Bring Your Biomarkers to Life.

The #1 best seller for multiplex and single plex protein detection.

Analyte Quarterly, Vol. 1 2016

Immunoassays & MILLIPLEX® MAP Kits:

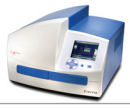
- Bone Metabolism
- Cancer Biomarkers
- Immunology
- Intracellular
  - Cell Signaling
  - Cellular Metabolism
- Metabolism / Endocrinology / CVD
- Neuroscience
- Toxicity

Merck Millipore is a business of MERCK

Better than "Fit for purpose"

Choose the protein detection platform that best meets your needs

Flexibility and sensitivity: our platforms fit your purpose.

Protein Detection Platforms	Fit for Purpose	Quantitative	Sensitivity	Sample Volume	Dynamic Range	Multiplex Capability	Custom Assay Support
ELISA 	Plate reader compatibility Most widely used	Yes	pg	50 -100 µL	•	▭	Yes
Luminex® platform 	Multiplex detection Flexible platform	Yes	pg	~25 µL	••	▬	Yes
Gyrolab® workstation 	Fully automated High precision	Yes	pg	< 5 µL	••	▭	Yes
Singulex Erenna® system 	Ultrasensitivity High performance	Yes	fg	5 -100 µL	•••	▭	Yes

• Good Performance •• Strong Performance ••• Superior Performance ▭ Not recommended ▬ Recommended

ELISAs: Quantify critical targets and interpret cell-based assays

ELISAs combine the specificity of antibodies with the sensitivity of simple enzyme assays. Our manufacturing of highly validated, preconfigured ELISAs and RIAs is the gold standard, giving you the same accuracy and precision in every lot, backed by the same, unwavering technical support.

GyroMark™ HT Kits: High-throughput, nanoliter-scale assays requiring as little as 1µL of sample

Our ready-to-use kits for the Gyrolab® platform are fully validated for reliable use in clinical research, and their accuracy and precision meets or exceeds ELISA performance.

Singulex Erenna® Platform: Previously undetectable, quantified. One molecule at a time

Combine a traditional immunoassay workflow with ultrasensitive Single Molecule Counting (SMC®) technology (developed by Singulex, Inc.) to capture concentrations down to the femtogram/mL level.

MILLIPLEX® MAP Multiplex Detection: Rely on the quality we build into each kit to produce results you trust

In addition to the assay specifications listed in the protocol, we evaluate other performance criteria during our validation process: cross-reactivity, dilution linearity, kit stability, and sample behavior (e.g. detectability and stability).

Each MILLIPLEX® MAP kit includes:

- Quality controls (QCs) provided to qualify assay performance
- Comparison of standard (calibrator) and QC lots to a reference lot to ensure lot-to-lot consistency
- Optimized serum matrix to mimic native analyte environment
- Detection antibody cocktails designed to yield consistent analyte profiles within panel

Intracellular MILLIPLEX® MAP panels and kits include:

- Stimulated and unstimulated cell lysates provided to qualify assay performance
- Premixed magnetic beads to capture analytes of interest
- Detection antibody cocktails designed to yield consistent analyte profiles within panel

MILLIPLEX® MAP offers the broadest selection of analytes across a wide range of disease states and species

NEW: MILLIPLEX® MAP and Single Protein Detection

MILLIPLEX® MAP Kits	Species	Catalog No.
Amyloid Beta and Tau Panel - 4 Plex	Human	HNABTMAG-68K
Circulating Cancer Biomarker Panel 4	Human	HCCB4MAG-58K
Complement Panels 1	Human	HCMP1MAG-19K,
Complement Panels 2	Human	HCMP2MAG-19K
Cytokine/Chemokine Panel IV, Premix & Bulk Premix	Human	HCYP4MAG-64K, HCP4MAG-64K-PX21, HCP4MAG64KPX21BK
Cytokine/Chemokine, Premix & Bulk Premix	Equine	EQCYTMAG-93K, EQCYTMG-93KPX23, EQCTMG93KPX23BK
Diabetes Panel 5-plex premixed kit	Human	HDIAB-34K-PMX5
Myokine Panel	Human	HMYOMAG-56K

NEW! Bulk/Space Saver premix catalog numbers—same bulk/space saver packaging you get with configurable kits

- Look for premix catalog numbers ending with "BK"
- Box and other cardboard is removed
- Kit components are grouped by item number and placed in plastic bags
- No minimum or maximum number of kits that can be bulked

Coming Soon

MILLIPLEX® MAP Kits	Species	Catalog No.
Neuroscience Panel 1	Human	Coming Soon!
RTK Phosphoprotein - 18 Plex	Human	Coming Soon!
Phospho/Total Akt-1 2 Plex	Human	Coming Soon!
Phospho/Total Akt-2 2 Plex	Human	Coming Soon!
Phospho/Total Akt-3 2 Plex	Human	Coming Soon!

