

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 9 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-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 9-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 9 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 (9-plex)

Markers

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

Product Range

| Analyte | Units | Range | LLD |
|----------|-------|--------------|-------|
| IL-1α | pg/ml | 1100 - 1.5 | 1.51 |
| IL-1β | pg/ml | 4100 - 5.6 | 5.62 |
| IL-18 | pg/ml | 300 - 0.4 | 1.89 |
| IL-33 | pg/ml | 350 - 0.5 | 0.48 |
| IL-18BPa | pg/ml | 3100 - 4.3 | 2.84 |
| sIL-1 R1 | pg/ml | 5300 - 7.3 | 2.86 |
| sIL-1 R2 | pg/ml | 9900 - 13.6 | 8.44 |
| sIL-1 R3 | pg/ml | 4700 - 6.5 | 2.55 |
| sIL-1 R4 | pg/ml | 30000 - 41.2 | 19.68 |

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

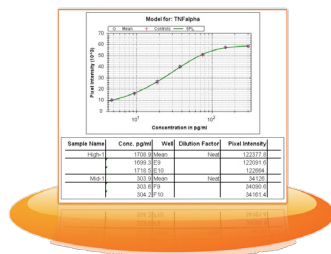
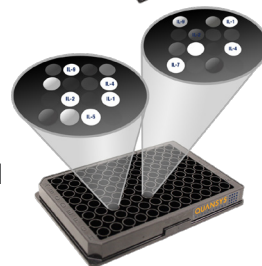
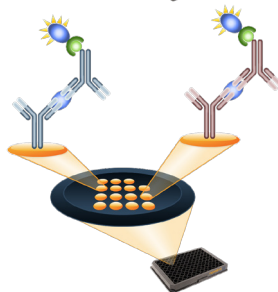
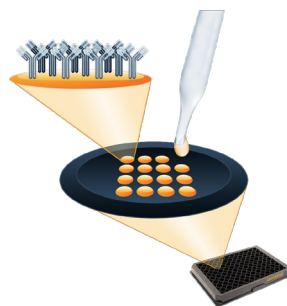
- ▶ An image of the plate is taken via a high resolution camera contained within the Q-View Imager Pro or Q-View Imager LS
- ▶ The image file (TIFF) is imported into Q-View Software and a Q-View Project is created

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 Pro and Q-View Imager LS 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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