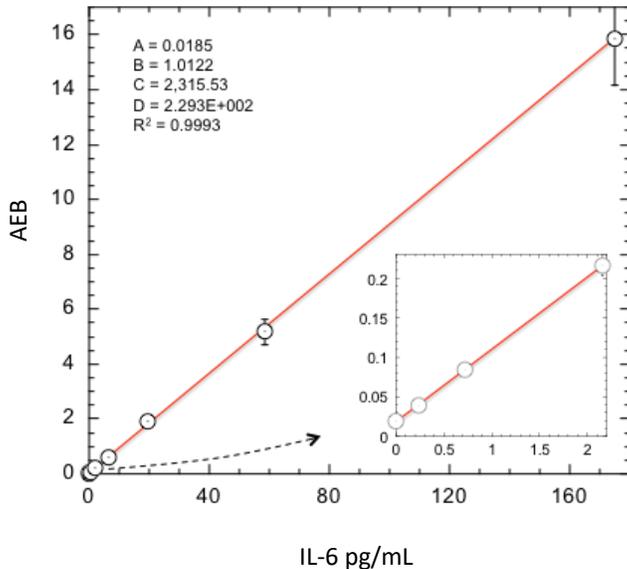


Description

Interleukin 6 (IL-6) is an alpha-helical cytokine with a wide variety of biological functions, including inducement of acute phase reactions, inflammation, hematopoiesis, bone metabolism, and cancer progression. It is secreted by multiple cell types as a 22k-28k dalton phosphorylated and variably glycosylated molecule. Mature mouse IL-6 shares 41% aa sequence identity with human and rat IL-6. IL-6 is secreted by T cells and macrophages to induce immune responses following tissue trauma leading to inflammation. IL-6 also acts as an anti-inflammatory myokine, secreted by muscles during contraction after which it acts to increase breakdown of fats and improve insulin resistance.³ Because of its role in inducing inflammation and auto-immune response, there is interest in developing anti-IL-6 agents as potential therapies against various diseases, including rheumatoid arthritis and cancer.

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



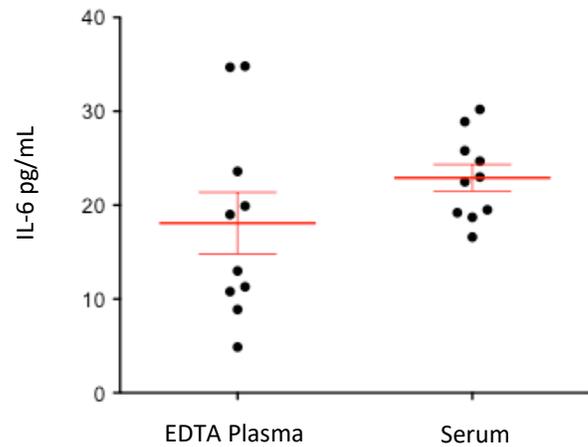
Lower Limit of Quantification (LLOQ): Triplicate measurements of serially diluted calibrator were read back on the calibration curve over 1 reagent lot on 1 instrument (5 runs total).

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	0.120 pg/mL pooled CV 16.9% mean recovery 109%
LOD	0.035 pg/mL range 0.017–0.056 pg/mL
Dynamic range (serum and plasma)	0–700 pg/mL
Diluted Sample volume*	100 µL per measurement
Tests per kit	192

*See Kit Instruction for details

Endogenous Sample Reading: IL-6 in EDTA plasma (n=10) and serum (n=10) from non-medicated, non-immunized mice. Error bars depict median and interquartile ranges.



Sample Type	Median IL-6 pg/mL	% Above LOD
EDTA Plasma	16.0	100%
Serum	22.8	100%

Precision: Representative precision was estimated with repeated assay of serum panels using one instrument 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	4.86	5.9%	5.8%
Serum Panel 2	21.7	4.0%	9.7%
Serum Panel 3	34.5	6.5%	8.4%

Spike and Recovery: IL-6 spiked into 4 serum pools at 2 levels.

Dilution Linearity: Serum pool diluted 2x serially from MRD (4x) to 256x with Sample Diluent.

Spike and Recovery (Serum)	Mean = 93.3% Range: 80–109%
Dilution Linearity (256x)	Mean = 111% Range: 99–119%

The Simoa mouse IL-6 Discovery assay kit is formulated for use on the SR-X®, HD-1, or HD-X® platform. Data in this document was obtained from runs on the HD-1 platform unless otherwise noted. Some differences in performance claims between SR-X and HD-1/HD-X may be observed when comparing datasheets for these platforms. This may be due to experiments run at different time-points with different reagent lots and different samples, or it may be due to minor differences in antibody and analyte behavior in the different assay formats.