

BOVINE cytokine ANALYSIS simplified

The MILLIPLEX® Bovine Cytokine/Chemokine Panel 1 is the first multiplex panel designed to analyze up to 15 bovine cytokines within the same sample. Harness the power of this novel assay and save valuable time, money and sample while dramatically increasing the number of data points per plate.

MILLIPLEX® Bovine Cytokine/Chemokine Panel 1

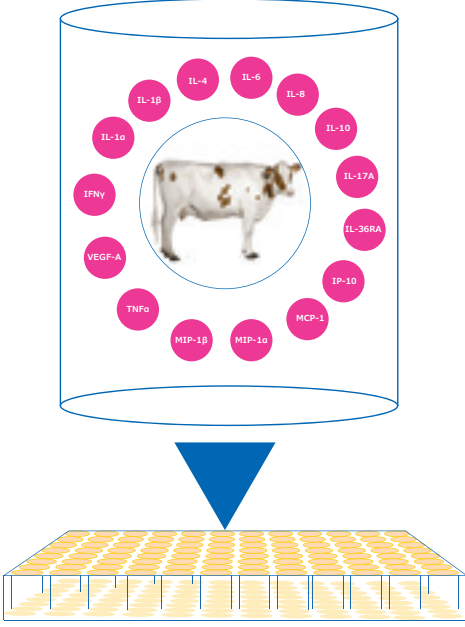
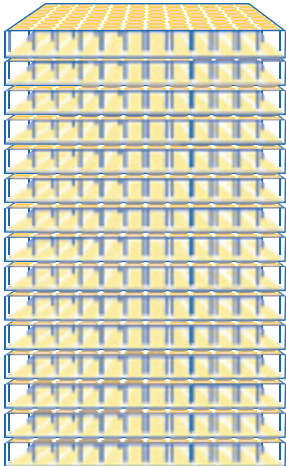
(Cat. Nos. BCYT1-33K or BCYT1-33K-PX15/BCYT1-33K-PXBK15 for premixed beads)

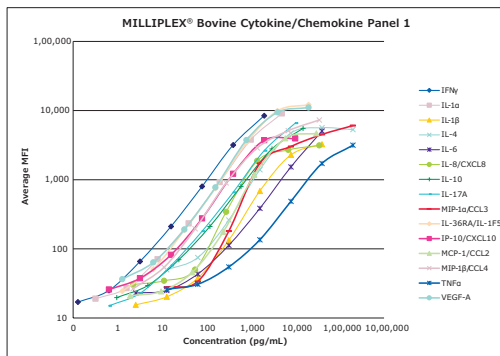
Analytes: IFN γ , IL-1 α , IL-1 β , IL-4, IL-6, IL-8/CXCL8, IL-10, IL-17A, IL-36RA/IL-1F5, IP-10/CXCL10, MCP-1/CCL2, MIP-1 α /CCL3, MIP-1 β /CCL4, TNF α , VEGF-A

Samples: Serum, plasma and cell culture supernatant

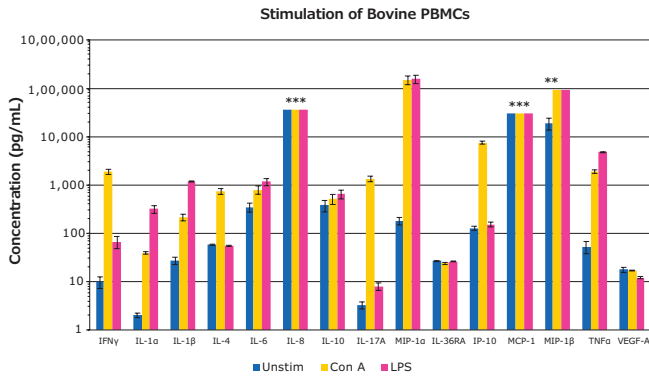
Kit Formats: Select the analytes you want, choose the 15-plex premixed kit, or the custom premix option for an additional charge

Comparison of MILLIPLEX® vs. Traditional ELISAs

	MILLIPLEX® Assay	ELISA
		
Number of plates required	1	15
Total plate run time	1 hour	15 hours
Results per plate (duplicate samples)	570	40
Total sample used (duplicate samples)	25 μL (1:2 sample dilution)	750 μL
Lower limit of detection	\sim1 pg/mL	\sim1 pg/mL



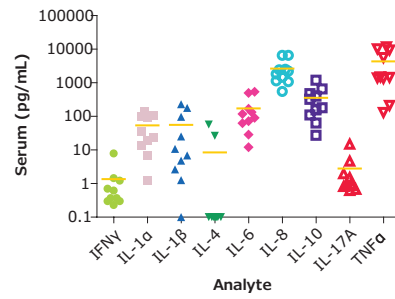
Quantify up to 15 analytes per sample and identify trends faster



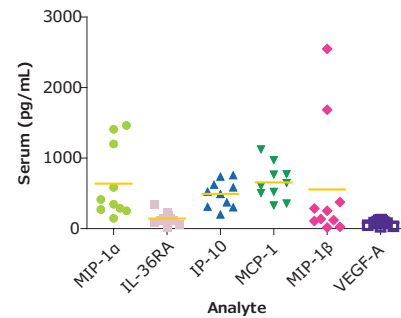
Bovine PBMCs (BioIVT, Hicksville, NY) were treated with LPS or Concanavalin A for 48 hr, after which, cell-free samples were collected and assayed with the Bovine Cytokine/Chemokine Panel 1 (n=3 mean \pm SEM).

*Notes saturation on the standard curve for these sample groups.

Bovine Serum Cytokine Concentrations



Bovine Serum Cytokine Concentrations



Serum samples obtained from BioIVT (Hicksville, NY).

All with the trusted MILLIPLEX® assay specifications to guarantee consistent performance over time

Analyte	Standard Curve Range (pg/mL)	Sensitivity minDC	+2SD (pg/mL)	Precision		Accuracy (%)
				Intra-Assay (%CV)	Inter-Assay (%CV)	
IFN γ	0.1 – 2,000	0.08		<10%	<10%	94
IL-1 α	0.3 – 5,000	0.36		<10%	<10%	94
IL-1 β	2.6 – 40,000	4.93		<10%	<10%	91
IL-4	12.8 – 200,000	16.57		<10%	<10%	93
IL-6	2.6 – 40,000	11.23		<10%	<15%	95
IL-8/CXCL8	2.2 – 35,000	22.6		<10%	<10%	95
IL-10	0.96 – 15,000	1.05		<10%	<10%	96
IL-17A	0.6 – 10,000	0.67		<10%	<10%	103
IL-36RA/IL-1F5	1.28 – 20,000	1.23		<10%	<10%	98
IP-10/CXCL10	0.6 – 10,000	0.91		<10%	<10%	94
MCP-1/CCL2	1.92 – 30,000	2.74		<10%	<10%	95
MIP-1 α /CCL3	12.8 – 200,000	98.54		<10%	<15%	96
MIP-1 β /CCL4	2.2 – 35,000	2.32		<10%	<10%	97
TNF α	12.8 – 200,000	22.62		<10%	<15%	92
VEGF-A	1.28 – 20,000	1.18		<10%	<10%	97

To view MILLIPLEX® assays for protein detection across 9 species, visit SigmaAldrich.com/milliplex

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