

All-In-One Interferon Testing

Using the MILLIPLEX® Human Interferon Multiplex Panel

Interferons (IFNs) are widely expressed cytokines that have potent antiviral and antiproliferative effects. These cytokines are the first line of defense against viral infections and have important roles in immunosurveillance for malignant cells. Functionally, type I and type III IFNs are induced during viral infection and involved in host defense against viruses. IFN γ is involved primarily in the allergic response, in host defense against intracellular pathogens, and in control of tumor growth. Studies of IFNs

have broadened the mechanistic understanding of cell signaling, gene transcription, and innate and acquired immunity.

The **MILLIPLEX® Human Interferon Panel (Cat. No. HIFN-130K)** is a 9-plex kit to be used for the simultaneous quantification of the following analytes in serum or plasma samples and tissue/cell lysate and culture supernatant samples: IFN α 2, IFN β , IFN ϵ , IFN ω , IFN γ Receptor 1 (IFNGR1), IFN γ , IL-29/IFN λ 1, IL-28A/IFN λ 2, and IL-28B/IFN λ 3.

Analyte	Standard Curve Range (pg/mL)	Sensitivity (minDC + 2SD, pg/mL) n=8 assays	Intra-Assay Precision (%CV) n=16 wells	Inter-Assay Precision (%CV) n=10 assays	% Recovery in Serum Matrix n=6 samples
IFN α 2	34-25,000	42.9	<10	<20	89
IFN β	3.4-2,500	3.3	<10	<20	96
IFN ϵ	274-200,000	259.3	<10	<20	94
IFN ω	14-10,000	8.0	<10	<20	96
IFNGR1	14-10,000	5.9	<10	<20	97
IFN γ	4.1-3,000	1.7	<10	<20	96
IL-29/IFN λ 1	4.8-3,500	4.6	<10	<20	96
IL-28A/IFN λ 2	25-18,000	14.0	<10	<20	94
IL-28B/IFN λ 3	11-8,000	4.9	<10	<20	98

Table 1. MILLIPLEX® Human Interferon Panel performance characteristics.

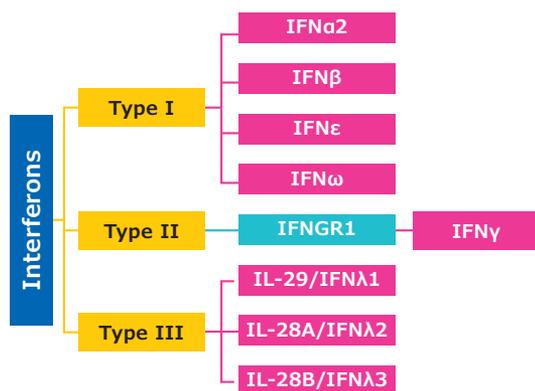


Figure 1. Interferon targets included in the MILLIPLEX® Human Interferon panel (Cat. No. HIFN-130K).



