

Q-Plex™ Human Cytokine Screen (16-Plex)

The Q-Plex Human Cytokine Screen (16-Plex) is a fully quantitative ELISA-based chemiluminescent assay allowing the concurrent measurement of 16 biomarkers or analytes: IL-1 α , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-13, IL-15, IL-17a, IL-23, IFN γ , TNF α , and TNF β .

Each kit contains a 96-well plate, featuring the relevant biomarker panel, and all the reagents required to perform testing. Q-Plex™ plates are built by absorbing sixteen distinct capture antibodies in a defined array to the bottom of each well. Using just 50 μ L of sample per well, up to 80 samples can be assayed for all sixteen markers in the panel within 2.5 hours. The Q-Plex™ Human Cytokine – Screen (16-plex) provides researchers an easy to use and cost effective means of generating a cytokine profile for each sample.

Catalog #	Product	Markers			
110933HU	Q-Plex™ Human Cytokine Screen (16-Plex)	IFN γ	IL-1 α	IL-1 β	IL-2
		IL-4	IL-5	IL-6	IL-8
		IL-10	IL-12p70	IL-13	IL-15
		IL-17a	IL-23	TNF α	TNF β

Product Range

Analyte	Assay Type	Calibrator Range	Upper Limit of Quantification (ULOQ)	Lower Limit of Quantification (LLOQ)	Limit of Detection	Precision* (Inter-assay)	Precision* (Intra-assay)	Average* Linearity
IFN γ	Sandwich	8000 -10.97 (pg/mL)	5600 (pg/mL)	14.3 (pg/mL)	4.95 (pg/mL)	8%	6%	97%
IL-1 α	Sandwich	4000 -5.49 (pg/mL)	2800 (pg/mL)	7.1 (pg/mL)	5.43 (pg/mL)	6%	3%	86%
IL-1 β	Sandwich	12226 -16.77 (pg/mL)	8558 (pg/mL)	21.8 (pg/mL)	12.40 (pg/mL)	8%	6%	94%
IL-2	Sandwich	5213 – 7.15 (pg/mL)	3649 (pg/mL)	9.3 (pg/mL)	4.12 (pg/mL)	6%	5%	99%
IL-4	Sandwich	1676 – 2.30 (pg/mL)	1173 (pg/mL)	3.0 (pg/mL)	1.79 (pg/mL)	6%	4%	94%
IL-5	Sandwich	3000 – 4.12 (pg/mL)	2100 (pg/mL)	5.3 (pg/mL)	2.90 (pg/mL)	10%	5%	95%
IL-6	Sandwich	3000 – 4.12 (pg/mL)	2100 (pg/mL)	5.3 (pg/mL)	3.47 (pg/mL)	7%	7%	104%
IL-8	Sandwich	2000 – 2.74 (pg/mL)	1400 (pg/mL)	3.6 (pg/mL)	1.37 (pg/mL)	12%	7%	100%
IL-10	Sandwich	8039 – 11.03 (pg/mL)	5627 (pg/mL)	14.3 (pg/mL)	10.99 (pg/mL)	7%	4%	103%
IL-12p70	Sandwich	3000 – 4.12 (pg/mL)	2100 (pg/mL)	5.3 (pg/mL)	3.20 (pg/mL)	7%	7%	103%
IL-13	Sandwich	3000 – 4.12 (pg/mL)	2100 (pg/mL)	5.3 (pg/mL)	4.12 (pg/mL)	6%	5%	98%
IL-15	Sandwich	10733 – 14.72 (pg/mL)	7513 (pg/mL)	19.1 (pg/mL)	6.87 (pg/mL)	10%	10%	96%
IL-17a	Sandwich	16772 – 23.01 (pg/mL)	11740 (pg/mL)	29.9 (pg/mL)	22.57 (pg/mL)	7%	6%	95%
IL-23	Sandwich	41700 – 57.20 (pg/mL)	21000 (pg/mL)	120 (pg/mL)	48.65 (pg/mL)	10%	7%	105%
TNF α	Sandwich	6500 – 8.92 (pg/mL)	4522 (pg/mL)	11.5 (pg/mL)	7.74 (pg/mL)	6%	6%	98%
TNF β	Sandwich	4000 – 5.49 (pg/mL)	2800 (pg/mL)	7.1 (pg/mL)	5.29 (pg/mL)	8%	7%	96%

* Actual values may vary from kit to kit. Please see the In-Kit Certificate of Analysis included in your kit for specific values.

