

## Vet Med & Animal Health Research

### Using Multiplex Immunoassay Biomarker Detection

#### Multiplex Biomarker Detection using Luminex® xMAP® Technology

Research in veterinary medicine and animal health is crucial to the protection of both animal and human health, and to the advancement of science.

MILLIPLEX® multiplex assays, based on Luminex® xMAP® technology, enables scientists studying animal health and animal models, as well as human health, to understand complex biological systems and processes. Our kit offerings span across companion, agricultural, and research animals, and, of course, humans. Trust MILLIPLEX® assays to allow you to advance your research.

Listed below are our kits in the companion and agricultural animal space. For updates and more information, visit [SigmaAldrich.com/vetmed](http://SigmaAldrich.com/vetmed).

#### Bovine

Cytokine/ Chemokine	BCYT1-33K	IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-4, IL-6, IL-8, IL-10, IL-17A, IL-36RA, IP-10, MCP-1, MIP-1 $\alpha$ , MIP-1 $\beta$ , TNF $\alpha$ , VEGF-A
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#### Canine

Cytokine/ Chemokine	CCYTOMAG-90K	GM-CSF, IFN $\gamma$ , IL-2, IL-6, IL-7, IL-8, IL-10, IL-15, IL-18, IP-10, KC-like, MCP-1, TNF $\alpha$
Pituitary (Expanded)	CANPIT-96K	ACTH, FSH, GH, LH, Prolactin, TSH
Gut Hormone	CGTMAG-98K	Amylin (total), Ghrelin (active), GIP (total), GLP-1 (active), Glucagon, Insulin, Leptin, Pancreatic Polypeptide (PP), PYY (total)
Kidney Toxicity 1 (Urine samples)	CKT1MAG-97K	Clusterin, Cystatin C, IL-8, KIM-1, MCP-1/CCL2, NGAL, OPN
Kidney Toxicity 2 (Urine samples)	CKT2MAG-97K	Albumin, $\beta$ -2-Microglobulin, RBP4, TFF-3

#### Chicken

Cytokine/ Chemokine	GCYT1-16K	IFN $\alpha$ , IFN $\gamma$ , IL-2, IL-6, IL-10, IL-16, IL-21, M-CSF, MIP-1 $\beta$ /CCL4, MIP-3 $\alpha$ /CCL20, RANTES/CCL5, VEGF
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#### Feline

Cytokine/ Chemokine	FCYTMAG-20K- PMX	sFAS, Flt3 Ligand, GM-CSF, IFN $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-6, IL-8, IL-12 (p40), IL-13, IL-18, KC/GRO, MCP-1, PDGF-BB, RANTES, SCF, SDF-1, TNF $\alpha$
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#### Equine

Cytokine/ Chemokine	EQCYTMAG-93K	Eotaxin, FGF-2, Fractalkine, G-CSF, GM-CSF, GRO, IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12 (p70), IL-13, IL-17A, IL-18, IP-10, MCP-1, RANTES, TNF $\alpha$
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#### Ovine

Cytokine/ Chemokine	SCYT1-91K	IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-4, IL-6, IL-8, IL-10, IL-17A, IL-36RA, IP-10, MIP-1 $\alpha$ , MIP-1 $\beta$ , TNF $\alpha$ , VEGF-A
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#### Porcine

