

## Ovine Cytokine Multiplex Analysis

The MILLIPLEX® Ovine Cytokine/Chemokine Panel 1 is the first multiplex panel designed to analyze your choice of up to 14 ovine cytokines within the same sample. Save valuable time, money and sample volume while dramatically increasing the number data points generated from a single 96-well plate assay.

### MILLIPLEX® Ovine Cytokine/Chemokine Panel 1

(Cat. Nos.: SCYT1-91K, SCYT-91K-PX14, SCYT-91K-PXBK14)

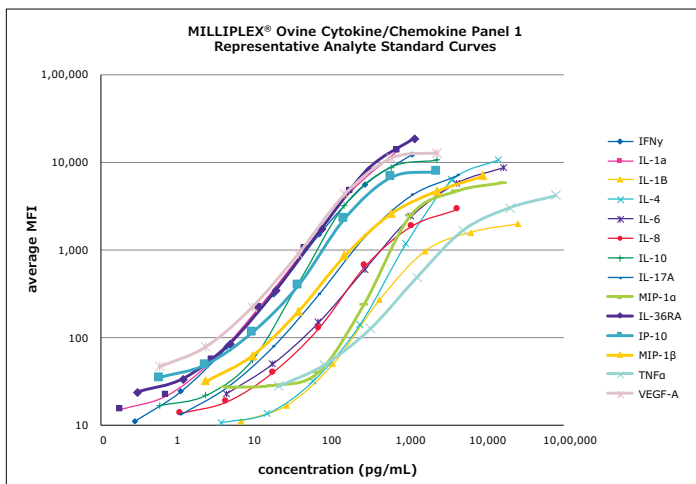
**Analytes:** IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-4, IL-6, IL-8 (CXCL8)\*, IL-10, IL-17A, IL-36RA (IL-1F5), IP-10 (CXCL10), MIP-1 $\alpha$  (CCL3), MIP-1 $\beta$  (CCL4), TNF $\alpha$ , VEGF-A

**Sample Types:** Serum, plasma, and tissue culture supernatants

\*In serum/plasma samples, the analyte IL-8 (CXCL8), may require additional sample dilution beyond that of the other analytes in the panel.

**Kit Formats:** Select the analytes you want, choose the 14-plex premixed kit, or the custom premix option for an additional charge

**Complete Kits:** A convenient “all-in-one” box format that gives you the assurance that you will have all the necessary reagents you need to run your assay.

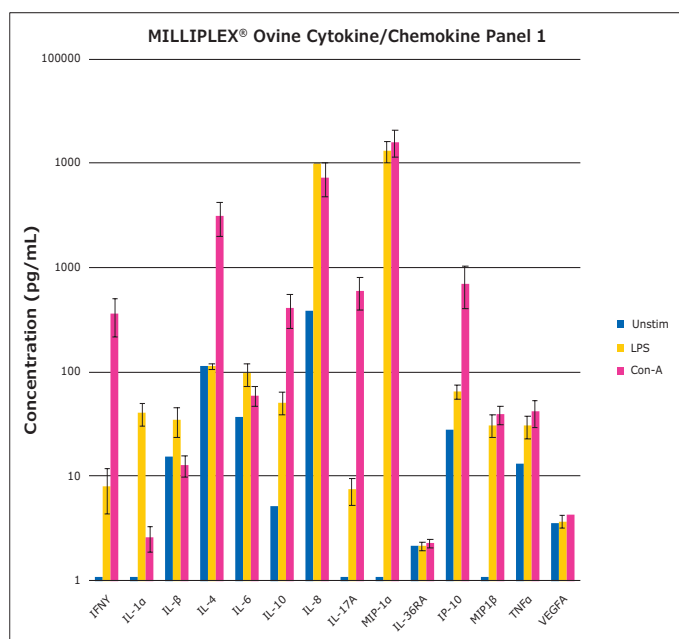


### Comparison of MILLIPLEX® vs. Traditional ELISA

Assay Parameter	MILLIPLEX® Assay	Traditional ELISA
Number of 96-well plates	1 plate	14 plates
Total plate run time	1 hour	14 hours
Results per plate (duplicate samples)	570	40
Total volume of sample Required (duplicate samples)	25 $\mu$ L (1:2 sample dilution)	750 $\mu$ L
Lower Limit of Detection	~ 1 pg/mL	~ 1 pg/mL

