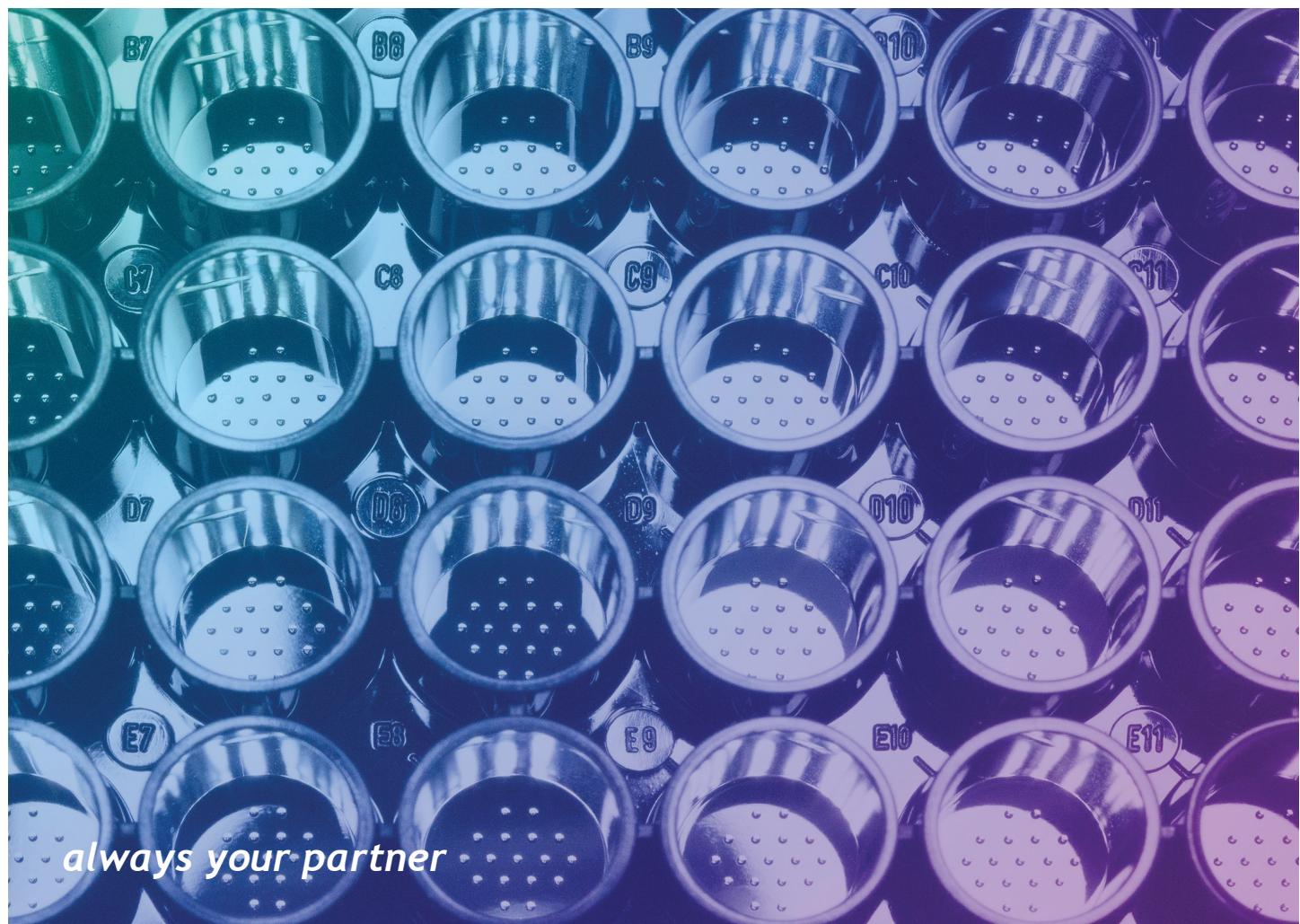


TECOmedical Group

Multiplex Systems for Complement and Cytokines



always your partner

MULTIPLEX SYSTEMS FOR COMPLEMENT AND CYTOKINES

The Q-Plex Array Technology is a multiplex ELISA based on chemiluminescence. It is capable of measuring and quantifying up to 18 distinct analytes in one well: complement fragments, cytokines, chemokines, hormones and proteins. Each well of the 96-well plate contains a defined array of printed capture microspots. Detection of the array is performed by the Q-View Imager and data are reported in different individual formats.

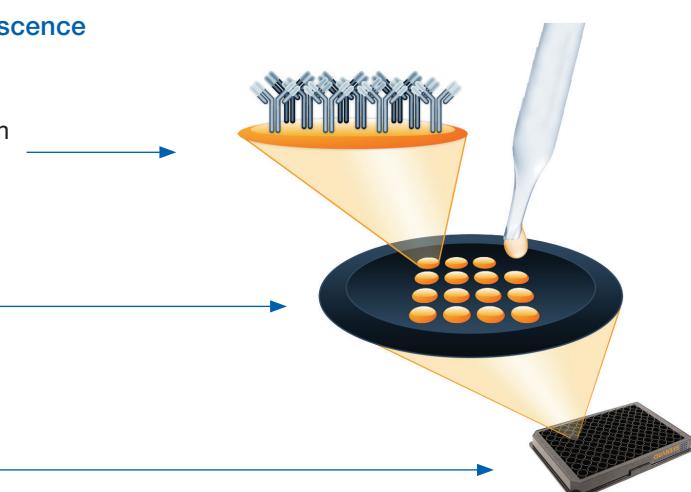
Technology

ELISA Plate Technology: Chemiluminescence

Capture antibody is applied to 350-500 μm spots to bind target proteins

Deposition of 20-50 nL

Static 96-well plate specially created to prevent inter-well signal loss



ELISA Formats

Competitive and sandwich ELISA formats allow for testing high and low abundant proteins in the same assay, while expanding dynamic range between analytes.

Indirect ELISA

Crude viral lysate, cell lysates, recombinant virus antigens, peptides etc. to detect IgG antibodies.

Sandwich ELISA

To maximize sensitivity of low abundant analytes.

Competitive ELISA

For high abundant proteins.

Detection

Signal from individual spots is generated via standard biotin and streptavidin-HRP complexing. Chemiluminescent signal detection and intensity is then used to determine presence and quantity of the specific analytes.



