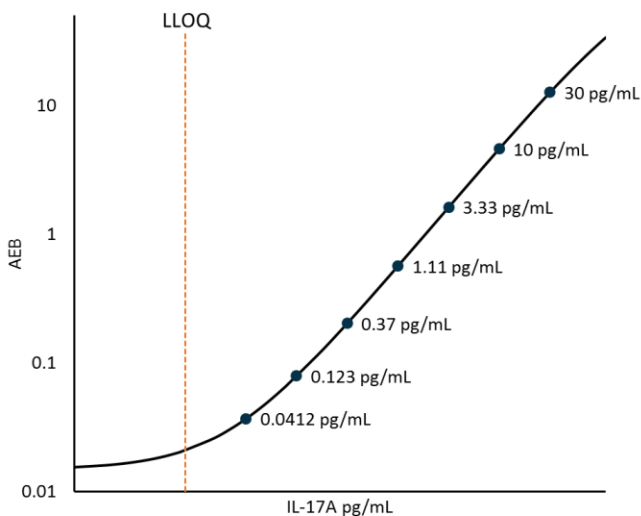


Description

Interleukin 17A (IL-17A) is disulfide-linked homodimeric cytokine of 155 amino acids (molecular weight 35kDa) and a member of an IL-17 family of related cytokines (IL-17B through IL-17F). All IL-17 cytokines have a similar protein structure, and no sequence similarity to any other cytokines. These cytokines are well conserved in mammals, with significant sequence conservation between the human and mouse homologs. A major role of IL-17A is its involvement in inducing and mediating proinflammatory responses. It acts as a potent mediator in delayed-type reactions by increasing chemokine production in various tissues to recruit monocytes and neutrophils to the site of inflammation, similar to interferon gamma. IL-17A is produced by T-helper cells and is induced by IL-23 which results in destructive tissue damage in delayed-type reactions. IL-17 induces the production of many other synergistic cytokines, including GM-CSF, IL-6, IL-1b, and TNF α . The IL-17 family has been linked to many immune/autoimmune related diseases including rheumatoid arthritis, asthma, lupus, allograft rejection, anti-tumor immunity and recently psoriasis.

Calibration Curve: Calibrator concentrations and Lower Limit of Quantification depicted.



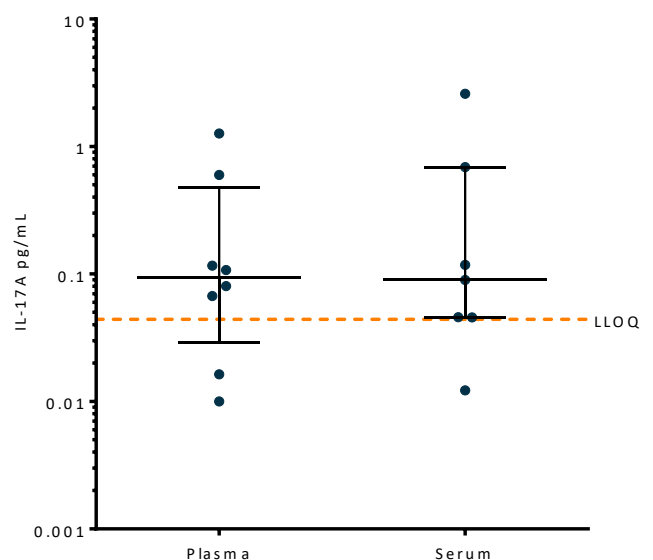
Lower Limit of Quantification (LLOQ): Triplicate measurements of serially diluted calibrator were read back on the calibration curve over 3 runs each for 1 reagent lot across 2 instruments (6 runs total).

Limit of Detection (LOD): Calculated as 2.5 standard deviations from the mean of background signal read back on each calibration curve over 3 runs each for 1 reagent lot across 2 instruments (6 runs total).

LLOQ	0.0110pg/mL pooled CV 16% mean recovery 86%
LOD	0.0110 pg/mL range 0.0020-0.0260 pg/mL
Dynamic range	0–120 pg/mL
Diluted Sample volume (1:4 Dilution)*	100 μ L per measurement
Tests per kit	96

*See Kit Instruction for details

Endogenous Sample Reading: Healthy donor matched EDTA plasma (n=10) and serum (n=10) samples were measured. Bars depict median with interquartile range. 2 plasma and 3 serum samples could not be read and were excluded from analysis. Orange line represents functional LLOQ.



Sample Type	Mean IL-17A pg/mL	Median IL-17A pg/mL	% Above LOD
EDTA plasma	0.372*	0.0736	60%
Serum	0.596*	0.0457	60%

*Values below LLOQ are not included in the mean

Precision: Measurements of 3 serum or plasma based panels and 2 calibrator-based controls. Triplicate measurements were made for 3 runs each for 1 reagent lot across 2 instruments (6 runs total, 18 measurements).

The Simoa IL-17A assay kit is formulated for use on either the SR-X or HD-1 platform. Data in this document was obtained from runs on the SR-X platform unless otherwise noted. Some differences in performance claims between the HD-1 and SR-X may be observed when comparing datasheets for the two platforms. This may be due to experiments run at different time-points with different reagent lots and different samples, or may be due to minor differences in antibody and analyte behavior in the different assay formats.

Sample	Mean (pg/mL)	Within run CV	Between run CV	Between inst CV
Control 1	26.9	9.1%	5.5%	0.3%
Control 2	0.520	6.2%	6.2%	3.0%
Panel 1	0.362	7.7%	9.8%	3.6%
Panel 2	8.82	2.2%	5.4%	4.3%
Panel 3	2.48	4.2%	7.0%	1.4%

Note: Data in the following sections were obtained using the HD-1 Analyzer.

Spike and Recovery: 4 serum samples were spiked at high and low concentrations within the range of the assay and analyzed on HD-1.

Dilution Linearity: 3 spiked serum samples were diluted 2x serially from MRD (4x) to 64x in sample diluent.

Spike and Recovery	Mean = 99% Range: 94-107%
Dilution Linearity (64x)	Mean = 93% Range: 79-103%