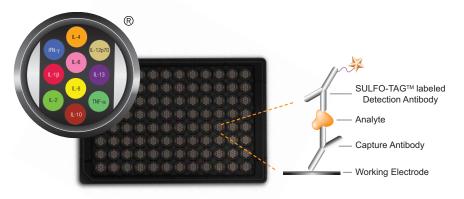


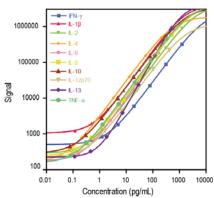
# Human Cytokine Assays

For use with cell culture supernatants, serum, plasma, and urine

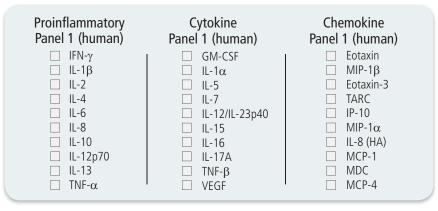


- Analytically validated panels
- Lot-to-lot reproducibility with inter-lot bridging to support long term studies
- Optimized panels with proven specificity for high performance and efficient multiplexing





- High sensitivity, wide dynamic range, and guaranteed limits of quantitation
- Flexible customization
- Orders ship within 1 3 days (including custom multiplexes)
- Attractive pricing



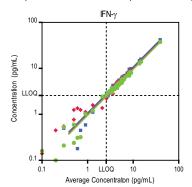
For Research Use Only. Not for use in diagnostic procedures.

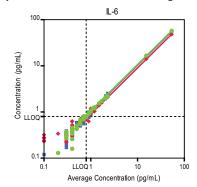


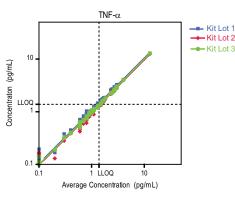
## Are you struggling to get consistent results?

V-PLEX<sup>™</sup> products are developed under design control and fully validated in multiple matrices according to fit-for-purpose principles. Kits use qualified reagents, and each calibrator lot is anchored to reference standards. Controls are available, and lot-to-lot consistency is guaranteed. V-PLEX assays are organized into panels by species, analytical compatibility, clinical range, and expected use to ensure optimal and consistent performance from each assay while still providing the benefits and efficiencies of multiplexing. V-PLEX assays offer unsurpassed performance. Order all 30 assays, any 10-plex panel, single assays, or any custom combination of assays with no compromise in performance.

As part of the validation process, samples in a variety of matrices were measured using multiple kit lots.





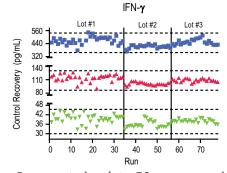


Representative results: IFN- $\gamma$ , IL- 6, and TNF- $\alpha$  recovered from normal samples using 3 independent kit lots.

#### Superior performance within runs, between runs, and between lots

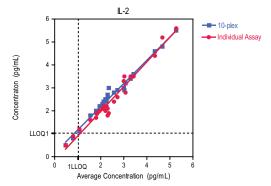
Controls for V-PLEX kits are available to confirm absolute quantification across runs and lots. Controls were built spanning the quantifiable range of the assay. During validation, controls were tested using multiple runs from 3 kit lots. Results were consistently within the target range of  $\pm 20\%$  of assigned concentration (dashed lines)

- CVs within a run were typically <5%</li>
- CVs between runs were typically <7%</li>
- CVs between lots were typically <6%</li>



Representative data: 76 runs measuring high, mid, and low IFN- $\gamma$  controls

# Multiplexing does not compromise performance



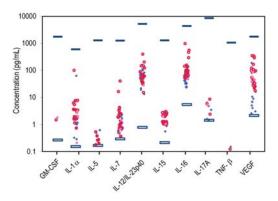
Performance when run individually on a single-spot plate was compared with performance when run in the full multiplex panel. Here we show that running samples using both formats results in the same measured concentrations.

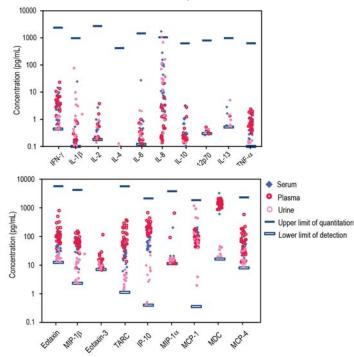
	10-Plex	Individual
R <sup>2</sup> Value	0.98	0.98
Slope	0.96	1.04



## Consistency from biomarker discovery to focused custom panels

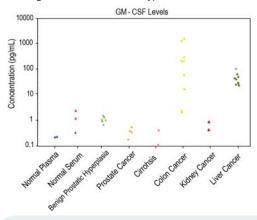
Use the full 30-plex panel to discover novel biomarker profiles. The assays are grouped into 3 optimized, 10-plex panels that provide clinical-quality data from a variety of samples. These highly sensitive assays can detect low abundance cytokines in 62.5  $\mu L$  of sample. Our assays' wide dynamic range reduces the need to run multiple dilutions when measuring normal and disease samples.

