Olink® Signature Q100

A benchtop system for protein biomarker analysis

Olink® Signature Q100 is a dedicated system specifically designed for readout of **Olink® Target** (96 & 48-plex), **Olink® Flex** (15–21 chosen assays) and **Olink® Focus** (custom design) protein biomarker panels. These are focused on specific disease areas or biological processes and offer Proximity Extension Assay (PEA) technology coupled to a qPCR readout. PEA combines the best of antibody- and DNA-based methodologies to provide unique, enabling tools for protein biomarker discovery and development.

An enabling solution for running Olink protein biomarker studies in your own lab

- Developed specifically for Olink's high quality Target 96/48, Focus and Flex protein biomarker panels.
- User-focused design and intuitive interface, including integrated software and IFC loader.
- Low investment threshold, broadening access to proteomic profiling to more researchers than ever before.
- Small, compact footprint.

Olink PEA Technology

The exponential amplification properties of PCR are utilized in PEA to achieve a strong readout signal, providing assay sensitivity on par or better than traditional enzyme-linked immunosorbent assays (ELISAs). Consequently only extremely small sample volumes are needed to measure large numbers of proteins simultaneously, greatly facilitating studies with limited sample availability, such as those using human samples from clinical cohorts or biobanks. Moreover, the requirement for correctly matched oligos on the antibody probe pairs in PEA ensures exceptional specificity even at high multiplexing levels.

Available panels for Olink Signature

Olink Target 96 panels are focused around a specific disease area or biological process and each enable the relative quantification of 92 carefully selected proteins across 88 samples simultaneously, using just 1 µL sample. This offers a uniquely flexible proteomics solution, with a library of over 1100 human proteins available via 14 different 96-plex panels.

Olink Target 48 Cytokine is the ultimate solution for targeted studies focused on inflammatory diseases or processes. This panel enables analysis of 45 carefully selected proteins across 40 samples simultaneously from just 1 µL sample. Thanks to the provision of calibrators for each assay, Olink® Target 48 Cytokine also offers absolute quantification, providing data in both standard concentration (pg/mL) and relative concentration (NPX) units.

Olink Flex panels are highly flexible and made-to-order. They enable you to select and combine targets for up to 21 human proteins in one biomarker panel with results reported in absolute quantification (pg/mL) and relative quantification (NPX). Pick and choose from over 200 inflammation-related human proteins with 99% combinability in a broad mix-and-match library.

Olink Focus panels are available via custom projects with our R&D experts, and offer assays for up to 21 customer-selected proteins, with a choice of absolute or relative quantification.

Olink will continue to develop additional Target and custom panel offerings to further expand the utility of Olink Signature.

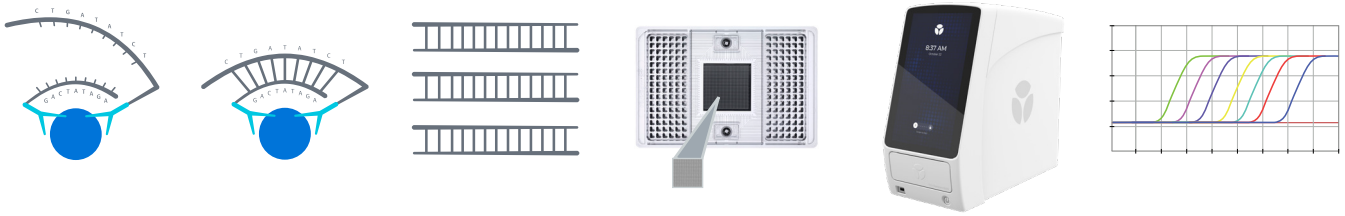

Figure Lab workflow for Olink Signature Antibody pairs labeled with DNA oligonucleotides bind target antigen in solution, allowing hybridization and extension by DNA polymerase. This newly created piece of DNA barcode is amplified by standard PCR before transfer to an integrated microfluidic chip (IFC), which is loaded into the instrument for qPCR and data readout.

Instrument specifications

Olink® Signature Q100

Dimensions

Depth	60 cm (23.6 in)
Width	27 cm (10.6 in)
Height	55 cm (21.6 in)
Weight	41.5 kg (91.5 lb)

Thermal control

Peltier-based, 4–99 °C

Heating ramp rate

Up to 5.5 °C/sec

Cooling ramp rate

Up to 5.5 °C/sec

Fluorescence excitation

475 nm, 575 nm

Fluorescence emission

525 nm, 630 nm

Instrument control computer

Memory	16 GB
Storage	1 TB HDD
Ports	3 USB (1 in front, 2 in back)
	1 GB/sec Ethernet

Power requirements

100–240V; 8.0 Amp

Olink provides a region-specific power cord for the Signature Q100 system.

Work environment (indoor use only)

Temperature	15–30 °C (59–86 °F)
Humidity	20%–80% relative humidity, non-condensing
Altitude	Not to exceed 2,000 m (6,560 ft) above sea level

Supported IFCs

Protein expression	Olink® 96.96 IFC for Protein Expression
	Olink® 48.48 IFC for Protein Expression
	Olink® 24.192 IFC for Protein Expression

Compliance

- Low Voltage (LVD) 2014/35/EU
- Electro Magnetic Compatibility (EMC) 2014/30/EU
- Restrictions on the use of certain hazardous substances in Electrical and Electronic Equipment (RoHS) 2011/65/EU
- Waste Electrical and Electronic Equipment (WEEE) 2012/19/EU
- EU Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Regulation (EC) No 1907/2006

Software

Data collection	Olink® Signature Q100 Instrument software
Analysis	Olink® NPX Signature

The Signature Q100 instrument is delivered with a twelve (12) months warranty included.

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