Multiplex Assays

Complement Assays MicroVue (Quidel)

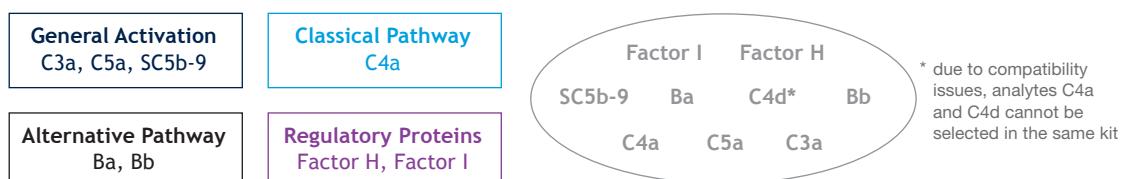
- 9 analytes
- 1:100 dilution for all analytes in the Multiplex format
- In comparison, individual ELISAs require different dilutions for each analyte
- Sample type: plasma and serum (5µl)

Cytokine Assays (Quansys)

- 15 Human Cytokine assays – up to 18 analytes
- 9 Animal Cytokine assays (rat, mouse, porcine)
- Human assays suitable for monkey samples
- Sample type: serum, plasma, cell culture and other biological fluids (25µl)

MicroVue Complement Fragment Assays - Standard and customized 3- to 8-Plex

The ability to measure multiple Complement proteins in an individual sample constitutes a major step forward in research-based tools. The MicroVue Complement Multiplex can quantitatively measure eight individual complement proteins, providing a comprehensive overview of complement system homeostasis and activation.



MicroVue Complement Performance and Validation Data

The data in the table below shows the R² value between plasma samples run on established MicroVue Complement EIA kits and on the MicroVue Complement Multiplex. High correlation between the products is shown and demonstrates experimental integrity for the multiplex.

Analyte	Ba	Bb	C3a	Ca4	C4d	C5a	SC5b-9	Factor I	Factor H
R ²	0.928	0.977	0.966	0.969	0.971	0.962	0.962	0.978	0.884

MicroVue Complement Multiplex Assays – Animal Cross Reaction

Product	African Green Monkey	Cynomolgous Monkey	Rhesus Monkey	Dog	Porcine	Baboon	Pigtail Monkey	Rabbit
C3a*	None							
C5a	None							
Ba	✓	✓	✓	✓				
Bb		✓	✓		✓			
Sc5b-9	✓	✓	✓			✓	✓	✓
C4d						✓		
C4a	✓	✓					✓	
Factor I	None							
Factor H	None							

* C3a in monkeys can only be measured with the individual ELISA kit

Quansys Multiplex Cytokine Standard Assays

Human Multiplex Assays

- Human Angiogenesis (9-plex)
- Human Chemokine (4-plex)
- Human Chemokine (9-plex)
- Human Cytokine (4-plex)
- Human Cytokine – High Sensitivity (9-plex)
- Human Cytokine – High Sensitivity (15-plex)
- Human Cytokine – Inflammation (9-plex)
- Human Cytokine – Screen (16-plex)
- Human Cytokine – Strip wells (16-plex)
- Human Cytokine Panel 1 (6-plex)
- Human Cytokine Panel 2 (6-plex)
- Human Female Hormone (8-plex)
- Human Micronutrient (7-plex)
- Human MMP (6-plex)
- Human Obesity (7-plex)

Mouse Multiplex Assays

- Mouse Cytokine Inflammation (14-plex)
- Mouse Cytokine Panel 1 (4-plex)
- Mouse Cytokine Panel 1 (6-plex)
- Mouse Cytokine Panel 2 (4-plex)
- Mouse Cytokine Panel 2 (6-plex)
- Mouse Cytokine – Screen (16-plex)
- Mouse Cytokine – Strip wells (16-plex)

Rat Multiplex Assays

- Rat Cytokine – Inflammation (9-plex)

Porcine Multiplex Assays

- Porcine Cytokine – High Sensitivity (4-plex)

Quansys Multiplex Cytokine Assays - Customized

Select up to 18 Quansys analytes out of 200

- Kits are available in 96- and 384-well sizes.

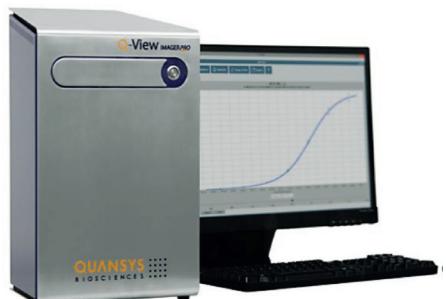


Imagers

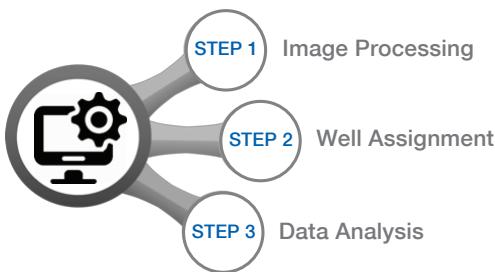
High Quality, Reproducible Chemiluminescent Imaging

Q-View Imagers offer a high quality and reproducible solution to 96-well plate based chemiluminescent imaging and the analysis of western blot imaging.

Q-View Imager LS	
Catalog #	104150GR
Resolution	16.9 x 16.9 microns
Sensor Type	CMOS
Optics	Selected to minimize vignetting effect
Image Applications	SBS plate format and maximum blots 3 x 4 ¾ in (7.6 x 12.1 cm)
Imaging Time	4.5 minutes
Control	Q-View Software
Connection to PC	USB 2.0
Power	120-240 Volt AC 50/60 Hz
Cooling (typical)	N/A
Footprint/Dimensions	8 x 10 x 22 in (20.32 x 25.4 x 55.88 cm)
Weight	21.3 lbs (9.7 kg)
CE-certified	
Q-View Imager PRO	
Catalog #	107550GR
Resolution	5.4 x 5.4 microns
Sensor Type	CCD
Optics	EF 28mm f/2.8 IS USM lens
Image Applications	SBS plate format and chemiluminescent blots 3 x 4 ¾ in (7.6 x 12.1 cm)
Imaging Time	1-5 minutes
Control	Q-View Software
Connection to PC	USB 2.0
Power	120-240 Volt AC 50/60 Hz
Cooling (typical)	Max delta -40°C
Footprint/Dimensions	10.5 x 9.5 x 18 in (26.7 x 24.1 x 45.7 cm)
Weight	28.4 lbs (12.9 kg)
CE-certified	



Q-View Software - 3 Step Process



Three main software portals can be used for analysis: Image Processing, Well Assignment and Data Analysis. There are a number of features within each of these portals to meet and any and all data analysis needs.

STEP 1

Image Processing:

Acquire images and easily locate spots using Auto-Set Plate Overlay and Auto-Adjust Spots or use Blot Tools to determine signal intensities from alternate assay types.