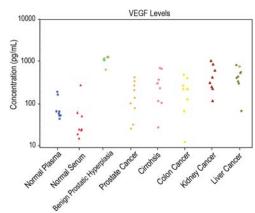




#### **Custom V-PLEX Panels**

Once a profile is selected, customers can order any combination of analytes from pre-configured panels. Custom panels use the same validated assays, providing consistency between discovery and focused studies. These custom panels use the same components (plates, antibodies, and other reagents) as the pre-configured panels and meet the same specifications for quality and performance. For example, GM-CSF and VEGF may be included in a custom panel used to distinguish different cancer types.





#### Wide range of sample types

- · Stimulated whole blood
- · Stimulated PBMCs
- · Cell culture supernatant
- · Cell lysates

- · Serum
- · Heparin plasma
- · EDTA plasma
- · Citrate plasma
- · Urine

- $\cdot$  CSF
- · Cancer samples
- · HAMA positive samples
- · RF positive samples





Panels	Assays	Catalog Numbers
Human Cytokine 30-Plex	IFN-γ, IL-1β, IL-2, IL-4, IL-6, IL-8, IL-10, IL-12p70, IL-13, TNF-α, GM-CSF, IL-1α, IL-5, IL-7, IL-12/IL-23p40, IL-15, IL-16, IL-17A, TNF-β, VEGF, Eotaxin, MIP-1β, Eotaxin-3, TARC, IP-10, MIP-1α, IL-8 (HA*), MCP-1, MDC, MCP-4	K15054D
Proinflammatory Panel 1 (human)	IFN-γ, IL-1β, IL-2, IL-4, IL-6, IL-8, IL-10, IL-12p70, IL-13, TNF-α	K15049D
Cytokine Panel 1 (human)	GM-CSF, IL-1α, IL-5, IL-7, IL-12/IL-23p40, IL-15, IL-16, IL-17A, TNF-β, VEGF	K15050D
Chemokine Panel 1 (human)	Eotaxin, MIP-1β, Eotaxin-3, TARC, IP-10, MIP-1α, IL-8 (HA*), MCP-1, MDC, MCP-4	K15047D
Human Proinflammatory I (4-Plex)	IFN-γ, IL-1β, IL-6, TNF-α	K15052D
Human Proinflammatory II (4-Plex)	IL-1β, IL-6, IL-8, TNF-α	K15053D

<sup>\*</sup> High Abundance (This assay quantitates high levels of IL-8.)

-	
Assays	Catalog Numbers
Human IFN-γ	K151Q0D
Human IL-1β	K151QPD
Human IL-2	K151QQD
Human IL-4	K151QRD
Human IL-6	K151QXD
Human IL-8	K151RAD
Human IL-10	K151QUD
Human IL-12p70	K151QVD
Human IL-13	K1510DD
Human TNF-α	K151QWD

Assays	Catalog Numbers
Human GM-CSF	K151RID
Human IL-1α	K151RBD
Human IL-5	K151QSD
Human IL-7	K151RCD
Human IL-12/IL-23p40	K151RJD
Human IL-15	K151RDD
Human IL-16	K151RED
Human IL-17A	K151RFD
Human VEGF	K151RHD
Human TNF-β	K151RGD

Assays	Catalog Numbers
Human Eotaxin	K151NSD
Human MIP-1β	K151NRD
Human Eotaxin-3	K151NUD
Human TARC	K151NTD
Human IP-10	K151NVD
Human MIP-1 $\alpha$	K151NQD
Human MCP-1	K151NND
Human MDC	K151NPD
Human MCP-4	K151NOD

Control Packs	Catalog Numbers
Proinflammatory Panel 1 (human)	C4049-1
Cytokine Panel 1 (human)	C4050-1
Chemokine Panel 1 (human)	C4047-1

#### V-PLEX kits include

- · Pre-coated 10-spot plate
- · Multi-analyte, lyophilized calibrator
- · Individual detection antibodies
- · Blended calibrator

- · Diluents
- · Comprehensive product insert
- · Certificate of analysis

For Research Use Only. Not for use in diagnostic procedures.

#### V-PLEX Plus kits include

Everything above, plus:

· Controls

- · Wash buffer
- · Plate seals

Custom combinations of the assays above may be ordered online at www.mesoscale.com/V-PLEX.

Phone: 1-240-314-2795 . Fax: 1-301-990-2776

Email: customerservice@mesoscale.com

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