

Q-Plex IL-1 Family Array

The IL-1 family is a group of cytokines, along with associated receptors and binding proteins, that plays a central role in the regulation of immune and inflammatory responses. The Q-Plex IL-1 Family Array is a fully quantitative ELISA-based chemiluminescent assay allowing concurrent measurement of 10 ligands, receptors, and binding proteins involved in the IL-1 family of cytokines.

The Q-Plex IL-1 Family Array includes the following

IL-1 family ligands: IL-1 alpha/IL-1F1, IL-1 beta/IL-1F2, IL-1ra/IL-1F3, IL-18/IL-1F4, IL-33/IL1-F11

IL-1 family receptors: sIL-1 R1, sIL-1 R2, sIL-1 R3/IL-1 RAcP, sIL-1 R4 /ST2

IL-1 family binding proteins: IL-18 BPa

Each kit contains a 96-well plate, with each well featuring the 10-plex and a reference spot, along with all other reagents necessary to perform the test. Using just 25 µl of sample per well, up to 80 samples can be assayed for all 10 markers in the panel in 3.5 hours.



Response profiles of two samples (Replicates are in each row) demonstrate typical sample result and reproducibility

Human IL-1 Family Kit

Catalog # Product

118651HU Q-Plex™ Human IL-1 Family Array (10-plex)

Markers

IL-1α IL-1ra IL-33 sIL-1 R1 sIL-1 R3
IL-1β IL-18 IL-18BPa sIL-1 R2 sIL-1 R4

Product Range

Analyte	Standard High Point (pg/mL)	Standard Low Point (pg/mL)
IL-1α	1100	1.5
IL-1β	4100	5.6
IL-1ra	7000	9.6
IL-18	10000	13.7
IL-33	350	0.5
IL-18BPa	3100	4.3
sIL-1 R1	5300	7.3
sIL-1 R2	9900	13.6
sIL-1 R3	4700	6.5
sIL-1 R4	30000	41.2

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 50µL of sample
- ▶ Wash
- ▶ Add mix of detection antibodies specific to kit
- ▶ Wash
- ▶ Add streptavidin conjugated HRP or IR-Dye

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

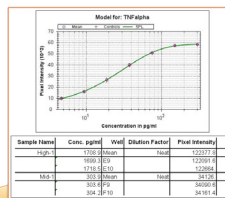
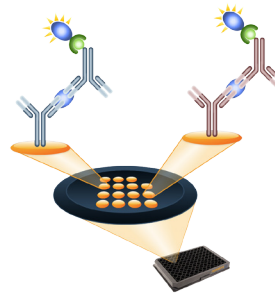
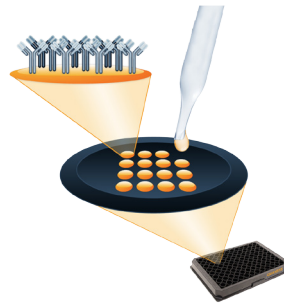
- ▶ An image of the plate is taken via a high resolution camera (Q-View Imager or approved gel doc system) or fluorescent scanner (LI-COR Odyssey)
- ▶ The image file (TIFF) is imported into Q-View Software and a Q-View Project is created

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 and Q-View Imager Pro are 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.

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