STEP 2

Well Assignment:

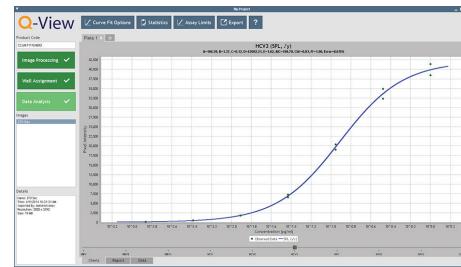
Label wells quickly via Templates and Sequential Naming, and import/export plate layouts as csv files.



STEP 3

Data Analysis:

View raw data, Auto-Select the best curve fit or manually optimize regression model settings for your data, and customize charts and reports with Statistics, Assay Limits, and Auto-Selected Dilutions.



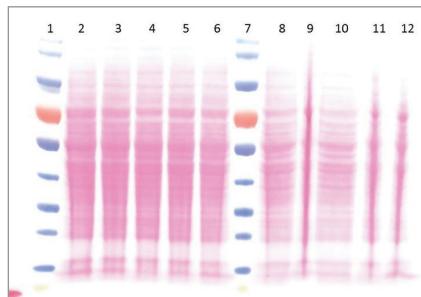
Q-View Software - Functionality

- Drives the Q-View Imager
- Time-saving “Auto” features
- Advanced acquisition algorithms to minimize the effects of noise, maximum sensitivity
- GLP compliant
- Multiple regression models including 4PL, 5PL, and point to point quantitative
- Multiple select weighing options to offset heteroscedasticity
- Outlier masking
- Pass/fail calculations to automatically detect and flag errors
- Customizable reports and charts
- Import of blot images for further analysis
- Customization & Integration
- System online or data via USB
- Unlimited number of user keys
- Barcode
- LIS connection

Software Blot Tools

A Blot image can be imported and analyzed with the Q-View software. The software allows to select a region for analysis. The regions can be rectangular, ellipse, circular, and/or polygon shaped. The sensitivity can be adjusted to include less or more pixels in the selection.

Blot Tools Report: The report consists of a custom identifier, number of pixels, mean and standard deviation.



Summary and Advantages

Assays

- Classical ELISA format
- 2 to 18 analytes on one plate
- Low sample volume of 5 to 25 ul
- Different sample types
- Decrease the need for multiple dilutions
- Measure high and low abundant proteins in the same assay (up to 10 Log Dynamic Range)
- Reduce time spent running assays
- High sensitivity
- Image detection time only 2-3 minutes
- Flexibility to select custom panels, created on demand
- Blot analysis

Imagers and Software

- Adaptable and customizable platform
- Simple and robust protocols
- Full touch screen support
- Multiple methods to analyze data
- System online or data via USB
- Unlimited number of user keys
- Barcode
- LIS connection
- GLP compliant
- CE-certified



Quansys Standard Assays

Human Angiogenesis (9-plex)			
I-150233HU			
	Units	Calibrator Range	LLD Limit
Ang-2	pg/ml	10000 - 13.72	3.9
FGF basic	pg/ml	5000 - 6.86	12.7
HGF	pg/ml	14000 - 19.2	7.2
IL-8	pg/ml	2000 - 2.74	2.7
PDGF-BB	pg/ml	4000 - 5.49	2.2
TIMP-1	pg/ml	10000 - 13.72	10.2
TIMP-2	pg/ml	20000 - 27.43	15.9
TNF α	pg/ml	4000 - 5.49	5.2
VEGF	pg/ml	2000 - 2.74	2.74

Human Chemokine (4-plex)			
I-125433HU			
	Units	Calibrator Range	LLD Limit
IL-8	pg/ml	2000 - 2.74	2.70
IP-10	pg/ml	4000 - 5.49	5.40
MCP-1	pg/ml	2000 - 2.74	2.60
Rantes	pg/ml	7800 - 10.70	3.93

Human Chemokine (9-plex)			
I-120233HU			
	Units	Calibrator Range	LLD Limit
Eotaxin	pg/ml	3000 - 4.12	1.25
GRO α	pg/ml	2000 - 2.74	1.20
I-309	pg/ml	3000 - 4.12	4.10
IL-8	pg/ml	2000 - 2.74	2.70
IP-10	pg/ml	4000 - 5.49	5.40
MCP-1	pg/ml	2000 - 2.74	2.60
MCP-2	pg/ml	2000 - 2.74	2.70
Rantes	pg/ml	7800 - 10.70	3.93
TARC	pg/ml	2000 - 2.74	2.40

Human Cytokine - High Sensitivity (9-plex)			
I-114433HU			
	Units	Calibrator Range	LLD Limit
IL-1 α	pg/ml	1300 - 1.78	1.4
IL-1 β	pg/ml	3070 - 4.21	1.75
IL-4	pg/ml	23 - 0.03	0.02
IL-5	pg/ml	360 - 0.49	0.2
IL-6	pg/ml	350 - 0.48	0.4
IL-10	pg/ml	950 - 1.30	1.1
IL-17	pg/ml	1200 - 1.65	1.48
INF γ	pg/ml	80 - 0.11	0.1
TNF α	pg/ml	440 - 0.60	0.31

Human Cytokine - High Sensitivity (15-plex)			
I-112433HU			
	Units	Calibrator Range	LLD Limit
IFN- γ	pg/ml	80 - 0.11	0.10
IL-1 α	pg/ml	1300 - 1.78	1.40
IL-1 β	pg/ml	3070 - 4.21	1.75
IL-2	pg/ml	50 - 0.07	0.07
IL-4	pg/ml	23 - 0.03	0.02
IL-5	pg/ml	360 - 0.49	0.20
IL-6	pg/ml	350 - 0.48	0.40
IL-10	pg/ml	950 - 1.30	1.10
IL-12p70	pg/ml	3000 - 4.12	3.00
IL-13	pg/ml	340 - 0.47	0.23
IL-15	pg/ml	950 - 1.30	0.43
IL-17	pg/ml	1200 - 1.65	1.48
IL-23	pg/ml	9000 - 12.35	1.50
TNF α	pg/ml	440 - 0.60	0.31
TNF β	pg/ml	470 - 0.64	0.57

Human Cytokine - Inflammation (9-plex)			
I-110433HU			
	Units	Calibrator Range	LLD Limit
IL-1 α	pg/ml	4000 - 5.49	5.43
IL-1 β	pg/ml	10000 - 13.72	10.14
IL-2	pg/ml	4000 - 5.49	3.16
IL-4	pg/ml	2000 - 2.74	2.14
IL-6	pg/ml	3000 - 4.11	3.47
IL-8	pg/ml	2000 - 2.74	2.70
IL-10	pg/ml	3000 - 4.11	4.10
INF γ	pg/ml	8000 - 10.97	4.95
TNF α	pg/ml	4000 - 5.49	5.20

