## Description

Interleukin 23 (IL-23) is a heterodimeric cytokine composed of the IL-12 p40 "soluble receptor" subunit and a novel cytokine-like subunit related to IL-12 p35, termed p19. Like IL-12, IL-23 binds to the IL-12R subunit IL-12Rβ1. However, it does not use IL-12Rβ2. IL-23 stimulates IFN-γ production and proliferation in PHA blast T cells, as well as in CD45RO (memory) T cells. Activated dendritic cells secrete detectable levels of IL-23. IL-23 promotes inflammatory responses such as upregulation of the matrix metalloprotease MMP9 and increases angiogenesis but reduces CD8 T-cell infiltration. Studies have indicated that IL-23 is an important molecular link between tumor-promoting pro-inflammatory processes and the failure of the adaptive immune surveillance to infiltrate tumors.

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

A = 0.01872
B = 0.96433
C = 1566.388
D = 1.201E+002
R^2 = 0.9999

IL-23 pg/mL
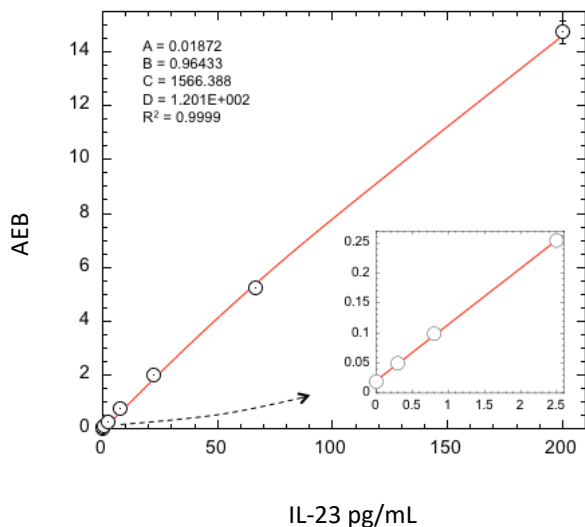
Lower Limit of Quantification (LLOQ): Triplicate measurements of serially diluted calibrator were read back on the calibration curve over 1 reagent lot across 3 instruments (5 runs total).

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 across 3 instruments (5 runs total).

LLOQ	**0.137 pg/mL** pooled CV 14% mean recovery 117%
LOD	**0.033 pg/mL** range 0.0095–0.0732 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: IL-23 in EDTA plasma (n=10) and serum (n=10) from non-medicated, non-immunized mice. Error bars depict median and interquartile ranges.
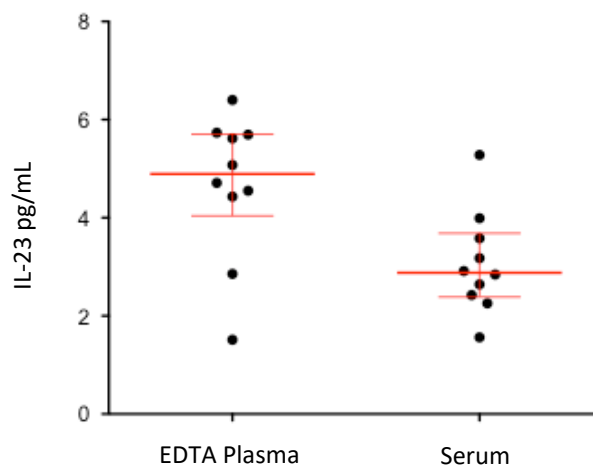
Sample Type	Median IL-23 pg/mL	% Above LOD
EDTA Plasma	4.89	100%
Serum	2.89	100%

Precision: Representative precision was estimated with repeated assay of mouse serum and plasma pools 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 Pool 1	1.51	9.4%	8.1%
Serum Pool 2	2.14	4.3%	9.1%
Plasma Pool 1	4.10	4.9%	5.7%

Spike and Recovery: Mouse IL-23 spiked into 2 serum and 2 plasma samples at 2 levels.

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

Spike and Recovery (Serum/Plasma)	**Mean = 89.4%** Range: 74.3–100%
Dilution Linearity (256x)	**Mean = 99.1%** Range: 88–106%