

Overcome matrix effects with highly validated multiplex assays

Platinum ProcartaPlex® assays

Platinum ProcartaPlex Multiplex Immunoassays

Platinum ProcartaPlex Multiplex Immunoassays are our most validated bead-based multiplexing assay system. Similar to our Platinum ELISAs, Platinum ProcartaPlex® assays have to pass more than 30 qualification criteria to guarantee reproducible high performance of the kits.

Overcome matrix effects

Serum and plasma samples are complex matrices with many components. This complexity can cause the “matrix effect” which can impact the readout of many cytokines (low spike and dilution recovery). Affymetrix developed matrix-specific diluents to overcome these matrix and multiplex effects, assuring high-performance specifications comparable to those of traditional ELISA. Spike and dilution recoveries in a range between 70–130% are obtainable.

100% combinable

All Platinum ProcartaPlex® simplex kits are combinable with one another, eliminating any limitations on composition and size of your Platinum ProcartaPlex® panel. Besides simplex kits, Platinum ProcartaPlex® kits are available in pre-mixed panels. You can select between two off-the-shelf panels or compile your own custom panel.

Platinum ProcartaPlex Assays feature

- Matrix-specific diluents: Optimized diluents for use with serum and plasma samples
- High performance: Spike recovery and dilution linearity between 70–130%
- 100% combinatory: All ProcartaPlex simplex kits can be combined with one another
- All in one solution: All required reagents are included in our panels



As reliable as our Platinum ELISAs

Most Platinum ProcartaPlex assays use the same antibody pairs as our Platinum ELISAs, resulting in a high correlation between the two assay formats (Figure 1). Platinum ProcartaPlex assays achieve quantitative results comparable to traditional ELISA assays, with the added benefits of multiplexing, including reduced sample volume, shorter assay time, and lower cost.

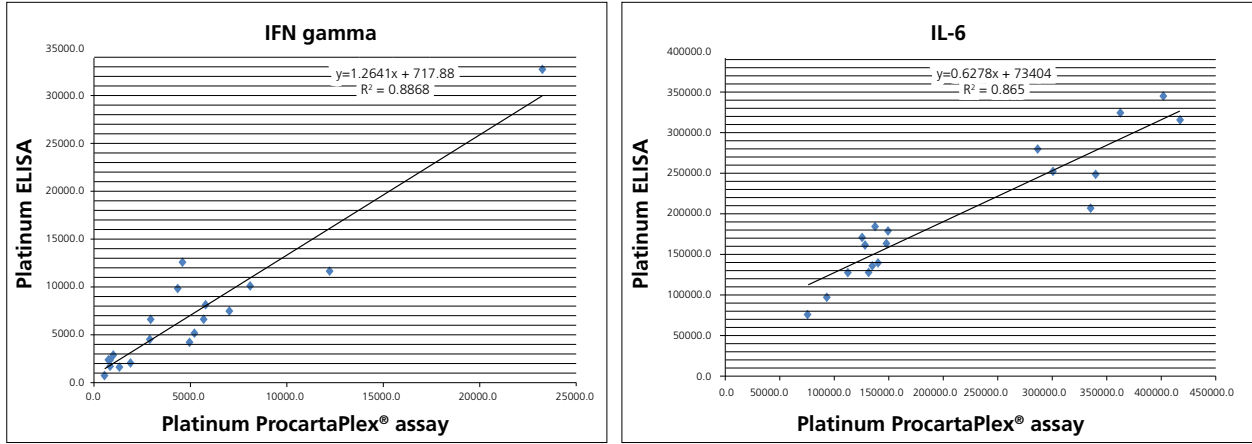


Figure 1: Results of an experiment measuring IFN gamma and IL-6 in stimulated human plasma with Platinum ProcartaPlex® assay and Platinum ELISA assays.

Dilution and spike recoveries of 70–130%

Both serum and plasma samples are complex matrices with different matrix compositions, which may influence results. Platinum ProcartaPlex assays are validated with serum samples as well as EDTA and citrate plasma samples. Figure 2 shows the spike recovery (green) and dilution linearity (red) in all three sample types lying within 100% +/-30%.