ELISA Kits	Species	Catalog No.
PGE1 ELISA	Human	Custom*
PGF2α ELISA	Human	Custom*

*Contact Custom Assay Development: customassay@merckmillipore.com

Legend key for MILLIPLEX® MAP kits: pages 2 - 18

† Cannot be plexed together. 1. PSA (free) and PSA (total)
♦ Available in cat. no. listed
Δ These analytes cannot be plexed with other analytes in this panel in serum/plasma
‡ Cannot be plexed together: 1. Amylin (active) and Amylin (total). 2. GLP-1 (active) and GLP-1 (total).
▼ Premix panel only
Δ Cannot be plexed with other analytes in this panel in serum/plasma
% Requires a protease inhibitor during sample collection
■ Requires Sample Extraction
⌂ Serum/Plasma Only
Can be plexed with other 2 Plexes
◊ Cannot plex with other phospho Akt
● Recommended
● Acceptable
○ Not Recommended
H Human
M Mouse
R Rat

MILLIPLEX® MAP
New Product Spotlight

Human Myokine Panel (14 plex)

(Cat. No. HMYOMAG-56K)

Myokines, which are proteins made and secreted by muscle, regulate skeletal muscle metabolism and muscle proliferation and differentiation. In addition, myokines can act as endocrine hormones in altering cell metabolism, endothelial function, and tumor growth/retardation. These myokines are also involved in inflammatory responses in a wide variety of tissues. The MILLIPLEX® MAP Human Myokine Magnetic Bead Panel enables you to focus on discovering the roles and therapeutic potential of these muscle proteins.

Coupled with the Luminex xMAP® platform in a magnetic bead format, you obtain ideal speed and sensitivity, allowing quantitative multiplex detection of dozens of analytes simultaneously, which can dramatically improve productivity.

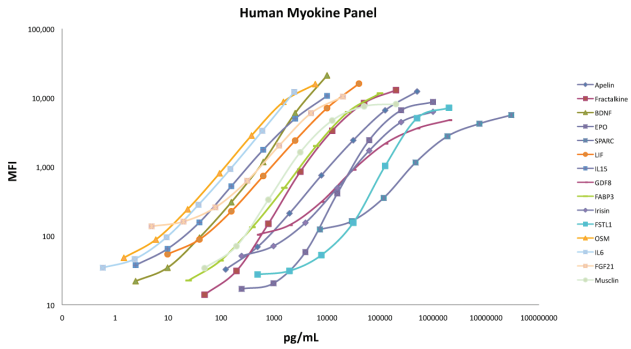


Figure 1. The 15 standard curves shown here demonstrate broad dynamic ranges and good sensitivity for the myokine biomarkers contained in the new Human Myokine Panel HMYOMAG-56K.

Human Complement Panels 1 and 2

(Cat. No. HCMP1MAG-19K HCMP2MAG-19K)

The ability to assess levels of multiple complement proteins simultaneously in patient serum or plasma to determine "complement profiles" would enable more accurate characterization of changes in inflammation signaling and innate immune response. Until now, researchers could assay only individual complement components using ELISAs. These assays require large amounts of sample and time at an increased expense. However, using the Luminex xMAP® technology, Merck Millipore has developed two MILLIPLEX® MAP Human Complement panels, based on biologically relevant concentrations to determine levels of 15 key complement proteins simultaneously in serum or plasma.

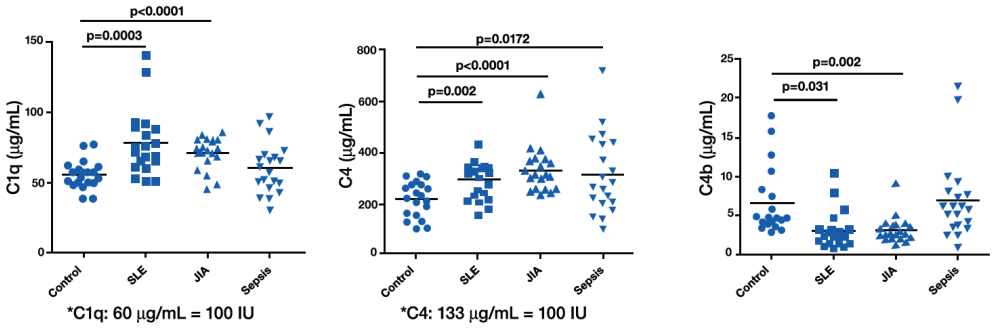


Figure 2. Human serum and plasma samples from healthy control, systemic lupus erythematosus (SLE), juvenile idiopathic arthritis (JIA) or sepsis patients (n=20 each) were assayed for complement factors using the MILLIPLEX® MAP Human Complement Panels 1 and 2 (15 analytes total). P values indicating significant differences between disease samples and healthy control samples were determined using Student t-test.

Human Amyloid Beta and Tau Magnetic Bead Panel

(Cat. No. HNABTMAG-68K)

Alzheimer's disease (AD), a progressive neurodegenerative disorder, afflicts approximately 36 million people worldwide and is the sixth leading cause of death in the U.S. Two key neuropathological features that exemplify AD are extracellular Amyloid β (Aβ) plaques and intracellular neurofibrillary tangles, which are composed of the abnormally hyperphosphorylated protein Tau. Unlike ELISAs and other multiplex kits, the MILLIPLEX® MAP Human Amyloid Beta and Tau Panel enables the simultaneous measurement of Aβ1-40, Aβ1-42, total Tau and phospho-Tau (Thr181) in cerebrospinal fluid (CSF) samples, saving time, money and precious sample.

