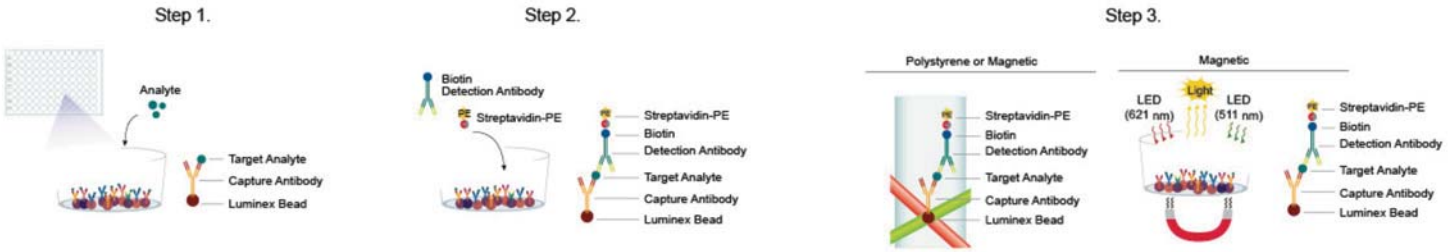
Luminex xMAP Technology as an Alternative to ELISA

Highly Flexible, Cost-Effective and Efficient

The Luminex xMAP technology offers significant advantages over traditional bioassays by offering high-throughput multiplexing of up to 100 analytes in a single well of a microtiter plate. As a bead-based detection system, Luminex allows for simultaneous measurement of analytes in as little as 25 µL- deriving maximum data from minimal sample input. The system delivers fast and cost-effective results across several assay formats, including immunoassays, receptor-ligand assays, and enzymatic assays.

Factors	ELISA	Luminex
Expense (multiple analytes)	Expensive	Less Expensive
Time Required	Time Consuming	Minimal Hands-on Time
Labor Intensive	Highly Intensive	Efficient: Simultaneous Readouts
Analytes (estimate)	1	Up to 100
Sample Required	10-100 µL PER analyte	25 µL For >40 analytes
Reagents Needed	Significant Volumes	Minimal
Primary Hybridization Technique	Multiple wells coated/uncoated antibody	Antibody attached to magnetic/non-magnetic beads
Reporter Technique	Spectrophotometer	Laser
Time to Read	Several Minutes	45 Minutes

ABL scientists know that standard ELISA formats can be limiting in the number of analytes, cost and the time required to perform, in addition to their need for a relatively large amount of sample. Moreover, the large surface area of the wells and the hydrophobic binding of capture antibody can lead to non-specific binding and increased background, which is not an issue in the bead-based, flow cytometry analyses offered by Luminex.



As an alternative to traditional bioassays, such as the ELISA, ABL offers the Luminex 100/200 System platform. A combination of three core xMAP Technologies- xMAP microspheres, the flow cytometry-based Luminex analyzer, and the xPONENT software, ABL can provide clients with protocol-based data acquisition with robust data regression analysis.

In contrast to an ELISA, the beads or microspheres used in Luminex have the capture antibody covalently immobilized on a small surface area, requiring less capture antibody and accommodating smaller sample volumes with a marked reduction in non-specific binding. Contact us today with your analytes or indication of interest and let our scientists suggest a multiplexing panel that best suits your needs.

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