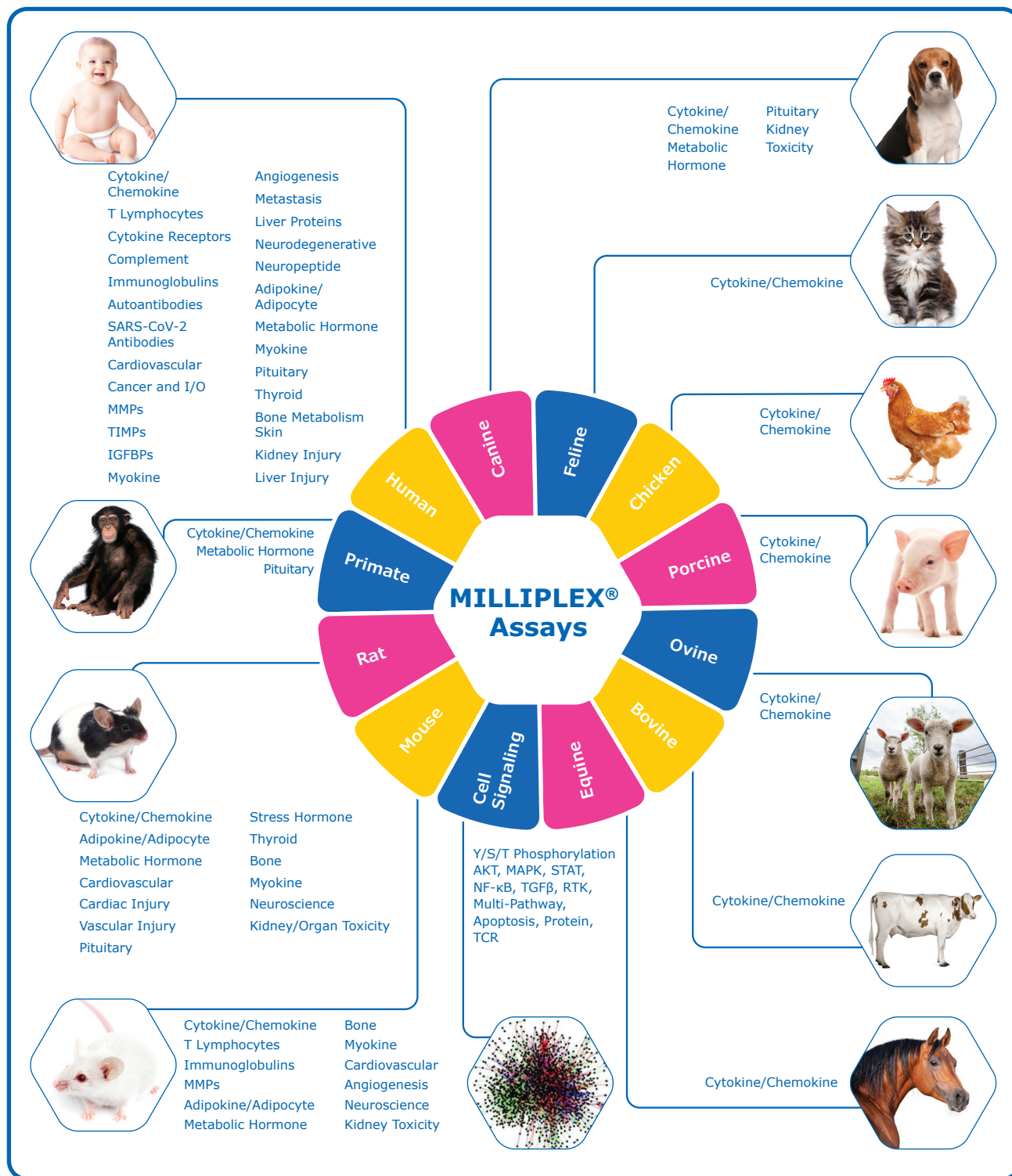
Cytokine/ Chemokine	PCYTMAG-23K	GM-CSF, IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-1Ra, IL-1 $\beta$ , IL-2, IL-4, IL-6, IL-8, IL-10, IL-12, IL-18, TNF $\alpha$
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#### Multi-Species

Hormone	MSHMAG-21K	Cortisol, Estradiol, Progesterone, Testosterone, T3, T4
TGF $\beta$	TGFBMAG- 64K-03	TGF $\beta$ 1, TGF $\beta$ 2, TGF $\beta$ 3



# Immunoassay Portfolio: Target Breakdown



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Lit No. MK\_FL2516EN Ver 2.0  
 32333  
 04/2021