Human Cytokine - Screen (16-plex)			
I - 110933HU			
	Units	Calibrator Range	LLD Limit
IL-1 α	pg/ml	4000 - 5.49	5.43
IL-1 β	pg/ml	10000 - 13.72	10.14
IL-2	pg/ml	4000 - 5.49	3.16
IL-4	pg/ml	2000 - 2.74	2.14
IL-5	pg/ml	3000 - 4.12	2.90
IL-6	pg/ml	3000 - 4.11	3.47
IL-8	pg/ml	2000 - 2.74	2.70
IL-10	pg/ml	3000 - 4.11	4.10
IL-12p70	pg/ml	3000 - 4.12	3.20
IL-13	pg/ml	3000 - 4.12	2.86
IL-15	pg/ml	3000 - 4.12	1.92
IL-17	pg/ml	4000 - 5.49	5.40
IL-23	pg/ml	30000 - 41.15	25.00
INF γ	pg/ml	8000 - 10.97	4.95
TNF α	pg/ml	4000 - 5.49	5.20
TNF β	pg/ml	4000 - 5.49	5.29

Human Cytokine - Stripwells (16-plex)			
I-110333HU			
	Units	Calibrator Range	LLD Limit
IL-1 α	pg/ml	4000 - 5.49	5.43
IL-1 β	pg/ml	10000 - 13.72	10.14
IL-2	pg/ml	4000 - 5.49	3.16
IL-4	pg/ml	2000 - 2.74	2.14
IL-5	pg/ml	3000 - 4.12	2.90
IL-6	pg/ml	3000 - 4.11	3.47
IL-8	pg/ml	2000 - 2.74	2.70
IL-10	pg/ml	3000 - 4.11	4.10
IL-12p70	pg/ml	3000 - 4.12	3.20
IL-13	pg/ml	3000 - 4.12	2.86
IL-15	pg/ml	3000 - 4.12	1.92
IL-17	pg/ml	4000 - 5.49	5.40
IL-23	pg/ml	30000 - 41.15	25.00
IFN- γ	pg/ml	8000 - 10.97	4.95
TNF α	pg/ml	4000 - 5.49	5.20
TNF β	pg/ml	4000 - 5.49	5.29

Human Cytokine Panel 1 (6-plex)			
I-115233HU			
	Units	Calibrator Range	LLD Limit
IL-1 β	pg/ml	10000 - 13.72	10.14
IL-6	pg/ml	3000 - 4.11	3.47
TNF α	pg/ml	4000 - 5.49	5.20
IFN- γ	pg/ml	8000 - 10.97	4.95
IL-1 α	pg/ml	4000 - 5.49	5.43
IL-10	pg/ml	3000 - 4.11	4.10

Human Cytokine Panel 2 (6-plex)			
I-115333HU			
	Units	Calibrator Range	LLD Limit
IL-6	pg/ml	3000 - 4.11	3.47
IL-8 LLD Limit	pg/ml	2000 - 2.74	2.70
TNF α	pg/ml	4000 - 5.49	5.20
IFN- γ	pg/ml	8000 - 10.97	4.95
IL-4	pg/ml	2000 - 2.74	2.14
IL-10	pg/ml	3000 - 4.11	4.10

Human Micronutrient (7-plex)			
I-565149HU			
	Units	Calibrator Range	LLD Limit
AGP	g/L	0.36 - 0.0005	0.0019
CRP	mg/L	5.61 - 0.0077	0.006
Ferritin	μ g/L	155 - 0.1578	0.2057
sTfR	mg/L	107 - 0.1468	0.1917
RBP4	μ mol/L	1.01 - 0.0014	0.0054
Tg	μ g/L	13.7 - 0.0188	0.0244
HRP2	μ g/L	0.96 - 0.0013	0.0017

Human Female Hormone (8-plex)			
I-332149HU			
	Units	Calibrator Range	LLD Limit
Adiponectin	ng/ml	28.3 - 0.12	1.64
Cortisol	ng/ml	744 - 1.02	6.45
C-Peptide	ng/ml	39 - 0.16	0.16
E1G	ng/ml	522 - 0.72	0.50
FHS	mIU/ml	167 - 0.69	2.30
HCGb	ng/ml	50 - 0.07	0.05
IL-6	pg/ml	1500 - 6.1	3.47
IL-10	pg/ml	666 - 2.7	4.10

Human MMP (6-plex)			
I-565149HU			
	Units	Calibrator Range	LLD Limit
MMP-1	pg/ml	12000 - 49.38	5.40
MMP-2	pg/ml	80000 - 329.22	96
MMP-3	pg/ml	4500 - 18.52	4.90
MMP-7	pg/ml	1800 - 7.41	4.60
MMP-9	pg/ml	44000 - 181.07	43.50
MMP-13	pg/ml	35000 - 144.03	42

Mouse Cytokine Inflammation (14-plex)			
I-110449MS			
	Units	Calibrator Range	LLD Limit
GMCSF	pg/ml	2000 - 2.74	2.30
IL-1 α	pg/ml	5000 - 6.86	4.20
IL-1 β	pg/ml	14000 - 19.20	12.41
IL-2	pg/ml	5000 - 6.86	3.44
IL-3	pg/ml	5000 - 6.86	3.18
IL-4	pg/ml	5000 - 6.86	2.50
IL-6	pg/ml	5000 - 6.86	2.90
IL-10	pg/ml	2000 - 2.75	3.00
IL-12p70	pg/ml	12000 - 16.46	12.20
IL-17	pg/ml	10000 - 13.72	6.20
MCP-1	pg/ml	3000 - 4.12	3.40
MIP-1 α	pg/ml	5000 - 6.86	0.61
RANTES	pg/ml	3000 - 4.12	2.15
TNF α	pg/ml	3000 - 4.12	3.40

Mouse Cytokine Panel 1 (6-plex)			
I-115249MS			
	Units	Calibrator Range	LLD Limit
IFN- γ	pg/ml	8000 - 10.97	5.40
IL-1 α	pg/ml	5000 - 6.86	4.20
IL-1 β	pg/ml	14000 - 19.20	12.41
IL-6	pg/ml	5000 - 6.86	2.90
IL-10	pg/ml	2000 - 2.74	3.00
TNF α	pg/ml	3000 - 4.12	3.40

