Quanterix™
The Science of Precision Health

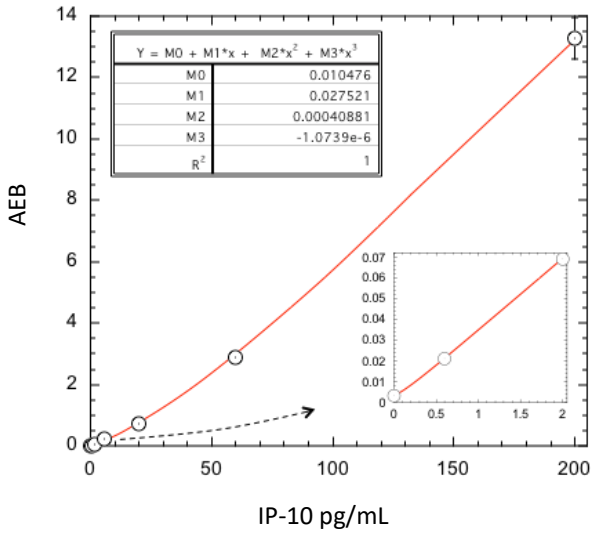
Simoa® IP-10 Advantage Kit
HD-1/HD-X Data Sheet

Item 101132

Description

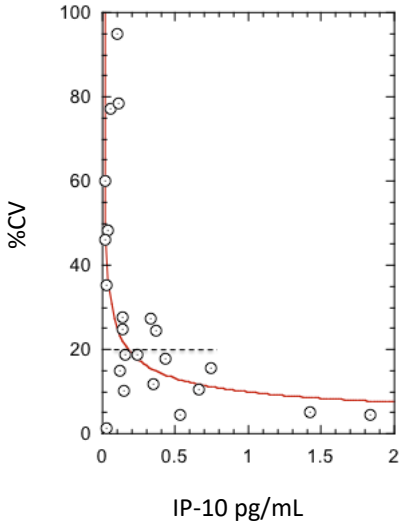
IFN-γ-inducible protein 10 (IP-10, CXCL10) is a 10 kDa chemokine secreted from cells stimulated with type I and II interferons (IFNs) and lipopolysaccharide (LPS). IP-10 is constitutively expressed at low levels in thymic, splenic, and lymph node stroma. Expression of IP-10 is seen in many Th1-type human inflammatory diseases, including skin diseases (e.g., psoriasis), multiple sclerosis, atherosclerosis, rheumatoid arthritis, transplant rejection, and inflammatory bowel disease. Elevated levels of IP-10 protein have been found in the cerebral spinal fluid in patients with viral meningitis and multiple sclerosis. In these diseases, levels of IP-10 correlate with the tissue infiltration of T lymphocytes, suggesting that IP-10 plays an important role in the recruitment of T cells to sites of tissue inflammation. Serum levels of IP-10 in patients with chronic persistent hepatitis C have been known to be elevated compared with those in normal volunteers, and levels were further significantly higher in patients with the active form (chronic active hepatitis (CAH)). In patients cured by IFN therapy, IP-10 levels have been shown to decrease, while the serum levels in patients who were not cured remain unchanged after IFN therapy.

Calibration Curve: Four-parameter curve fit parameters are depicted.



Limit of Detection (LOD): Calculated as 2.5 standard deviations from the mean of background signal read back on each calibration curve over 10 runs.

Sample Dose CV Profile: Triplicate measurements of diluted serum samples assayed over multiple runs (24 measurements). LLOQ determined as the concentration at which %CV exceeds 20% according to the power equation fit to the data.

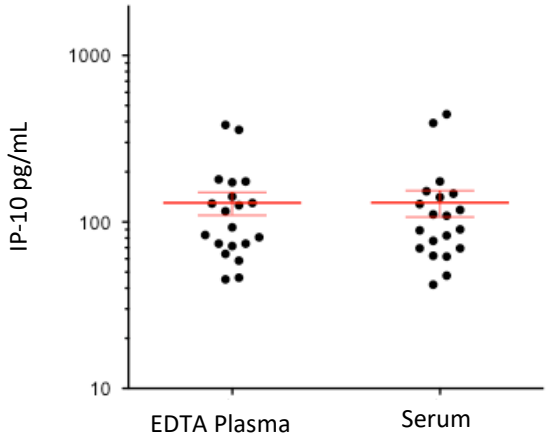


LLOQ	**0.177 pg/mL**
LOD	**0.052 pg/mL** SD 0.0423 pg/mL
Dynamic range (serum and plasma)	0–800 pg/mL
Diluted Sample volume*	100 µL per measurement
Tests per kit	96

***See Kit Instruction for details**

Chimera Biotec - Your Official Quanterix Partner
info@chimera-biotec.com
www.chimera-biotec.com

Endogenous Sample Reading: Healthy donor matched EDTA plasma (n=20) and serum (n=20) were measured. Error bars depict mean and SEM.



Sample Type	Median IP-10 pg/mL	% Above LOD
EDTA Plasma	105	100%
Serum	99.6	100%

Precision: Four samples consisting of a serum panel, a plasma panel, and two IP-10 controls were assayed in replicates of three at two separate times per day for five days using a single lot of reagents and calibrators. Analysis of variance (fully nested ANOVA) results are summarized in the following table.

Sample	Mean (pg/mL)	Within run CV	Between run CV	Between day CV
Control 1	2.62	6.6%	13.9%	0.0%
Control 2	298	2.7%	14.7%	0.0%
Panel 1	112	11.6%	3.0%	11.2%
Panel 2*	121	4.1%	16.7%	1.9%

*Plasma

Spike and Recovery: IP-10 spiked into 4 serum samples at 2 levels.

Dilution Linearity: Endogenous serum diluted 2x serially from MRD (4x) to 1024x with Sample Diluent.

Spike and Recovery (Serum)	**Mean = 101%** Range: 88.8–117%
Dilution Linearity (1024x)	**Mean = 97.3%** Range: 89.3–106%