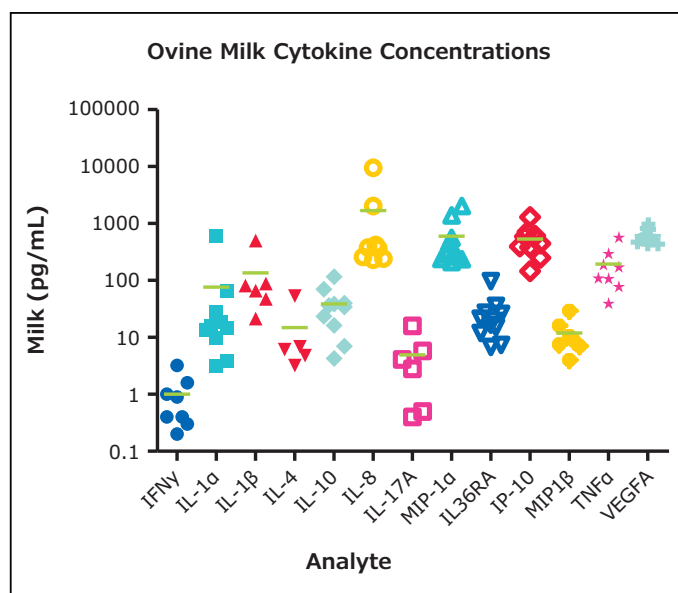


## MILLIPLEX® Ovine Cytokine/Chemokine Panel 1: Example Data



**Figure 1. Stimulation of Ovine PBMCs**

Ovine PBMC (BioIVT, Hicksville, NY) were stimulated for 48 hours with LPS or Concanavalin A or left unstimulated. Cell supernatants were collected and assayed according to protocol in the MILLIPLEX® Ovine Cytokine Chemokine Panel 1 (n=3, mean). The analyte IL-8 reached saturation on the standard curve for this sample group.



**Figure 2. Ovine Milk Cytokine Concentrations**

MILLIPLEX® Ovine milk samples (BioIVT, Hicksville, NY) were assayed according to protocol in the Ovine Cytokine Chemokine Panel 1 (n=10, mean).

## Our trusted MILLIPLEX® assay specifications 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 $\gamma$	0.32 – 5,000	1.00	<10%	<20%	106
IL-1 $\alpha$	0.19 – 3,000	0.07	<10%	<20%	94
IL-1 $\beta$	12.8 – 200,000	6.78	<10%	<20%	105
IL-4	6.4 – 100,000	4.86	<10%	<20%	108
IL-6	7.7 – 120,000	1.99	<10%	<20%	115
IL-8/CXCL8	0.77 – 12,000	3.51	<10%	<20%	97
IL-10	1.6 – 25,000	2.20	<10%	<20%	83
IL-17A	1.6 – 25,000	2.79	<10%	<20%	109
IL-36RA/IL-1F5	0.35 – 5,500	1.04	<10%	<20%	91
IP-10/CXCL10	0.77 – 12,000	1.59	<10%	<20%	97
MIP-1 $\alpha$ /CCL3	7.7 – 120,000	33.76	<10%	<20%	95
MIP-1 $\beta$ /CCL4	3.8 – 60,000	3.40	<10%	<20%	112
TNF $\alpha$	48 – 750,000	12.50	<10%	<20%	99
VEGF-A	0.77 – 12,000	1.26	<10%	<20%	96

To view MILLIPLEX® assays for protein detection across multiple species, visit [SigmaAldrich.com/milliplex](https://SigmaAldrich.com/milliplex) or [SigmaAldrich.com/vetmed](https://SigmaAldrich.com/vetmed)