Human Obesity (7-plex)			
I-119049HU			
	Units	Calibrator Range	LLD Limit
Adipsin	ug/ml	16.6 - 0.02	0.017
Glucagon	pg/ml	2500 - 3.4	2.63
PAI-1	pg/ml	3000 - 4.1	2.75
VEGF	pg/ml	5500 - 7.544582	5.18
RBP4	ug/ml	100 - 0.14	0.094
Ghrelin	pg/ml	2300 - 3.2	2.19
Leptin	pg/ml	3400 - 4.7	3.91

Mouse Cytokine Panel 2 (6-plex)			
I-115349MS			
	Units	Calibrator Range	LLD Limit
IL-1β	pg/ml	14000 - 19.20	12.41
IL-10	pg/ml	2000 - 2.74	3.00
MCP-1	pg/ml	3000 - 4.12	3.40
MIP-1α	pg/ml	5000 - 6.86	0.61
Rantes	pg/ml	3000 - 4.12	2.15
TNFα	pg/ml	3000 - 4.12	3.40

Mouse Cytokine Panel 1 (4-plex)			
I-115449MS			
	Units	Calibrator Range	LLD Limit
MCP-1	pg/ml	3000 - 4.12	3.40
MIP-1α	pg/ml	5000 - 6.86	0.61
Rantes	pg/ml	3000 - 4.12	2.15
TNFα	pg/ml	3000 - 4.12	3.40

Mouse Cytokine Screen (16-plex)			
I-110949MS			
	Units	Calibrator Range	LLD Limit
GMCSF	pg/ml	2000 - 2.74	2.30
IFN-γ	pg/ml	8000 - 10.97	5.40
IL-1α	pg/ml	5000 - 6.86	4.20
IL-1β	pg/ml	14000 - 19.20	12.41
IL-2	pg/ml	5000 - 6.86	3.44
IL-3	pg/ml	5000 - 6.86	3.18
IL-4	pg/ml	5000 - 6.86	2.71
IL-5	pg/ml	5000 - 6.86	2.50
IL-6	pg/ml	5000 - 6.86	2.90
IL-10	pg/ml	2000 - 2.74	3.00
IL-12p70	pg/ml	12000 - 16.46	10.20
IL-17	pg/ml	10000 - 13.72	6.20
MCP-1	pg/ml	3000 - 4.12	3.40
MIP-1α	pg/ml	5000 - 6.86	0.61
RANTES	pg/ml	3000 - 4.12	2.15
TNFα	pg/ml	3000 - 4.12	3.40

Rat Cytokine - Inflammation (9-plex)			
I - 110449RT			
	Units	Calibrator Range	LLD Limit
IFNy	pg/ml	17343 - 23.79	18.40
IL-1α	pg/ml	17705 - 24.29	17.50
IL-1β	pg/ml	19221 - 26.37	15.00
IL-2	pg/ml	81609 - 111.95	89.70
IL-4	pg/ml	7055 - 9.68	3.18
IL-6	pg/ml	136761 - 187.60	94.70
IL-10	pg/ml	7814 - 10.72	5.21
IL-12p70	pg/ml	50464 - 69.22	45.10
TNFα	pg/ml	28218 - 38.71	22.60

Mouse Cytokine - Stripwells (16-plex)			
I-110349MS			
	Units	Calibrator Range	LLD Limit
IL-1α	pg/ml	5000 - 6.86	4.20
IL-1β	pg/ml	14000 - 19.20	12.41
IL-2	pg/ml	5000 - 6.86	3.44
IL-3	pg/ml	5000 - 6.86	3.18
IL-4	pg/ml	5000 - 6.86	2.71
IL-5	pg/ml	5001 - 6.86	2.50
IL-6	pg/ml	5000 - 6.86	2.90
IL-10	pg/ml	2000 - 2.74	3.00
IL-12p70	pg/ml	12000 - 16.46	10.20
IL-17	pg/ml	10000 - 13.72	6.20
MCP-1	pg/ml	3000 - 4.12	3.40
IFN-γ	pg/ml	8000 - 10.97	5.40
TNFα	pg/ml	3000 - 4.12	3.40
MIP-1α	pg/ml	5000 - 6.86	0.61
GMCSF	pg/ml	2000 - 2.74	2.30
RANTES	pg/ml	3000 - 4.12	2.15

Porcine Cytokine - High Sensitivity (4-plex)			
I-119149PC			
	Units	Calibrator Range	LLD Limit
IL-1β	pg/ml	1550 - 2.13	2.10
IL-6	pg/ml	1800 - 2.47	2.50
IL-8	pg/ml	2100 - 2.88	2.90
TNFα	pg/ml	1600 - 2.19	1.90

Validated Parameters for Customized Assays

Validated Human Assays for Inclusion in Custom Q-Plex Arrays						
Parameter	Upper Range	Lower Range	Units	Validated Sample Type	High Sensitive	
Adiponectin - GBP-28, apM1, AdipoQ, Acrp30	28.3	0.12	ng/ml	Urine/Serum/EDTA Plasma		
Adipsin - Complement factor D, C3 proactivator convertase, properdin factor D esterase	16.6	0.02	µg/ml	Serum/EDTA Plasma		
AGP - Alpha-1-acid glycoprotein 1 (AAG), Orosomucoid (ORM)	0.36	0.0005	g/L	Serum/Heparinized Plasma		
Ang-2 - ANGPT2, Angiopoietin-2	10000	13.72	pg/ml	Serum/EDTA Plasma		
C-Peptide - Connecting Peptide	39	0.16	ng/ml	Urine (serum if diluent Q6)		
CD-14 - Cluster of Differentiation 14	600000	823.05	pg/ml	Serum/EDTA Plasma		
CD-26 - Cluster of Differentiation 26, Dipeptidyl peptidase-4 (DPP4, DPPIV), adenosine deaminase (ADA) complexing protein 2	600000	823.05	pg/ml	Serum/EDTA Plasma		
CD-163 - Cluster of Differentiation 163	412100	565.29	pg/ml	Serum/EDTA Plasma		
Cortisol - Hydrocortisone	744	1.02	ng/ml	Urine (serum if diluent Q6)		
CRP - C-Reactive Protein, PTX1, MGC149895, MGC88244	50000	68.50	ng/ml	Serum/EDTA Plasma		
CTACK - Cutaneous T cell-attracting chemokine, C-C motif chemokine ligand 27 (CCL27), ALP, CTAK, ESKINE, ILC, PESKY, SCYA27	1650	2.26	pg/ml	Serum/EDTA Plasma		
CXCL-5 - C-X-C motif chemokine 5, ENA-78	2500	3.43	pg/ml	Serum/EDTA Plasma		
E1G - Estrone-3-Glucuronide	522	0.72	ng/ml	Urine (serum if diluent Q6)		
E2 (Estradiol) - Estradiol, oestradiol	2500	3.43	ng/ml	Urine		
Eotaxin - Eosinophil Chemotactic Protein, Chemokine ligand 11 (CCL11)	3000	4.12	pg/ml	Serum/EDTA Plasma		
Ferritin	115.0	0.1578	ug/L	Serum/Heparinized Plasma		
FGF - Human Basic Fibroblast Growth Factor, bFGF, FGF2 or FGF-β	5000	6.86	pg/ml	Serum/EDTA Plasma		
Fractalkine - Chemokine (C-X3-C motif) Ligand 1, Neurotactin	13500	18.52	pg/ml	Serum/EDTA Plasma		
FSH - Follicle-Stimulating Hormone	167	0.69	mIU/ml	Urine (serum if diluent Q6)		
GCSF - Human Granulocyte Colony Stimulating Factor, colony-stimulating factor 3 (CSF 3)	4600	6.31	pg/ml	Serum/EDTA Plasma		
Ghrelin - Lenomorelin	2300	3.2	pg/ml	Serum/EDTA Plasma		
Glucagon	2500	3.4	pg/ml	Serum/EDTA Plasma		
GMCSF - Granulocyte-macrophage colony-stimulating factor (GM-CSF), colony-stimulating factor 2 (CSF2)	6000	8.23	pg/ml	Serum/EDTA Plasma		
GROα - Chemokine Ligand 1 (CXCL1), Neutrophil-activating protein 3 (NAP-3), GRO1 oncogene, Melanoma Growth Stimulating Activity alpha (MSGα-α)	2000	2.74	pg/ml	Serum/EDTA Plasma		
HCGb - Human Chorionic Gonadotropin beta sub-unit	50	0.07	ng/ml	Urine (serum if diluent Q6)		
HGF - Hepatocyte growth factor, Scatter Factor	14000	19.20	pg/ml	Serum/EDTA Plasma		
HRP2 (MNT) - Histidine-Rich Protein II	0.96	0.0013	µg/L	Serum/Heparinized Plasma		

