Quanterix™
The Science of Precision Health

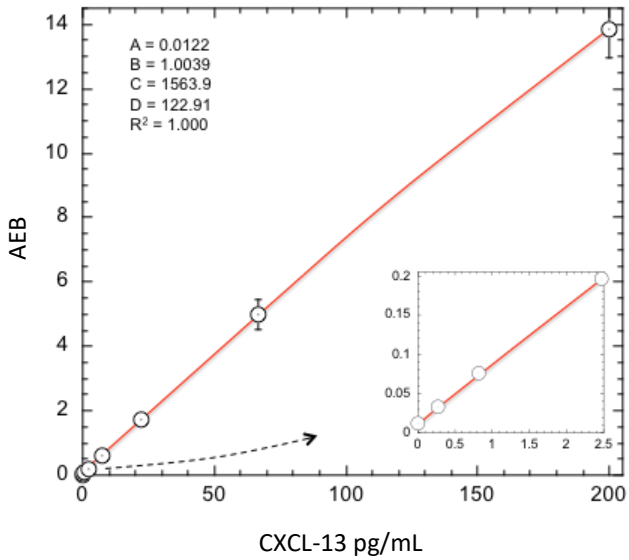
Simoa® CXCL-13 Discovery Kit
HD-1/HD-X Data Sheet

Item 102635

Description

The CXCL-13 (CXC Ligand 13) protein, also known as B cell attracting chemokine 1 (BCA-1) or B lymphocyte chemo-attractant (BLC) is a chemokine ligand. It is expressed in secondary lymphoid tissue by stromal cells within B-cell follicles and by follicular dendritic cells, macrophages, and germinal center T cells. The CXCL-13 receptor CXCR5 is expressed on follicular B cells. CXCL-13 interaction with its receptor causes germinal center formation as part of a normal immune response to infection. The main role of CXCL-13 is homeostatic immune cell trafficking and levels may become up-regulated under pathological conditions. CXCL-13 and CXCR5 are expressed in prostrate, breast, neuronal and oral carcinomas. Elevated serum CXCL-13 levels have been observed in lung cancer and breast cancer patients.

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



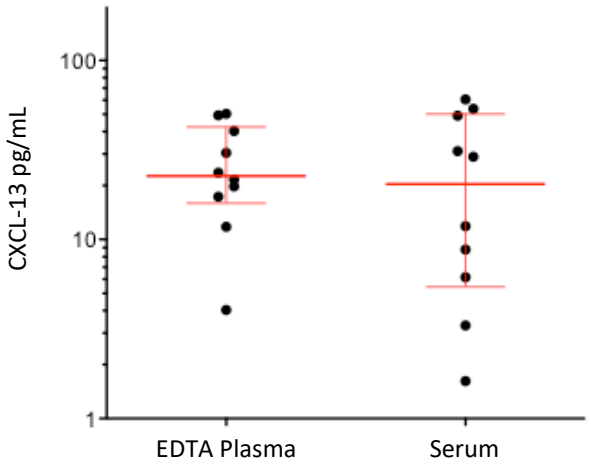
Lower Limit of Quantification (LLOQ): Triplicate measurements of serially diluted calibrator were read back on the calibration curve over 1 reagent lot on 1 instrument (5 runs total).

Limit of Detection (LOD): Calculated as 2.5 standard deviations from the mean of background signal read back on each calibration curve over 1 reagent lot on 1 instrument (5 runs total).

LLOQ	**0.070 pg/mL** pooled CV 16% mean recovery 105%
LOD	**0.048 pg/mL** range 0.045–0.057 pg/mL
Dynamic range (serum and plasma)	0–800 pg/mL
Diluted Sample volume*	100 µL per measurement
Tests per kit	192

***See Kit Instruction for details**

Endogenous Sample Reading: Healthy donor matched EDTA plasma (n=10) and serum (n=10) were measured. Error bars depict median with interquartile range.



Sample Type	Median CXCL-13 pg/mL	% Above LOD
Serum	20.41	100%
Plasma	22.63	100%

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Precision: Representative precision was estimated with repeated assay of serum and plasma panels using three instruments and one reagent lot. Within-run and between-run CVs are depicted in the following table. Within-run CVs reflect average CVs across 5 experiments of 3 replicates each.

Sample	Mean (pg/mL)	Within run CV	Between run CV
Serum Panel 1	3.3	6.7%	7.4%
Serum Panel 2	5.7	4.2%	10.6%
Serum Panel 3	0.9	15.1%	9.0%
Plasma Panel 4	23.8	7.8%	9.1%
Plasma Panel 5	18.7	4.4%	8.7%

Spike and Recovery: CXCL-13 spiked into 2 serum and 2 plasma samples at 2 levels.

Dilution Linearity: Spiked plasma diluted 2x serially from MRD (4x) to 128x with Sample Diluent.

Spike and Recovery (Serum/Plasma)	**Mean = 87.1%** Range: 65.4–107.9%
Dilution Linearity (128x)	**Mean = 93.5%*** Range: 85.3–103.9%

*Serum gave similar results

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