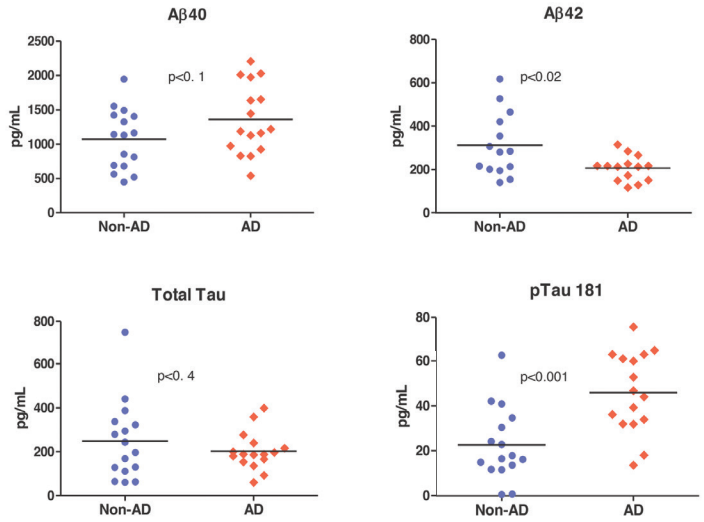


Figure 3. Multiplex measurement of human non-AD and AD CSF samples. Non-AD and AD CSFs samples. Non-AD CSF samples (n=16) and AD CSF samples (n=16) were analyzed using the MILLIPLEX® MAP Human Amyloid Beta and Tau Magnetic Bead Panel.

Human Circulating Cancer Biomarker Panel 4

(Cat. No. HCCB4MAG-58K)

Cancer research involves the study of both intracellular cancer biomarkers, which help to clarify the process of oncogenesis, and circulating cancer biomarkers, which give insight into how the body responds to the presence of a tumor, the dysregulation of homeostasis and the relationship between a tumor and its environment. Study of isolated biomarkers, whether intracellular or circulating, is often inadequate to analyze the complex relationship between tumor and non-tumor. The MILLIPLEX® MAP Human Circulating Cancer Biomarker Panel 4 enables the simultaneous study of 10 key circulating biomarkers in serum, plasma and cell/tissue culture samples, with ideal speed and sensitivity, quantitative, multiplex detection of multiple analytes and dramatically improved productivity.

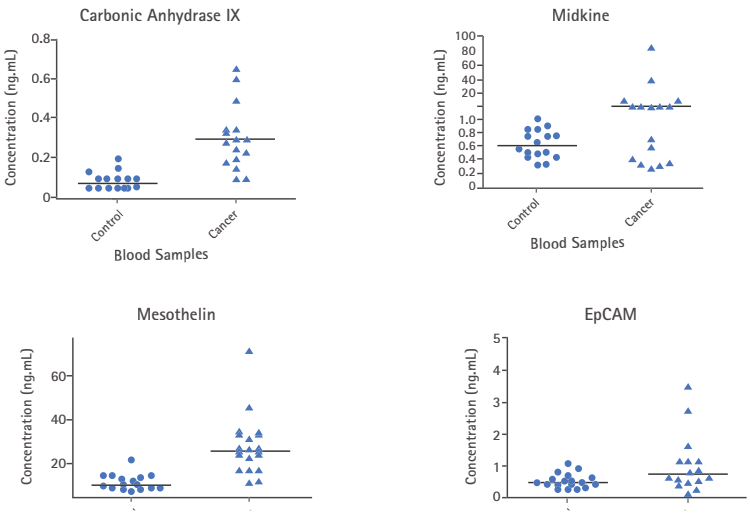


Figure 4. Human serum and plasma samples from healthy controls and different tumor types were assayed using the MILLIPLEX® MAP Human Circulating Cancer Biomarker Panel 4 kits (10 analytes total). Sixteen cancer samples were studied: nine lung cancer, three ovarian cancer, two breast cancer and two colon cancer samples.

Immunology

Human Cytokine / Chemokine Panel I

(Cat. No. HCYTOMAG-60K)
(Cat. No. HCYTMAG-60K-PX29) 29
(Bulk Cat. No. HCYTMAG60PMX29BK) 29
(Cat. No. HCYTMAG-60K-PX30) ♦ 30
(Bulk Cat. No. HCYTMAG60PMX30BK) ♦ 30
(Cat. No. HCYTMAG-60K-PX38) 38
(Bulk Cat. No. HCYTMAG60PMX38BK) 38
(Cat. No. HCYTMAG-60K-PX41) 41
(Bulk Cat. No. HCYTMAG60PMX41BK) 41

sCD40L	IL-9
EGF ♦	IL-10 ♦
Eotaxin/CCL11 ♦	IL-12 (p40) ♦
FGF-2/FGF-basic	IL-12 (p70) ♦
Flt3 Ligand	IL-13 ♦
Fractalkine /CX3CL1	IL-15 ♦
G-CSF ♦	IL-17A/CTLA8 ♦
GM-CSF ♦	IP-10/CXCL10 ♦
GRO	MCP-1/CCL2 ♦
IFNα2 ♦	MCP-3/CCL7
IFNγ ♦	MDC/CCL22
IL-1α ♦	MIP-1α/CCL3 ♦
IL-1β ♦	MIP-1β/CCL4 ♦
IL-1Ra ♦	PDGF-AA Δ
IL-2 ♦	PDGF-AB/BB Δ
IL-3 ♦	RANTES/CCL5 ♦ Δ
IL-4 ♦	TGFα
IL-5 ♦	TNFα ♦
IL-6 ♦	TNFβ / Lymphotoxinα (LTA) ♦
IL-7 ♦	VEGF-A ♦
IL-8/CXCL8 ♦	

Human Cytokine / Chemokine Panel II

(Cat. No. HCYP2MAG-62K)
(Cat. No. HCP2MAG-62K-PX23) 23
(Bulk Cat. No. HCP2MAG62KPX23BK) 23