Parameter	Upper Range	Lower Range	Units	Validated Sample Type	High Sensitive
HRP2 (MLA) - Histidine-Rich Protein II	3800	0.93	pg/ml	Whole blood/Serum/EDTA & Heparinized plasma	
I-309 - Chemokine ligand 1 (CCL1)	3000	4.12	pg/ml	Serum/EDTA Plasma	
IFNa - Interferon alpha 2a,	3500	4.80	pg/ml	Serum/EDTA Plasma	
IFNb - Interferon beta -1a, Avonex, Rebif	19000	26.06	pg/ml	Serum/EDTA Plasma	
IFNL - Interferon Lambda 1 and 2, IL 29 and IL-28a (detects both)	12000	16.46	pg/ml	Serum/EDTA Plasma	
IFNo - Interferon Omega	4050	5.56	pg/ml	Serum/EDTA Plasma	
IFNy - Interferon Gamma, Type II Interferon	8000	10.97	pg/ml	Serum/EDTA Plasma	X
IL-1a - Interleukin-1alpha, fibroblast-activating factor (FAF), lymphocyte-activating factor (LAF), B-cell-activating factor (BAF), leukocyte endogenous mediator (LEM), epidermal cell-derived thymocyte-activating factor (ETAF), serum amyloid A inducer of hepatocyte-stimulating factor (HSP), catabolin, hemopoietin-1 (H-1), endogenous pyrogen (EP), osteoclast-activating factor (OAF), proteolysis-inducing factor (PIF)	4000	5.49	pg/ml	Serum/EDTA Plasma	X
IL-1b - Interleukin-1 beta, leukocytic pyrogen, leukocytic endogenous mediator, mononuclear cell factor, lymphocyte activating factor	10000	13.72	pg/ml	Serum/EDTA Plasma	X
IL-1R1 - Interleukin-1 receptor, type I, Cluster of Differentiation 121a (CD121a)	5300	7.27	pg/ml	Serum/EDTA Plasma	
IL-1R2 - Interleukin-1 receptor, type II (IL-1R2), CD121b (Cluster of Differentiation 121b)	9900	13.58	pg/ml	Serum/EDTA Plasma	
IL-1R3 - Interleukin-1 receptor type III, IL1RAP, C3orf13, IL-1RAcP, IL1R3, interleukin 1 receptor accessory protein	4700	6.45	pg/ml	Serum/EDTA Plasma	
IL-1R4 - Interleukin-1 receptor type IIII, ST2	30000	41.15	pg/ml	Serum/EDTA Plasma	
IL-1RA - Interleukin-1 Receptor Antagonist	7000	9.60	pg/ml	Serum/EDTA Plasma	X
IL-2 - Interleukin-2	4000	5.49	pg/ml	Serum/EDTA Plasma	X
IL-4 - Interleukin-4	2000	2.74	pg/ml	Serum/EDTA Plasma	X
IL-5 - Interleukin-5	3000	4.12	pg/ml	Serum/EDTA Plasma	X
IL-6 - Interleukin-6	3000, 1500 (FH)	4.11 6.1 (FE)	pg/ml	Serum/EDTA Plasma	X
IL-6R - Interleukin-6 Receptor, Cluster of Differentiation 126 (CD126)	1250	1.71	pg/ml	Serum/EDTA Plasma	
IL-7 - Interleukin-7, lymphopoitietin-1, pre-B-cell growth factor	1000	1.37	pg/ml	Serum/EDTA Plasma	
IL-8 - Interleukin-8, chemokine ligand 8 (CXCL8)	2000	2.74	pg/ml	Serum/EDTA Plasma	
IL-10 - Interleukin-10, human cytokine synthesis inhibitory factor (CSIF), CSIF, IL10A, MGC126450, MGC126451, TGIF	3000, 666(FH)	4.11 2.7	pg/ml	Serum/EDTA Plasma	
IL-12 - Interleukin-12	3000	4.12	pg/ml	Serum/EDTA Plasma	
IL-12p40 - Inactive Homodimer of interleukin-12(IL-12)	4000	5.49	pg/ml	Serum/EDTA Plasma	
IL-12p70 - Active Heterodimer of Interleukin-12 (IL-12)	3000	4.12	pg/ml	Serum/EDTA Plasma	X
IL-13 - Interleukin-13	3000	4.12	pg/ml	Serum/EDTA Plasma	X

