The National Cancer Institute and the Frederick National Laboratory for Cancer Research have developed a set of reagents for the analytical qualification of biosensor platforms. The kit consists of virus like particles (VLPs) that are ~55 nm in size and are used as a capture molecule in a standard ELISA to measure antibody levels. The kit components are the VLPs, pooled serum from vaccinated individuals that are considered strong responders to these VLPs, mouse monoclonal antibodies (MAbs) to the VLPs, and anti-human and anti-mouse IgG antibodies for detection. The mouse MAbs were produced using purified VLPs as antigen and have been tested to ensure specificity.

These kits can be used to test the analytical performance of new biosensor platforms, with well-characterized VLPs and MAbs as reagents in the test assay. The reagents will be delivered with defined concentrations determined by FNLCR. The pooled serum samples will enable assay calibration. Together, the reagents and pooled serum will act as test assays for characterization of the analytical performance and variation of a sensor platform without introducing variability from clinical samples and with greater quality control and characterization than many commercial materials.

These kits are intended solely for the analytical validation of new sensor platforms, particularly nanotechnology-based platforms. They are not intended for use in virology or serology applications. Researchers interested in obtaining kit(s) to assist in sensor development and testing should contact Corinne Zeitler (corinne.zeitler@nih.gov) at FNLCR to prepare the appropriate documents for kit distribution.