6Ckine/CCL21/ Exodus-2	I-309/CCL1
BCA-1/CXCL13	LIF
CTACK/CCL27	MCP-2/CCL8
ENA-78/CXCL5	MCP-4/CCL13
Eotaxin-2/CCL24/ MPIF-2	MIP-1δ/MIP-5/CCL15
Eotaxin-3/CCL26	SCF
IL-16	SDF-1/CXCL12
IL-20	TARC/CCL17
IL-21	TPO
IL-23	TRAIL/TNFSF10
IL-28A/IFNλ2	TSLP
IL-33/NF-HEV (mature)	

Human Cytokine / Chemokine Panel III

(Cat. No. HCYP3MAG-63K)

HCC-1/CCL14 Δ	M-CSF
IL-11	MIG/CXCL9
IL-29/IFNλ1	MIP-3α/CCL20
I-TAC/CXCL11	MIP-3β/CCL19
LIX/CXCL6/GCP-2	NAP-2/CXCL7 Δ
Lymphotactin/XCL1	

Human Cytokine/Chemokine Panel IV NEW!

(Cat. No. HCYP4MAG-64K)
(Cat. No. HCY4MG-64K-PX21) 21
(Cat. No. HCP4MG64KPX21BK) 21

APRIL/TNFSF13	IL-19
IL-14/α-Taxilin	IL-24
BAFF/Blys	IL-28B/IFNλ3
BRAK/CXCL14	IL-32α
CXCL16	IL-34
CCL28	IL-35
HCC-4/CCL16	IL-36/IL-1F8
HMGB1 ⌓	IL-37/IL-1F7
MPIF/CCL23	IL-38/IL-1F10
IFNβ	YKL40/1CHI3L1
MIP-4/PARC/CCL18	

Human High Sensitivity T Cell

(Cat. No. HSTCMAG-28SK)
(Cat. No. HSTCMAG28SPMX13) ♦ 13
(Bulk Cat. No. HSTCMAG28PMX13BK) ♦ 13
(Cat. No. HSTCMAG28SPMX21) 21
(Bulk Cat. No. HSTCMAG28PMX21BK) 21

Fractalkine/CX3CL1	IL-12 (p70) ♦
GM-CSF ♦	IL-13 ♦
IFNγ ♦	IL-17A/CTLA8
IL-1β ♦	IL-21
IL-2 ♦	IL-23
IL-4 ♦	I-TAC/CXCL11
IL-5 ♦	MIP-1α/CCL3
IL-6 ♦	MIP-1β/CCL4
IL-7 ♦	MIP-3α/CCL20
IL-8/CXCL8 ♦	TNFα ♦
IL-10 ♦	

Human Soluble Cytokine Receptor

(Cat. No. HSCRMAG-32K)
(Cat. No. HSCRMAG32KPX14) 14
(Bulk Cat. No. HSCRMAG32PMX14BK) 14

sCD30	sRAGE
sEGFR	sTNF RI
sgp130	sTNF RII
sIL-1RI	sVEGFR1/sFlt-1
sIL-1RII	sVEGFR2/sKDR/sFlk-1
sIL-2Rα	sVEGFR3/sFlt-4
sIL-4R	
sIL-6R	

Human Th17

(Cat. No. HTH17MAG-14K)
(Cat. No. HT17MG-14K-PX25) 25
(Bulk Cat. No. HT17MAG14PMX25BK) 25

GM-CSF	IL-17E/IL-25
IFNγ	IL-17F
IL-1β	IL-21
IL-2	IL-22
IL-4	IL-23
IL-5	IL-27
IL-6	IL-28A/IFNλ2
IL-9	IL-31
IL-10	IL-33/NF-HEV (mature)
IL-12 (p70)	MIP-3α/CCL20
IL-13	TNFα
IL-15	TNβ / Lymphotoxinα (LTA)
IL-17A/CTLA8	

Human CD8+ T Cell

(Cat. No. HCD8MAG-15K)
(Cat. No. HCD8MAG15K17PMX) 17
(Bulk Cat. No. HCD8MAG15K17PXBK) 17

sCD137/4-1BB/TNFRSF9	IL-5
sFas	IL-6
sFasL/TNFRSF6	IL-10
GM-CSF	IL-13
Granzyme A	MIP-1α/CCL3
Granzyme B	MIP-1β/CCL4
IFNγ	Perforin
IL-2	TNFα
IL-4	

Immunology, continued

Human Complement Panel 1 NEW!
(Cat. No. HCMP1MAG-19K)

Adipson/Factor D	C5a
C2	C9
C4b	Factor I
C5	Mannose-binding lectin (MBL)

Human Complement Panel 2 NEW!
(Cat. No. HCMP2MAG-19K)

C1q	Factor B
C3	Factor H
C3b	Properdin
C4	

Human MMP Panel 1
(Cat. No. HMMP1MAG-55K)

MMP-3	MMP-13
MMP-12	

Human MMP Panel 2
(Cat. No. HMMP2MAG-55K)

MMP-1	MMP-9
MMP-2	MMP-10
MMP-7	

Human TIMP Panel 1
Serum/Plasma samples
(Cat. No. HTMP1MAG-54K)

TIMP-1	TIMP-2

Human TIMP Panel 2
Cell culture samples
(Cat. No. HTMP2MAG-54K)

TIMP-1	TIMP-3
TIMP-2	TIMP-4

Human Immunoglobulin Isotyping
(Cat. No. HGAMMAG-301K)

IgA	IgG3
IgG1	IgG4
IgG2	IgM

Human IgE - Single Plex
(Cat. No. HGAMMAG-303E)

