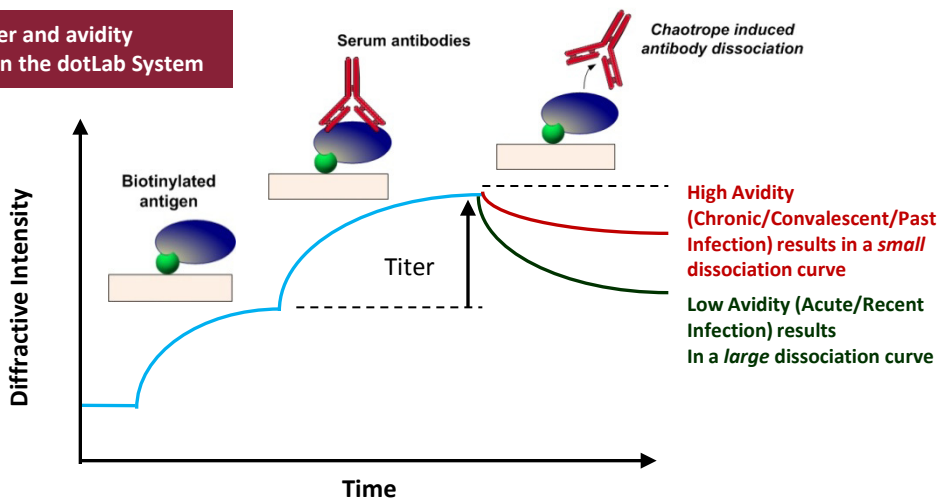


Rapid Determination of IgG Titer and Avidity

The measurement of antibody avidity in a serological test has wide spread applications in infectious disease research and vaccine development. For instance, it is used for distinguishing between recent and past infections in patients with diseases where time of infection onset is critical (eg. *Toxoplasma gondii* infection in pregnant women), and for determining the level of immunity after vaccination. The illustration below shows the dotLab[®] mX System being used to rapidly measure both the antibody titer and avidity of a serum sample during a single and easy to perform assay.

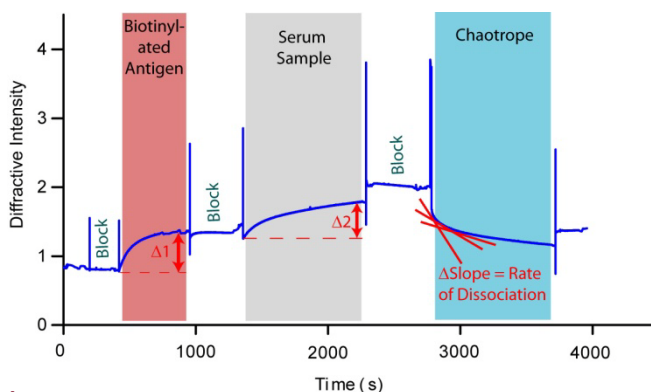
Illustration of titer and avidity measurements on the dotLab System



Typical data trace for a dotLab avidity assay

From the trace, one can measure:

- Relative titer from the antibody binding signal ($\Delta 2$) normalized to the biotinylated antigen binding signal ($\Delta 1$)
- Antibody avidity from the observed rate constant deduced from the chaotrope induced dissociation curve



Highlights:

- Real-time measurement of antibody dissociation
- Titer and avidity information in a single assay
- Rapid results (*less than one hour*)
- Potential for multiplexing using Axela's panelPlus[™] Sensors
- Suitable as a rapid and easy to use platform for infectious disease and vaccine research

