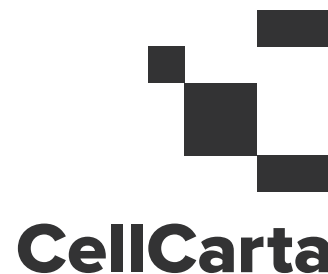


High Performance Technologies for Cytokine Measurement



Unmatched Expertise in Immunoassays for Cytokine Measurement

At CellCarta, we offer three platforms for cytokine measurement: Olink, Meso Scale Discovery®, and ELISA. Each of these three immunoassays come with unique advantages, depending on your specific application. Our team partners with you to select the right technology that will provide you with precise cytokine measurement and answer your clinical questions.

OLINK PEA TECHNOLOGY



The Olink PEA technology relies on a dual recognition approach with matched pairs of antibodies labeled with complementary DNA oligos, providing high specificity by avoiding cross-reactivity or interference at signal readout.

Advantages of Olink's PEA technology

- **High specificity and multiplexing capacity** enabled by dual recognition of correctly matched PEA probes and DNA sequence-specific protein-to-DNA conversion to generate a signal.
- **High sensitivity** levels achieved with extremely small sample volumes (1 µL/panel) via PCR amplification.
- **Wide dynamic range (10-log)** and **low limit of detection.**
- **Exceptional reproducibility** achieved through semi-automated workflow
- **Flexibility:**
 - Allows for two readout alternatives: NGS readout for large-scale protein biomarker discovery or qPCR readout for targeted protein biomarker discovery
 - Extensive range of 48-plex and 96-plex biomarker panels with qPCR readout, each focused around a specific disease area or biological process.
- Works with a **variety of samples:** serum, plasma, tissue lysates, and more.

MESO SCALE DISCOVERY® (MSD®) PLATFORM



Analyte screening with the multiplexed and highly sensitive MSD® platform is performed using both standard and custom panels. The MSD® immunoassay consists of two antibodies specific for the target analyte, one conjugated with an electrochemiluminescent label for quantitative readout.

Advantages of MSD®

- **High specificity and multiplexed:** high throughput, fast results, cost-effective for two or more analytes.
- **High sensitivity** levels with ability to target low analyte levels in small sample volumes (25-40 µL/panel).
- Dynamic range to detect high and low levels of cytokines with **5-log dynamic range and low limit of detection.**
- **Exceptional reproducibility**
- **Flexible:**
 - Multiplex reactions in 96- and 384-well plates.
 - **Standard panels** and **custom panels** of up to 10 analytes to address your specific needs.
- Works with a **variety of samples:** serum, plasma, tissue culture media, and more.

Partner with CellCarta for Flexible Solutions to All Your Applications

Both Olink and MSD® match or exceed the sensitivity and performance offered by single-plex ELISAs while providing additional benefits, including the ability to multiplex, and a broader dynamic range. The ability to multiplex enables low sample volumes and improves throughput, cost-savings, as well as data consistency, by enabling analysis of many different target analytes within the same assay environment.

The exceptional sensitivity of both Olink and MSD® fill the need for robust technologies that detect low abundant biomarkers, necessary in many clinical applications such as risk assessment, prognosis, monitoring of disease progression and response to therapies. Olink has the added benefit of requiring only small sample volumes, minimizing precious clinical sample utilization, and MSD® is used for secondary endpoints.



	MESO SCALE DISCOVERY® (MSD®) PLATFORM	OLINK PEA TECHNOLOGY	ELISA
Detection Method	Electrochemiluminescence	Fluorescence	Colorimetric reaction
Platform	Working electrode surface	NGS or qPCR	96-well Nunc Immunoplates
Multiplexing	Yes	Yes	Limited
Sample Volume	~25-100 µL/panel	~1 µL/panel	~50-100 µL
Sensitivity	High	High	High
Specificity	High	High	High
Dynamic Range	4-5-log	4-5-log	1-2 log
Readouts	Up to 10 analytes/plate	92 analytes/plate*	One analyte/plate
Regulatory	Exploratory or secondary endpoints	Exploratory	Exploratory, secondary or primary endpoints

*Using the Olink Target 96 Immuno-Oncology panel.

TALK TO ONE OF OUR SCIENTISTS FOR GUIDANCE ON WHICH PLATFORM IS BEST SUITED FOR YOUR NEED.

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ABOUT CELLCARTA

Leading provider of specialized precision medicine laboratory services to the biopharmaceutical industry. Leveraging its integrated analytical platforms in immunology, histopathology, proteomics and genomics, as well as related specimen collection and logistics services, CellCarta supports the entire drug development cycle, from discovery to late-stage clinical trials. The company operates globally with 10 facilities located in Canada, USA, Belgium, Australia, and China.

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