IgE

Human Sepsis Panel 1
(Cat. No. HSP1MAG-63K)

sFas	MIF
sFasL/TNFRSF6	PAI-1 (total)
sICAM-1	sVCAM-1

Human Sepsis Panel 2
(Cat. No. HSP2MAG-63K)

Granzyme B	MIP-1α/CCL3
HSP70	MIP-1β/CCL4
IL-1α	MMP-8
IL-8/CXCL8	

Human Sepsis Panel 3
(Cat. No. HSP3MAG-63K)

Lactotransferrin (LTF)
NGAL/Lipocalin-2
Neutrophil Elastase-2 (ELA2)
Resistin
Thrombospondin-1 (TSP-1)

Human Sepsis Panel 4
(Cat. No. HSP4MAG-63K)

FGF-13	Olfactomedin-4 (OLFM-4)
MMP-8	

Human Sepsis Panel 5
(Cat. No. HSP5MAG-63K)

Neutrophil Elastase-2 (ELA2)	Proteinase-3 (PRTN-3)

Human Skin
(Cat. No. SKINMAG-50K)

Cortisol	Involucrin
Fibronectin	Keratin-1,10
Human Serum Albumin (HSA)	Keratin-6
	LPS

Metabolism / Endocrinology

Human Adipokine Panel 1
Serum/Plasma samples
(Cat. No. HADK1MAG-61K)

Adiponectin	PAI-1 (total)
Adipsin/Factor D	Resistin
NGAL/Lipocalin-2	

Human Adipokine Panel 2
Serum/Plasma samples
(Cat. No. HADK2MAG-61K)

HGF	Leptin
IL-1β	MCP-1/CCL2
IL-6	NGF
IL-8/CXCL8	TNFα
Insulin	

Human Adipocyte
Cell culture samples
(Cat. No. HADCYMAG-61K)

Adiponectin	MCP-1/CCL2
HGF	NGF
IL-1β	PAI-1 (total)
IL-6	Resistin
IL-8/CXCL8	TNFα
Leptin	

Human Diabetes NEW!
(Cat.No. HDIAB-34K-PMX5) ▼
(Bulk Cat. No. HDIAB34KPMX5BK)

C-Peptide
GLP-1 (active)
Glucagon
Insulin
Leptin

Human Metabolic Hormone
(Cat. No. HMHEMAG-34K)

Amylin (active) ǂ	IL-6
Amylin (total) ǂ	Insulin
C-Peptide	Leptin
Ghrelin (active) %	MCP-1/CCL2
GIP (total)	Pancreatic Polypeptide (PP)
GLP-1 (active) ǂ	PYY (total)
GLP-1 (total) ǂ	TNFα
Glucagon	

Human Myokine NEW!
(Cat. No. HMYOMAG-56K)

Apelin	Myostatin
BDNF	FABP3
Fractalkine /CX3CL1	Irisin
Erythropoietin (EPO)	FSTL-1
LIF	IL-6
IL-15	Osteocrin/Musclin
SPARC/Osteonectin	Oncostatin-M

Human Liver Protein
(Cat. No. HLPPMAG-57K)

α-Fetoprotein (AFP)	FGF-19
ANGPTL3	FGF-21
ANGPTL4	FGF-23
ANGPTL6	HGF
FABP1	

Human IGF Binding Protein
(Cat. No. HIGFBMAG-53K)

IGFBP1	IGFBP5
IGFBP2	IGFBP6
IGFBP3	IGFBP7
IGFBP4	

Metabolism / Endocrinology, continued

Human IGF
(Cat. No. HIGFMAG-52K)

IGF-1	IGF-2

Human Pituitary Panel 1
(Cat. No. HPTP1MAG-66K)

ACTH	FSH
Agouti-Related Protein (AgRP)	GH
CNTF	LH
	TSH

Human Pituitary Panel 2
(Cat. No. HPTP2MAG-66K)

BDNF	Prolactin

Cardiovascular

Human CVD Panel 1
(Cat. No. HCVD1MAG-67K)

BNP	FABP4
NT proBNP	LIGHT
CK-MB	Oncostatin (OSM)
LIX/CXCL6/GCP-2	Placental Growth Factor (PLGF)
CXCL16	Troponin I (TnI)
Endocan (ESM-1)	
FABP3	

Human CVD Panel 2
(Cat. No. HCVD2MAG-67K)

ADAMTS13	Myeloperoxidase (MPO)
GDF-15	Myoglobin
D-dimer	Serum Amyloid A
sICAM-1	sP-Selectin
NGAL/Lipocalin-2	sVCAM-1

Human CVD Panel 3 (Acute Phase)
(Cat. No. HCVD3MAG-67K)

α-2-Macroglobulin	Haptoglobin
Adipsin/Factor D	sL-Selectin
α1-Acid Glycoprotein (AGP)	Platelet Factor 4 (PF4)
CRP	Serum Amyloid P
Fetuin A	von Willebrand Factor (vWF)
Fibrinogen	

Human CVD Panel 4
(Cat. No. HCVD4MAG-67K)

sE-Selectin	Pentraxin-3 (PTX3)
Follistatin (FST)	Tissue Factor (TF)
dPAPP-A	Thrombomodulin
sCD31/sPECAM-1	Troponin T (TnT)

Human Apolipoproteins
(Cat. No. APOMAG-62K)

Apo AI	Apo CII
Apo AII	Apo CIII
Apo B	Apo E

Bone

Human Bone
(Cat. No. HBNMAG-51K)

