conditions. Thus, any physical phenomenon at the surface that alters the refractive index will elicit a response. The key features of SPR biosensors (i.e. real-time monitoring of binding events and lack of labeling requirements.) make this technology suitable for a wide range of applications.

We prepared to SAMs of different length on gold surface and immobilized streptavidin. The binding capacity of streptavidin for biotinylated molecules was observed through the SPR LAB (KMAC, Korea).