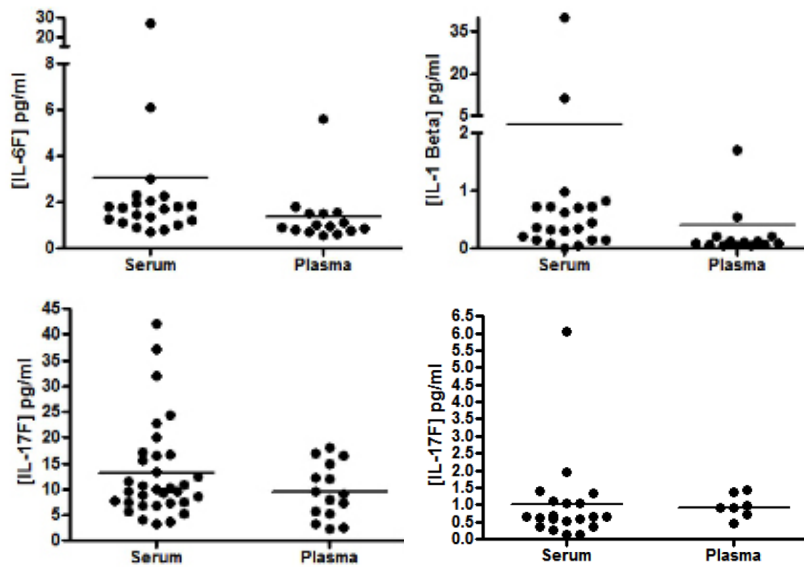




Ultra-Sensitive Cytokine Assay Services

Erenna Immunoassay System

- Accurately measures low abundance cytokines in serum or plasma with sub-picogram sensitivity
- Unique Single Molecule Counting (SMC) technology with robust 4-log+ dynamic range allows minimal sample dilution
- High precision assay service provides reproducible data
- Extensive analyte menu allows focused targeting of disease and therapeutic areas



Assay	LOD (pg/ml)	LLOQ (pg/ml)	Matrix Compatibility	Median Endogenous Level (pg/ml) Normal Healthy Donors
IL-6	0.015	0.10	Serum/Plasma	1.74 ^S 0.97 ^P
IL-17F V1	0.700	2.40	Serum/Plasma	9.9 ^S 12.0 ^P
†IL-17F V2	0.07	0.15	Serum/Plasma	†0.67 ^S †0.91 ^P (EDTA-plasma)
*IL-17A	0.020	0.20	Serum/Plasma	*0.08 ^S *0.04 ^P
IL-1b	0.040	0.20	Serum/Plasma	0.72 ^S 0.12 ^P

S = serum; P = plasma

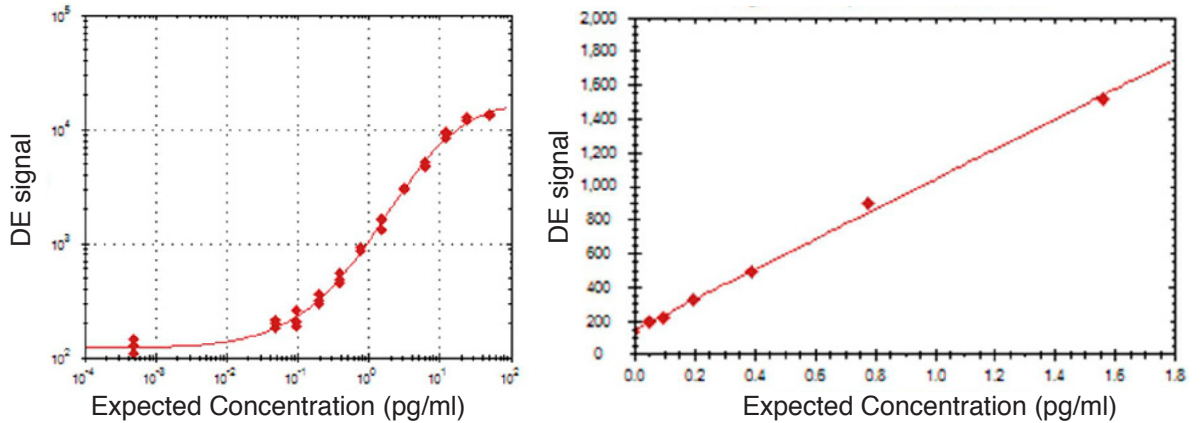
† Additional anti-coagulants in progress

* All samples > LOD; majority of samples < LLOQ; V2 Assay Performance Characterization in progress

The role and regulation of cytokines and interferons in disease states is a major focus area particularly in cancer, autoimmune and inflammatory diseases with new uses for them under investigation. The profiling and characterization of cytokines will lead to an increased understanding of their activities in biological responses. With a wide range of endogenous cytokine levels, the ability to accurately measure low-abundance cytokines present in complex matrices such as serum or plasma, is essential for successful biomarker discovery.

Employing proprietary single-molecule counting technology with robust microparticle based immunoassays, PBL's cytokine detection services† can provide scientists with sub-picogram measurements of low-abundance biomarkers in normal or disease sera/plasma.

DE Signal vs. Expected Concentration

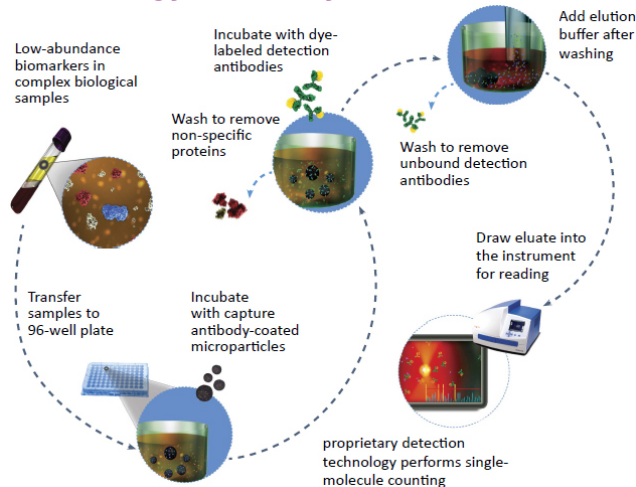


Assay	Inter-Assay Precision (average % CV) Normal Healthy Donors	Spike-Recovery (average %) Normal Healthy Donors
IL-6	11.8% ^S	74.4% ^S
IL-17F V1	13.8% ^S	83.2% ^S
IL-17F V2	13.3% ^S	91.4% ^S
*IL-17A	*22.3% ^S	81.0% ^S
IL-1b	13.2% ^S 16.7% ^P	93.1% ^S 90.8% ^P

S = serum; P = plasma

* All samples > LOD; majority of samples < LLOQ; V2 Assay Performance Characterization in progress

Technology Summary



To learn more or to discuss how we can help accelerate your discovery project, please visit our website or contact us.