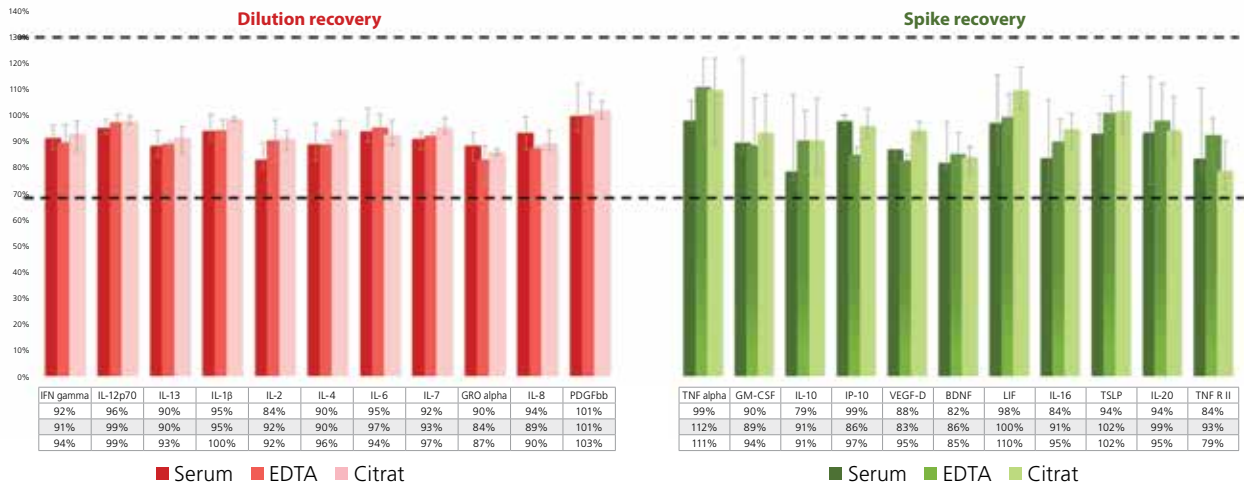


Figure 2: Dilution and spike recovery were evaluated in a minimum of five individual donor samples per matrix by performing 4-fold serial dilutions, from 1:4 to 1:256. Mean recoveries for each matrix were calculated across the complete portfolio of Platinum ProcartaPlex® assays, with a target specification of 100% +/-30%.

Benchmark analysis of spike recovery performance

Platinum ProcartaPlex kits were tested side-by-side with multiplex assays based on Luminex® xMAP technology from three different vendors. Kits were used according to supplier's instructions, with serum samples from at least four individual donors. To determine the spike recovery performance of the kits, the samples were spiked with three different known concentrations (high, medium, and low) of recombinant proteins. Recoveries from each individual sample were within the target range of 100% +/-30% using ProcartaPlex kits. **These results were not achieved in any samples when using other kits.**