ACTH	Osteocalcin (OC)
DKK1	Osteopontin (OPN)
FGF-23	Osteoprotegerin (OPG)
IL-1β	PTH
IL-6	Sclerostin (SOST)
Insulin	TNFα
Leptin	

Human RANKL - Single Plex
(Cat. No. HRNKLMAG-51K-01)

RANKL

Cancer Biomarkers

Human Circulating Cancer Biomarker Panel 1
(Cat. No. HCCBP1MAG-58K)

α-Fetoprotein (AFP)	IL-8/CXCL8
CA125	Leptin
CA15-3	MIF
CA19-9	Osteopontin (OPN)
CEA	Prolactin
CYFRA21-1	PSA (free)†
sFas	PSA (total)†
sFasL/TNFRSF6	SCF
FGF-2/FGF-basic	TGFα
HCGβ	TNFα
HE4	TRAIL/TNFSF10
HGF	VEGF-A
IL-6	

Human Circulating Cancer Biomarker Panel 2
(Cat. No. HCCBP2MAG-58K)

Antithrombin III
Complement Factor H (CFH)
Extracellular Matrix Protein 1 (ECM1)
Vitamin D Binding Protein
Vitronectin

Human Circulating Cancer Biomarker Panel 3
(Cat. No. HCCBP3MAG-58K)

Cathepsin D
Ferritin
Fibroblast Activation Protein (FAP)
Galectin 3
IGFBP3
Melanoma Inhibitory Activity (MIA)
Myeloperoxidase (MPO)
Sex Hormone Binding Globulin (SHBG)

Human Circulating Cancer Biomarker Panel 4 NEW!
(Cat. No. HCCB4MAG-58K)

ALDH1A1
Carbonic Anhydrase 9 (CA9)
CD44
EpCAM
Hepsin
Kallikrein-6
Mesothelin
Midkine
NCAML1/L1CAM/CD171
Transglutaminase 2 (TGM2)

Human Cancer / Metastasis Biomarker Panel 1
(Cat. No. HCMBMAG-22K)

DKK1	Periostin
GDF15	TRAP
Neuron-specific enolase (NSE)	TWEAK
Osteonectin (SPARC)	YKL40/1CHI3L1
Osteoprotegerin (OPG)	

Human Angiogenesis / Growth Factor Panel 1
(Cat. No. HAGP1MAG-12K)

Angiopoietin-2	HB-EGF
BMP-9	HGF
EGF	IL-8/CXCL8
Endoglin	Leptin
Endothelin-1	Placental Growth Factor (PLGF)
FGF-1/FGF-acidic	VEGF-A
FGF-2/FGF-basic	VEGF-C
Follistatin (FST)	VEGF-D
G-CSF	

Cancer Biomarkers, continued

Human Angiogenesis Panel 2 (Cat. No. HANG2MAG-12K)

Angiostatin/Kringle
sAXL
sc-Kit/sStem Cell Factor Receptor (SCFR)
sE-Selectin
sEGFR/sHER1/sErbB1
sHER2/sEGFR2/sErbB2
sHER3/sEGFR3/sErbB3
sHGFR/sc-Met
sIL-6Rα
sNeuropilin-1 (sNRP-1)
Osteopontin (OPN)
PDGF-AB/BB
sPECAM-1
Tenascin C (TN-C)
Thrombospondin-2 (TSP-2)
sTIE-2
suPAR
sVEGFR1/sFlt1
sVEGFR2/sKDR/sFlk-1
sVEGFR3/sFlt-4

Neuroscience

Human Amyloid Beta and Tau

CSF samples NEW!

(Cat. No. HNABTMAG-68K)

Aβ1-40	Tau (Thr181)
Aβ1-42	Tau (total)

Human Neuroscience Panel 1

(Coming Soon)

α-Synuclein	PARK5/UCHL1
Glial Fibrillary Acidic Protein (GFAP)	PARK7/DJ1
Neuron-Specific Enolase (NSE)	Transglutaminase 2 (TGM2)

Human Neurodegenerative Disease Panel 1

(Cat. No. HNDG1MAG-36K)

α-2-Macroglobulin	Complement C3
Apo AI	Factor H
Apo CIII	Prealbumin/ Transthyretin (TTR)
Apo E	

Human Neurodegenerative Disease Panel 2

(Cat. No. HNDG2MAG-36K)

α-2-Antitrypsin (A1AT)	MIP-4/PARC/CCL18
C4	PEDF
CRP	Serum Amyloid P (SAP)

Human Neurodegenerative Disease Panel 3

(Cat. No. HNDG3MAG-36K)

BDNF	PAI-1 (total)
Cathepsin D	PDGF-AA
sICAM-1	PDGF-AB/BB
Myeloperoxidase (MPO)	RANTES/CCL5
sNCAM	sVCAM-1

Human Neurodegenerative Disease Panel 4

CSF samples

(Cat. No. HNDG4MAG-36K)

Aβ1-40	sRAGE
Aβ1-42	S100B
GDNF	

Human Neurological Panel 1

Coming Soon

α–Synuclein
Glial Fibrillary Acidic Protein (GFAP)
Neuron-Specific Enolase (NSE)
PARK5/UCHL1
PARK7/DJ1
Transglutaminase 2 (TGM2)

Human Neurological Disorders Panel 2

(Cat. No. HND2MAG-39K)