Parameter	Upper Range	Lower Range	Units	Validated Sample Type	High Sensitive
IL-15 - Interleukin-15	3000	4.12	pg/ml	Serum/EDTA Plasma	X
IL-16 - Interleukin-16, lymphocyte chemoattractant factor (LCF)	6600	9.05	pg/ml	Serum/EDTA Plasma	
IL-17 - Interleukin-17, IL-17a	4000	5.49	pg/ml	Serum/EDTA Plasma	X
IL-18 - Interleukin-18, interferon-gamma inducing factor	300	0.41	pg/ml	Serum/EDTA Plasma	
IL-18BPa - Interleukin-18-binding protein (IL18BP)	3100	4.25	pg/ml	Serum/EDTA Plasma	
IL-21 - Interleukin-21	2000	2.74	pg/ml	Serum/EDTA Plasma	
IL-22 - Interleukin-22	65000	89.16	pg/ml	Serum/EDTA Plasma	
IL-27 - Interleukin-27	67000	91.91	pg/ml	Serum/EDTA Plasma	
IL-33 - Interleukin 33, C9orf26, DVS27, IL1F11, NF-HEV, NFEHEV	350	0.48	pg/ml	Serum/EDTA Plasma	X
IP-10 - Interferon gamma-induced protein 10, C-X-C motif chemokine 10 (CXCL10)	4000	5.49	pg/ml	Serum/EDTA Plasma	X
LDH-Pan - Lactate Dehydrogenase	290000	70.80	pg/ml	Whole blood/Serum/EDTA & Heparinized plasma	
LDH-Pf - Lactate Dehydrogenase	90000	21.97	pg/ml	Whole blood/Serum/EDTA & Heparinized plasma	
LDH-Pv - Lactate Dehydrogenase	175000	42.72	pg/ml	Whole blood/Serum/EDTA & Heparinized plasma	
Leptin	50	0.07	ng/ml	Serum/EDTA Plasma	
MCP-1 - Monocyte chemotactic protein-1, chemokine ligand 2 (CCL2), small inducible cytokine A2 (SCYA2)	2000	2.74	pg/ml	Serum/EDTA Plasma	
MCP-2 - Monocyte chemoattractant protein 2, Chemokine ligand 8 (CCL8)	2000	2.74	pg/ml	Serum/EDTA Plasma	
MCP-3 - Monocyte chemotactic protein-3, Chemokine ligand 7 (CCL7), FIC, MARC, MCP3, NC28, SCYA6, SCYA7	130	0.18	pg/ml	Serum/EDTA Plasma	
MIG - Monokine induced by gamma interferon, Chemokine ligand 9 (CXCL9)	5000	6.86	pg/ml	Serum/EDTA Plasma	
MIP-1a - Macrophage Inflammatory Protein-1 alpha, Chemokine ligand 3 (CCL3)	2000	8.23	pg/ml	Serum/EDTA Plasma	
MIP-1b - Macrophage Inflammatory Protein-1 beta, Chemokine ligand 4 (CCL4)	2000	8.23	pg/ml	Serum/EDTA Plasma	
MMP 1 - Matrix metalloproteinase-1, interstitial collagenase, fibroblast collagenase, CLG, CLGN	12000	49.38	pg/ml	Serum/EDTA Plasma	
MMP 2 - Matrix metalloproteinase-2, 72 kDa type IV collagenase, gelatinase A, CLG4, CLG4A, MMP-2, MMP-II, MONA, TBE-1	80000	329.22	pg/ml	Serum/EDTA Plasma	
MMP 3 - Matrix metalloproteinase-3, Stromelysin-1, CHDS6, MMP-3, SL-1, STMY, STMY1, STR1	4500	18.52	pg/ml	Serum/EDTA Plasma	
MMP 7 - Matrix metalloproteinase-7, Matrilysin, pump-1 protease (PUMP-1), uterine metalloproteinase, MPSL1	1800	7.41	pg/ml	Serum/EDTA Plasma	
MMP 9 - Matrix metalloproteinase-9, 92 kDa type IV collagenase, 92 kDa gelatinase, gelatinase B (GELB)	44000	181.07	pg/ml	Serum/EDTA Plasma	
MMP 13 - Matrix metallopeptidase 13, Collagenase 3 (CLG3), MANDP1, MDST	35000	144.03	pg/ml	Serum/EDTA Plasma	
MPO - Myeloperoxidase	1560	2.14	ng/ml	Serum/EDTA Plasma	
P4 (Progesterone)	200	0.27	ng/ml	Urine	

Parameter	Upper Range	Lower Range	Units	Validated Sample Type	High Sensitive
PAI-1 - Plasminogen activator inhibitor-1, endothelial plasminogen activator inhibitor, serpin E1	3000	4.1	pg/ml	Serum/EDTA Plasma	
PDG - Pregnadiol Glucuronide	25000	34.29	ng/ml	Urine	
PDGF - Platelet-derived growth factor	4000	5.49	pg/ml	Serum/EDTA Plasma	
PF-4 - Platelet Factor 4, chemokine ligand 4 (CXCL4)	65000	89.16	pg/ml	Serum/EDTA Plasma	
P-Selectin - CD62P, Granule Membrane Protein 140 (GMP-140), Platelet Activation-Dependent Granule to External Membrane Protein (PADGEM)	687600	943.21	pg/ml	Serum/EDTA Plasma	
RANTES - Regulated on activation normal T cell expressed and secreted, Chemokine ligand 5 (CCL5)	7800	10.70	pg/ml	Serum/EDTA Plasma	
RBP4 - Human Retinol-Binding Protein 4	1.01	0.0014	μmol/L	Serum/Heparinized Plasma	
Resistin - Found In Inflammatory Zone 3 (FIZZ3), Adipocyte Secreted Factor (ADSF), adipose tissue-specific secretory factor (ADSF), C/EBP-epsilon-regulated myeloid-specific secreted cysteine-rich protein (XCP1)	10000	89.16	pg/ml	Serum/EDTA Plasma	
S100A9 - S100 calcium-binding protein A9	35	0.05	ng/ml	Serum/EDTA Plasma	
sFAS - First apoptosis signal receptor, apoptosis antigen 1 (APO-1 or APT), tumor necrosis factor receptor superfamily member 6 (TNFRSF6)	14600	20.03	pg/ml	Serum/EDTA Plasma	
sTfR - Soluble Transferrin Receptor	107.0	0.1468	mg/L	Serum/Heparinized Plasma	
TARC - Thymus and activation regulated chemokine, Chemokine ligand 17 (CCL17)	2000	2.74	pg/ml	Serum/EDTA Plasma	
Tg - Thyroglobulin, ALT3, TGN	13.7	0.0188	μg/L	Serum/Heparinized Plasma	
TGFb	31000	1.984	pg/ml	Serum/EDTA Plasma	
TIMP-1 - Tissue inhibitor of metalloproteinases 1, Erythroid potentiating activity (EPA), Human collagenase inhibitor (HCl)	10000	13.72	pg/ml	Serum/EDTA Plasma	
TIMP-2 - Tissue inhibitor of metalloproteinases 2	20000	27.43	pg/ml	Serum/EDTA Plasma	
TNFα - Tumor Necrosis Factor alpha, cachexin, or cachectin	4000	5.49	pg/ml	Serum/EDTA Plasma	X
TNFβ - Tumor Necrosis Factor beta, Lymphotxin-alpha (LT-α)	4000	5.49	pg/ml	Serum/EDTA Plasma	X
TNFR1 - Tumor necrosis factor receptor 1, tumor necrosis factor receptor superfamily member 1A (TNFRSF1A), CD120a	3000	4.12	pg/ml	Serum/EDTA Plasma	
TNFR2 - Tumor necrosis factor receptor 2	2000	2.74	pg/ml	Serum/EDTA Plasma	
VEGF - Vascular endothelial growth factor, vascular permeability factor (VPF)	2000	2.74	pg/ml	Serum/EDTA Plasma	

