

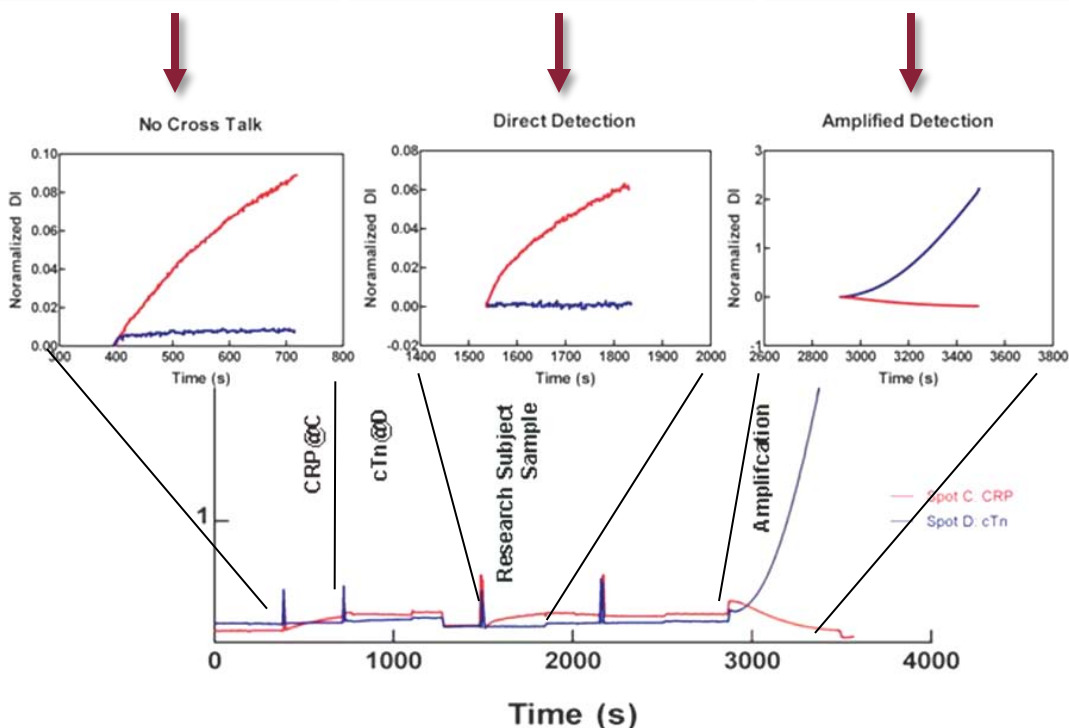
## Extended Dynamic Range on Multiplex panelPlus<sup>®</sup> Sensors

Analytes that are present in high and low abundance in a sample are difficult to measure in multiplexed assays since their signals often do not fall within the linear range of detection at a single dilution. However, the ability of the dotLab<sup>®</sup> mX System to sequentially add reagents to analytes on a panelPlus<sup>™</sup> Sensors enables the selective amplification of low abundance analytes to provide a detectable signal, thereby eliminating the need for multiple assays at different sample dilutions. To demonstrate the dynamic range on a panelPlus Sensor, a duplex assay was performed on C-reactive protein (CRP, a high abundance protein) and cardiac troponin (cTn, a low abundance protein).

Capture antibodies for CRP and cTn were immobilized at different locations on a panelPlus Sensor. No cross talk was observed among assay constituents.

When serum sample was added, CRP binding was directly detected due to its high abundance while no signal for cTn was observed

cTn binding was amplified using an alkaline phosphatase (AP)-linked anti-cTn detector antibody and a AP substrate



### Highlights:

- The dotLab<sup>®</sup> mX System together with the panelPlus<sup>™</sup> Sensors can be used to quickly develop multiplex biomarker assays
- Sequential probing during multiplex assays allows for:
  - a variety of signal amplification strategies
  - a large dynamic range
  - the ability to assay on a single dilution

