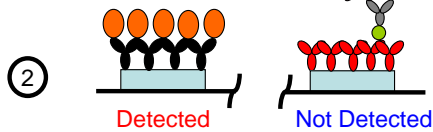


Cardiac Biomarker Multiplex Assay: Simultaneous High and Low Abundance Protein Measurement

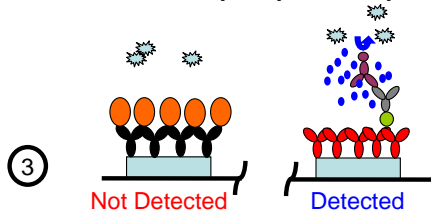
Antibodies patterned on separate spots and analyte mix is introduced



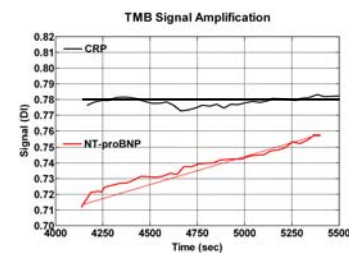
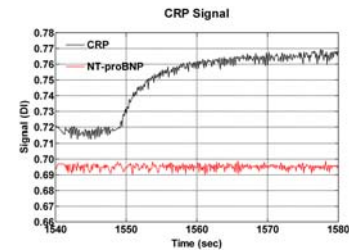
Binding is detected



TMB is introduced, precipitates in presence of HRP



25 $\mu\text{g/mL}$ C-Reactive Protein (CRP) and 25 pg/mL NT-proBNP in Serum



By coupling different affinity reagents to each spot, it becomes possible to measure multiple analytes. The enhanced dynamic range capability can then be applied not to just a single analyte but to components of mixtures present at wide concentration differences. This obviates the need to split samples and cluster analytes into similar concentration ranges for separate analysis. In this example, antibodies for CRP and NT-proBNP are coupled to two separate spots in a single sensor. When a serum sample is introduced, CRP is detected directly at micromolar concentrations. After a brief wash, the NT-proBNP is detected at picomolar levels through the addition of a signal enhancing reagent. The unique properties of this detection method means there is no observed cross-talk between analytes, a common limitation of multiplexed end-point assay approaches.