α-1-Acid Glycoprotein (AGP)	Haptoglobin (HP)
Ceruloplasmin (CP)	Serum Amyloid P

Human Neurological Disorders Panel 3

(Cat. No. HND3MAG-39K)

Angiotensinogen (AGT)	Soluble Superoxide Dismutase 1 (sSOD1)
Contactin-1	Soluble Superoxide Dismutase 2 (sSOD2)
Fetuin A	
Kallikrein-6	
Osteopontin (OPN)	

Human Neuropeptide

(Cat. No. HNPMAG-35K) ■

α-MSH
β-Endorphin
Neurotensin
Orexin A
Oxytocin
Substance P

Human Circadian Stress

(Cat. No. HNCSMAG-35K)

Cortisol
Melatonin

Toxicity

Human Kidney Injury Panel 1

Urine samples

(Cat. No. HKI1MAG-99K)

Calbindin	KIM-1
Collagen IV	Osteoactivin
FABP1	Renin
GSTα	TFF-3
GSTπ	TIMP-1
IP-10/CXCL10	

Human Kidney Injury Panel 2

Urine samples

(Cat. No. HKI2MAG-99K)

α-1-Microglobulin	EGF
Albumin	NGAL/Lipocalin-2
Clusterin	Osteopontin (OPN)
Cystatin C	

Human Kidney Injury Panel 3

Urine samples

(Cat. No. HKI3MAG-99K)

β-2-Microglobulin	Uromodulin
RBP4	

Human Kidney Injury Panel 4

Serum/Plasma samples

(Cat. No. HKI4MAG-99K)

EGF	KIM-1
FABP1	Osteopontin (OPN)
GSTα	PTH
IP-10/CXCL10	Renin

Human Kidney Injury Panel 5

Serum/Plasma samples

(Cat. No. HKI5MAG-99K)

α-1-Microglobulin	Osteoactivin
Collagen IV	TIMP-1
GSTπ	Uromodulin
NGAL/Lipocalin-2	

Human Kidney Injury Panel 6

Serum/Plasma samples

(Cat. No. HKI6MAG-99K)

β-2-Microglobulin	Cystatin C
Clusterin	RBP4

Immunology

Non-Human Primate Cytokine / Chemokine Panel 1

(Cat. No. PRCYTOMAG-40K)
(Cat. No. PCYTMG-40K-PX23) 23
(Bulk Cat. No. PRCYMAG40PMX23BK) 23

sCD40L	IL-12/23 (p40)
G-CSF	IL-13
GM-CSF	IL-15
IFNγ	IL-17A/CTLA8
IL-1β	IL-18
IL-1Ra	MCP-1/CCL2
IL-2	MIP-1α/CCL3
IL-4	MIP-1β/CCL4
IL-5	TGFα
IL-6	TNFα
IL-8/CXCL8	VEGF-A
IL-10	

Non-Human Primate Cytokine / Chemokine Panel 2

(Cat. No. PRCYT2MAG40K)
(Cat. No. PRCYTMAG40K-PX24) 24
(Bulk Cat. No. PRCY2MG40PMX24BK) 24
(Cat. No. PRCYTMAG40K-PX25) 25
(Bulk Cat. No. PRCY2MG40PMX25BK 25

sCD137/4-1BB/TNFRSF9	IL-117E/IL-25
Eotaxin/CCL11	IL-21
sFasL/TNFRSF6	IL-22
FGF-2/FGF-basic	IL-23
Fractalkine/CX3CL1	IL-28A/IFNλ2
Granzyme A	IL-31
Granzyme B	IL-33/NF-HEV (mature)
IL-1α	IP-10/CXCL10
IL-2	MIP-3α/CCL20
IL-4	Perforin
IL-6	RANTES/CCL5 Δ
IL-16	TNFβ / Lymphotoxinα (LTA)
IL-17A/CTLA8	

Metabolism

Non-Human Primate Metabolic Hormone

(Cat. No. NHPMHMAG-45K)

Amylin (active)	Insulin
C-Peptide	Leptin
Ghrelin (active) %	MCP-1/CCL2
GIP (total)	Pancreatic Polypeptide (PP)
GLP-1 (active)	PYY (total)
Glucagon	TNFα
IL-6	

Non-Human Primate Pituitary Panel 1

(Cat. No. NHPPT1MG-46K)

ACTH	GH
Agouti-Related Protein (AgRP)	LH
CNTF	TSH
FSH	

Non-Human Primate Pituitary Panel 2

(Cat. No. NHPPT2MG-46K)

BDNF	Prolactin

Immunology

Mouse Cytokine / Chemokine Panel I

(Cat. No. MCYTOMAG-70K)
(Cat. No. MCYTOMAG-70K-PMX) ♦ 25
(Bulk Cat. No. MCYTMAG70PMX25BK) ♦ 25
(Cat. No. MCYTMAG-70K-PX32) 32
(Bulk Cat. No. MCYTMAG70PMX32BK) 32

Eotaxin/CCL11	IL-13 ♦
G-CSF ♦	IL-15 ♦
GM-CSF ♦	IL-17A/CTLA8 ♦
IFNγ ♦	IP-10/CXCL10 ♦
IL-1α ♦	KC/GROα/CXCL1 ♦
IL-1β ♦	LIF
IL-2 ♦	LIX
IL-3	MCP-1/CCL2 ♦
IL-4 ♦	M-CSF
IL-5 ♦	MIG/CXCL9
IL-6 ♦	MIP-1α/CCL3 ♦
IL-7 ♦	MIP-1β/CCL4 ♦
IL-9 ♦	MIP-2/CXCL2 ♦
IL-10 ♦	RANTES/CCL5 ♦
IL-12 (p40) ♦	TNFα ♦
IL-12 (p70) ♦	VEGF-A