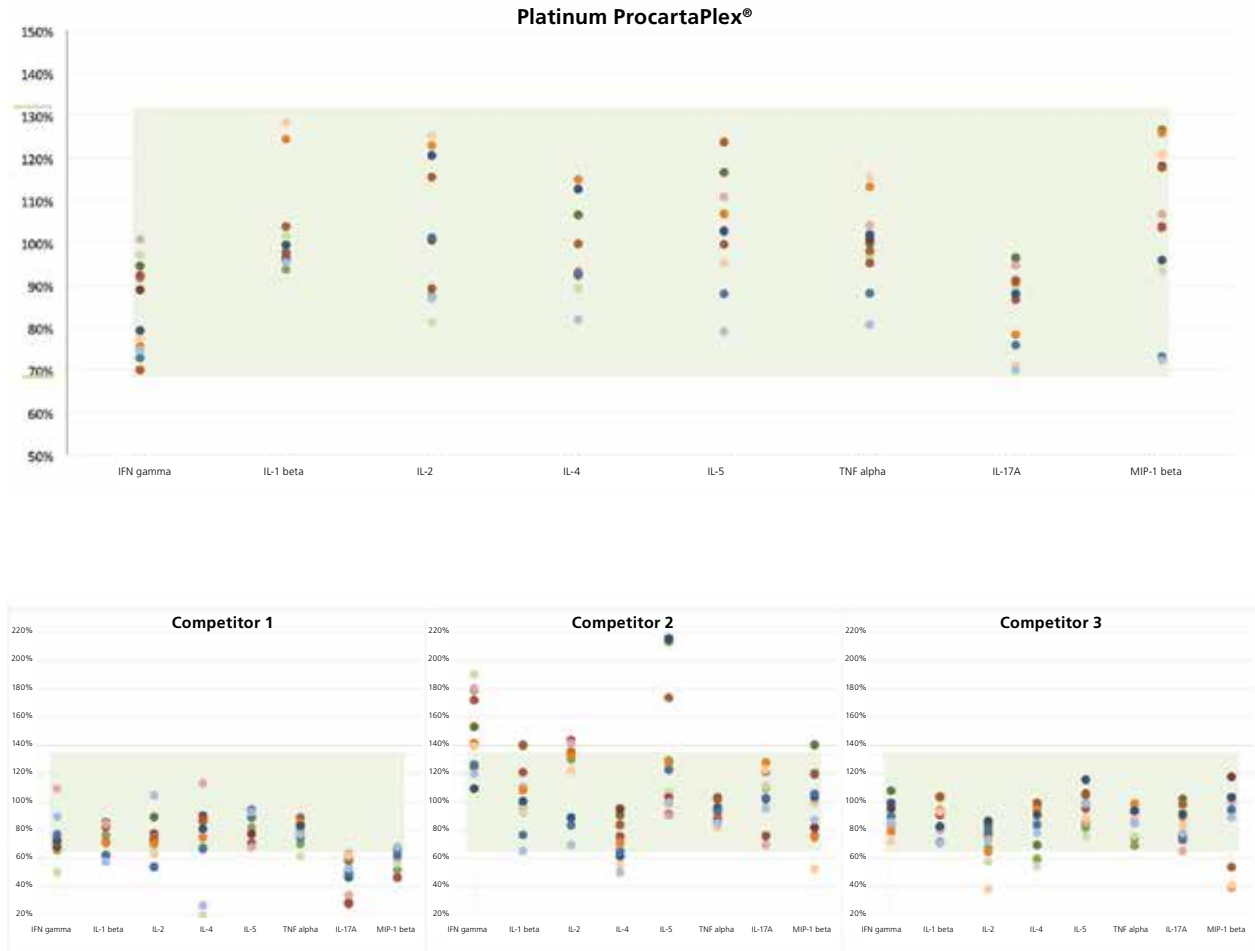


Figure 3: Spike recovery in Platinum ProcartaPlex® assays of each individual serum sample and spike concentration was shown to be in the target range of 70–130%. Same experiments performed in the corresponding competitor assays resulted in a significant number of individual spiked serum samples out of target range.

Platinum ProcartaPlex® Product Overview

Analyte	Part Number	Analyte	Part Number
BDNF	EPXP010-12116-901	IL-16	EPXP010-12162-901
Eotaxin (CCL11)	EPXP010-12120-901	IL-17A (CTLA-8)	EPXP010-12017-901
GM-CSF	EPXP010-10283-901	IL-20	EPXP010-12168-901
GRO alpha (KC/CXCL1)	EPXP010-12122-901	IL-21	EPXP010-12043-901
HGF	EPXP010-12069-901	IP-10	EPXP010-10284-901
IFN alpha	EPXP010-10216-901	LIF	EPXP010-10242-901
IFN gamma	EPXP010-10228-901	MCP-2	EPXP010-12169-901
IL-1 alpha	EPXP010-10243-901	MIP-1 alpha (CCL3)	EPXP010-12029-901
IL-1 beta	EPXP010-10224-901	MIP-1 beta (CCL4)	EPXP010-12030-901
IL-1RA	EPXP010-12080-901	Osteoprotegerin (OPG)	EPXP010-12021-901
IL-2	EPXP010-10221-901	PDGF-BB	EPXP010-12071-901
IL-4	EPXP010-10225-901	PECAM-1	EPXP010-10229-901
IL-5	EPXP010-10278-901	P-selectin	EPXP010-10219-901
IL-6	EPXP010-10213-901	RANTES (CCL5)	EPXP010-10287-901
IL-7	EPXP010-10237-901	SCF	EPXP010-12137-901
IL-8 (CXCL8)	EPXP010-10204-901	TNF alpha	EPXP010-10223-901
IL-9	EPXP010-12081-901	TNF-RII	EPXP010-10211-901
IL-10	EPXP010-10215-901	tPA	EPXP010-10258-901
IL-12p70	EPXP010-10238-901	TSLP	EPXP010-12164-901
IL-13	EPXP010-10231-901	VEGF-A	EPXP010-10277-901
IL-15	EPXP010-12089-901	VEGF-D	EPXP010-12076-901

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