Validated Rat Assays for Inclusion in Custom Q-Plex Arrays						
Parameter	Upper Range	Lower Range	Units	Validated Sample Type	High Sensitive	
IFNg - Interferon-gamma	17343	23.79	pg/ml	Serum/EDTA Plasma		
IL-1a - Interleukin-1a, hematopoietin 1	17705	24.29	pg/ml	Serum/EDTA Plasma		
IL-1b - Interleukin-1b, leukocytic pyrogen, leukocytic endogenous mediator, mononuclear cell factor, lymphocyte activating factor	19221	26.37	pg/ml	Serum/EDTA Plasma		
IL-2 - Interleukin-2 (IL-2)	81609	111.95	pg/ml	Serum/EDTA Plasma		
IL-4 - Interleukin-4	7055	9.68	pg/ml	Serum/EDTA Plasma		
IL-6 - Interleukin-6	136761	187.60	pg/ml	Serum/EDTA Plasma		
IL-10 - Interleukin 10, human cytokine synthesis inhibitory factor (CSIF), CSIF, IL10A, MGC126450, MGC126451, TGIF	7814	10.72	pg/ml	Serum/EDTA Plasma		
IL-12p70 - Active Heterodimer of Interleukin 12 (IL-12)	50464	69.22	pg/ml	Serum/EDTA Plasma		
TNFα - Tumor Necrosis Factor alpha, cachexin, or cachectin	28218	38.71	pg/ml	Serum/EDTA Plasma		

Validated Mouse Assays for Inclusion in Custom Q-Plex Arrays						
Parameter	Upper Range	Lower Range	Units	Validated Sample Type	High Sensitive	
Eotaxin - C-C motif chemokine 11 (CCL11)	4000	5.49	pg/ml	Serum		
GMCSF - Granulocyte-macrophage colony-stimulating factor, colony-stimulating factor 2 (CSF2)	2000	2.74	pg/ml	Serum		
IFNg - Interferon-gamma	8000	10.97	pg/ml	Serum		
IL-1a - Mouse Interleukin 1a, hematopoietin 1	5000	6.86	pg/ml	Serum		
IL-1b - Mouse Interleukin 1b, leukocytic pyrogen, leukocytic endogenous mediator, mononuclear cell factor, lymphocyte activating factor	14000	19.20	pg/ml	Serum		
IL-2 - Interleukin-2	5000	6.86	pg/ml	Serum		
IL-3 - Mouse Interleukin-3	5000	6.86	pg/ml	Serum		
IL-4 - Interleukin-4	5000	6.86	pg/ml	Serum		
IL-5 - Interleukin-5	5000	6.86	pg/ml	Serum		
IL-6 - Interleukin-6	5000	6.86	pg/ml	Serum		
IL-10 - Interleukin 10, human cytokine synthesis inhibitory factor (CSIF), CSIF, IL10A, MGC126450, MGC126451, TGIF	2000	2.74	pg/ml	Serum		
IL-12 - Active Heterodimer of Interleukin 12 (IL-12)	12000	16.46	pg/ml	Serum		
IL-13 - Interleukin-13	1000	1.37	pg/ml	Serum		
IL-17 - Interleukin-17, IL-17a	10000	13.72	pg/ml	Serum		
KC - Chemokine (C-X-C motif) ligand 1 (CXCL1), GRO1 oncogene, GROα, KC, neutrophil-activating protein 3 (NAP-3), melanoma growth stimulating activity	4000	5.49	pg/ml	Serum		
MCP-1 - Monocyte chemotactic protein-1, chemokine ligand 2 (CCL2), small inducible cytokine A2 (SCYA2)	3000	4.12	pg/ml	Serum		
MDC - Macrophage-Derived Chemokine, C-C motif chemokine 22 (CCL22)	4000	5.49	pg/ml	Serum		
MIP-1a - Macrophage inflammatory protein 1 alpha, Chemokine (C-C motif) ligand 3 (CCL3)	5000	6.86	pg/ml	Serum		
MIP-2 - Macrophage inflammatory protein 2, Chemokine (C-X-C motif) ligand 2 (CXCL2)	20000	82.30	pg/ml	Serum		
RANTES - Regulated upon Activation, Normal T-cell Expressed; Chemokine (C-C motif) ligand 5 (CCL5)	3000	4.12	pg/ml	Serum		
TARC - Thymus and Activation Regulated Chemokine, Chemokine (C-C motif) ligand 17 (CCL17)	20000	27.43	pg/ml	Serum		
TCA-3 - T-Cell Activator 3, Chemokine (C-C motif) ligand 1 (CCL1)	4000	5.49	pg/ml	Serum		
TNFα - Tumor Necrosis Factor alpha, cachexin, or cachectin	3000	4.12	pg/ml	Serum		
IFNa - Interferon alpha 2a	32000	43.90	pg/ml	Serum		
IFNb - Interferon beta -1a, Avonex, Rebif	700	0.96	pg/ml	Serum		

Validated Porcine Assays for Inclusion in Custom Q-Plex Arrays						
Parameter	Upper Range	Lower Range	Units	Validated Sample Type	High Sensitive	
IL-1b - Interleukin-1 beta, leukocytic pyrogen, leukocytic endogenous mediator, mononuclear cell factor, lymphocyte activating factor	1550	2.13	pg/ml	Serum/Cell Culture	X	
IL-6 - Interleukin-6	1800	2.47	pg/ml	Serum/Cell Culture	X	
IL-8 - Interleukin-8, chemokine ligand 8 (CXCL8)	2100	2.88	pg/ml	Serum/Cell Culture	X	
TNFα - Tumor Necrosis Factor alpha, cachexin, or cachectin	1600	2.19	pg/ml	Serum/Cell Culture	X	

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