

Q-Plex Human Micronutrient Array

The Q-Plex™ Human Micronutrient Array (7-plex) is a fully quantitative chemiluminescent assay allowing concurrent measurement of biomarkers used in nutritional assessment in heparinized plasma samples. Analytes CRP, Ferritin, Thyroglobulin (Tg), and HRP2 are sandwich ELISAs while AGP, RBP4 and sTfR are competitive ELISAs.

A kit contains a 96-well plate, with each well featuring the 7-plex along with a positive control and all the other reagents necessary to perform the test. Our high quality reagents help ensure the accuracy of your results.

Using just 10 µl of plasma (with 40 µl of diluent) per well, up to 80 wells can be tested for all seven markers in the panel in 2.5 hours. Q-Plex Arrays provide scientists with an easy-to-use and cost effective means of generating a biomarker profile for each sample.



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

Micronutrient Kit

Catalog # Product

565149HU Q-Plex™ Human Micronutrient Array (7-plex)

Markers

AGP CRP Ferritin sTfR
RBP4 Tg HRP2

Product Range

	Units	Sample Range of Quantification	LLD	Calibrator*
AGP	g/L	0.36 - 0.0005	0.0019	0.47
CRP	mg/L	5.61 - 0.0077	0.006	5.61
Ferritin	µg/L	115 - 0.1578	0.2057	150
sTfR	mg/L	107 - 0.1468	0.1917	139.8
RBP4	µmol/L	1.01 - 0.0014	0.0054	1.31
Tg	µg/L	13.7 - 0.0188	0.0244	17.8
HRP2	µg/L	0.96 - 0.0013	0.0017	1.24

* Actual values may vary from kit to kit. Please see the antigen card included in your kit for specific values.

Lillis L, Barney B, Brindle E, Kalnoky M, Peck R, Tyler A, Lyman C, Boyle D. LB400: Multiplexed Micronutrient Array for Population Surveillance. 2016. PATH, Seattle, WA, USA, Center for Studies in Demography and Ecology, University of Washington, Seattle, WA, USA, Quansys Biosciences, Logan, UT, USA.

Brindle E, Stevens D, Crudder C, Leven CE, Garrett D, Lyman C, and Boyle DS. A Multiplex Immunoassay Method for Simultaneous Quantification of Iron, Vitamin A and Inflammation Status Markers. 2014. PATH, Seattle, WA, USA, Center for Studies in Demography and Ecology, University of Washington, Seattle, WA, USA, Quansys Biosciences, Logan, UT, USA.

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

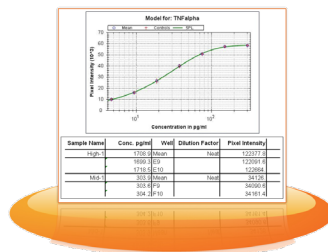
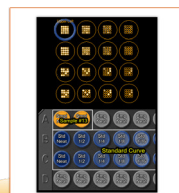
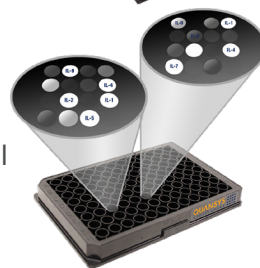
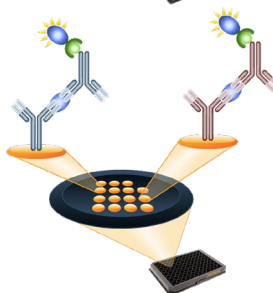
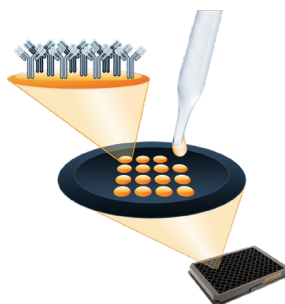
- ▶ An image of the plate is taken via a high resolution camera (Q-View Imager Pro, Q-View Imager LS or approved gel doc system) or fluorescent scanner (LI-COR Odyssey)
- ▶ The image file (TIFF) is imported into Q-View Software and a Q-View Project is created

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 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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