The Q-Plex™ Array

Spotting in 96 Well Plate

- ▶ Robotic liquid handlers print 20-50nL spots of capture antibody
- ▶ Each spot is a unique assay within the well
- ▶ Low spot-to-spot variability (CV)
- ▶ Spot size 350-500µm
- ▶ Plates are QC'd for spot quality

Performing the Assay

- ▶ Add as little as 25µL of sample
- ▶ Wash
- ▶ Add mix of detection antibodies specific to kit
- ▶ Wash
- ▶ Add streptavidin conjugated HRP

Detection of Sample

- ▶ With the addition of substrate, a response is produced
- ▶ If antigen is present the spot emits a signal proportional to the amount of antigen in the sample
- ▶ If no antigen is present, the spot is not visible

Image Capture

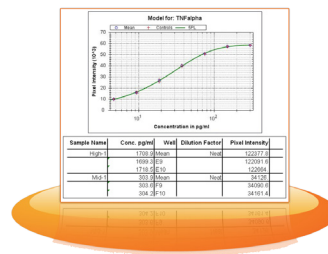
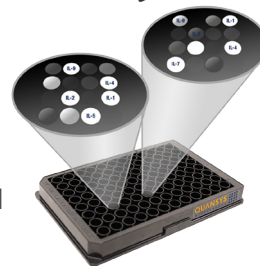
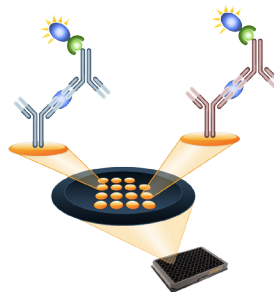
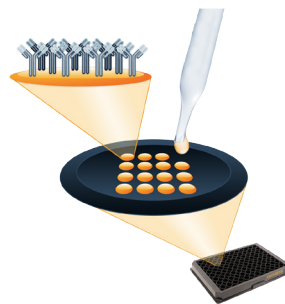
- ▶ An image of the plate is taken via a high resolution camera contained within the Q-View™ Imager LS

Image Analysis

- ▶ Image is opened in Q-View™ Software
- ▶ Spots are automatically found on plate image
- ▶ Intensity of spot response is measured and raw data is generated
- ▶ User imports product specs and well layout

Data Analysis

- ▶ Raw data is analyzed and compared to in-plate standard
- ▶ Regression models used to calculate unknowns
- ▶ Standard curves are calculated and sample and statistical data is exported



Increase productivity with Quansys products and services. Save time, sample, and money.

Q-Plex™ ARRAYS

Our Q-Plex Arrays are quantitative multiplex ELISAs with distinct proteins deposited in a defined array. Choose one of our standard kits for immediate delivery or customize the exact array you need.

Q-View™ IMAGERS

The Q-View™ Imager LS is a high quality, low-cost imaging systems for chemiluminescent assay imaging.

Q-View™ SOFTWARE

The Q-View Software is a user-friendly image analysis app that enables the acquisition and analysis of large amounts of multiplex ELISA data.

SAMPLE TESTING SERVICE

Our lab runs immunoassays on a wide variety of biological samples. Increase productivity and focus on your core research while we test your samples for you.



Quansys Biosciences
365 North 600 West
Logan, UT 84321
www.quansysbio.com

Fax: 435-750-6869
Phone: 435-752-0531
Toll Free: 888-QUANSYS (782-6797)

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