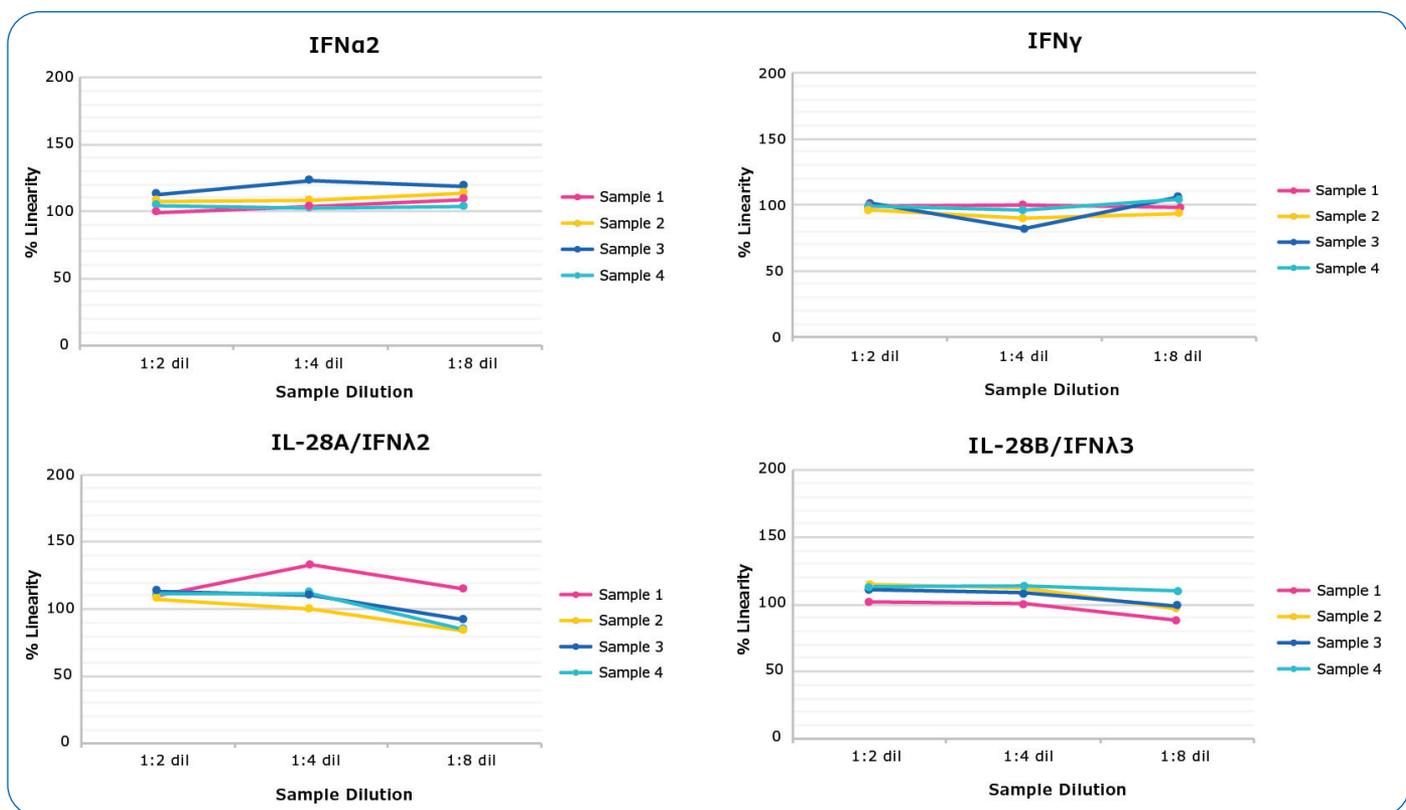


Figure 2. Parallelism/Linearity of dilution using the MILLIPLEX[®] Human Interferon Panel. IFN α 2, IFN λ 2, and IFN λ 3 analyses were performed with unspiked samples, and IFN γ analysis was performed with spiked samples. Samples were diluted 1:2 as indicated in the protocol and then further diluted as noted in the figures.

Ordering Information

MILLIPLEX [®] Panel	Cat. No.	Premix Cat. No.
MILLIPLEX [®] Human Interferon Panel	HIFN-130K	HIFN-130K-PMX9
Related Products	Cat. No.	Premix Cat. No.
MILLIPLEX [®] Human Cytokine/ Chemokine/Growth Factor Panel A	HCYTA-60K	HCYTA-60K-PX38 HCYTA-60K-PXBK38 HCYTA-60K-PX48 HCYTA-60K-PXBK48
MILLIPLEX [®] Human Cytokine/ Chemokine/Growth Factor Panel B	HCYTB-60K	HCYTB-60K-PX38 HCYTB-60K-PXBK38 HCYTB-60K-PX48 HCYTB-60K-PXBK48
SMC [®] High-Sensitivity IFN α 2 Kit	03-0186-00	---
SMC [®] High-Sensitivity IFN β 1 Kit	03-0191-00	---
SMC [®] High-Sensitivity IFN γ Kit	03-0181-00	---

Explore more ways MILLIPLEX[®] multiplex panels can be used in immunology research at SigmaAldrich.com/milliplex-immunology

For Research Use Only. Not For Use In Diagnostic Procedures.



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