Mouse Cytokine / Chemokine Panel 2

(Cat. No. MECY2MAG-73K)
(Cat. No. MECY2MAG-73KPX) 15
(Bulk Cat. No. MECY2MAG73KPXBK) 15

Erythropoietin (EPO)	IL-17A/F
Exodus-2/CCL21/6Ckine	IL-20
Fractalkine/CX3CL1	MCDC/CCL22
IFNβ1	MCP-5/CCL12
IFNγ	MIP-3α/CCL20
IL-11	MIP-3β/CCL19
IL-16	TARC/CCL17
	TIMP-1

Mouse Soluble Cytokine Receptor

(Cat. No. MSCRMAG-42K)

sCD30	sRAGE
sgp130	sTNF RI
sIL-1RI	sTNF RII
sIL-1RII	sVEGFR1/sFlt-1
sIL-2Rα	sVEGFR2/sKDR/sFlk-1
sIL-4R	sVEGFR3/sFlt-4
sIL-6R	

Immunology, continued

Mouse Th17
(Cat. No. MTH17MAG-47K)
(Cat. No. MT17MAG47K-PX25) 25
(Bulk Cat. No. MT17MAG47PMX25BK) 25

sCD40L	IL-17E/IL-25
GM-CSF	IL-17F
IFNγ	IL-21
IL-1β	IL-22
IL-2	IL-23
IL-4	IL-27
IL-5	IL-28B/IFNλ3
IL-6	IL-31
IL-10	IL-33/NF-HEV (mature)
IL-12 (p70)	MIP-3α/CCL20
IL-13	TNFα
IL-15	TNFβ / Lymphotoxinα (LTA)
IL-17A/CTLA8	

Mouse CD8+ T Cell
(Cat. No. MCD8MAG-48K)
(Cat. No. MCD8MAG48K-PX15) 15
(Bulk Cat. No. MCD8MAG48KPX15BK) 15

sCD137/4-1BB/TNFRSF9	IL-5
sFas	IL-6
sFasL/TNFRSF6	IL-10
GM-CSF	IL-13
Granzyme B	MIP-1β/CCL4
IFNγ	RANTES/CCL5
IL-2	TNFα
IL-4	

Mouse MMP Panel 1
Serum/Plasma samples
(Cat. No. MMMP1MAG-79K)

MMP-2	MMP-8
MMP-3	

Mouse MMP Panel 2
Serum/Plasma samples
(Cat. No. MMMP2MAG-79K)

proMMP-9	MMP-12

Mouse MMP Panel 3
Cell culture samples
(Cat. No. MMMP3MAG-79K)

MMP-2	proMMP-9
MMP-3	MMP-12
MMP-8	

Mouse Immunoglobulin Isotyping
(Cat. No. MGAMMAG-300K)

IgA	IgG2b
IgG1	IgG3
IgG2a	IgM

Mouse IgE - Single Plex
(Cat. No. MGAMMAG-300E)

IgE

Metabolism / Endocrinology

Mouse Adipokine
Serum/Plasma samples
(Cat. No. MADKMAG-71K)

IL-6	PAI-1 (total)
Insulin	Resistin
Leptin	TNFα
MCP-1/CCL2	

Mouse Adipocyte
Cell culture samples
(Cat. No. MADCYMAG-72K)

Adiponectin	PAI-1 (total)
IL-6	Resistin
Leptin	TNFα
MCP-1/CCL2	

Mouse Adiponectin - Single Plex
Serum/Plasma samples
(Cat. No. MADPNMAG-70K-01)

Adiponectin

Mouse Metabolic Hormone
(Cat. No. MMHMAG-44K)

Amylin (active)	Leptin
C-Peptide 2	MCP-1/CCL2
Ghrelin (active) %	Pancreatic Polypeptide (PP)
GIP (total)	PYY (total)
GLP-1 (active)	Resistin
Glucagon	TNFα
IL-6	
Insulin	

Mouse IGF Binding Protein
(Cat. No. MIGFBPMAG-43K)

IGFBP1	IGFBP5
IGFBP2	IGFBP6
IGFBP3	IGFBP7

Mouse Pituitary
(Cat. No. MPTMAG-49K)

ACTH	LH
BDNF	Prolactin
FSH	TSH
GH	

Cardiovascular

Mouse CVD1
(Cat. No. MCVD1MAG-77K)

sCD31/sPECAM-1	PAI-1 (total)
sE-Selectin	sP-Selectin
sICAM	Thombomodulin
proMMP-9	

Mouse CVD2
(Cat. No. MCVD2MAG-77K)

sCD40L	Oncostatin-M
CXCL16	Placental Growth Factor (PLGF-2)
Endocan-1	Troponin I (TnI)
Follistatin (FST)	Troponin T (TnT)
LIGHT	

Mouse Acute Phase Panel 1
(Cat. No. MAP1MAG-76K)

NGAL/Lipocalin-2	Serum Amyloid A-3 (SAA-3)
Pentraxin-3 (PTX3)	

Mouse Acute Phase Panel 2
(Cat. No. MAP2MAG-76K)

Adipsin/Factor D	CRP
α-1-Acid Glycoprotein (AGP)	Haptoglobin
α-2-Macroglobulin	Serum Amyloid P

Bone Metabolism

Mouse Bone
(Cat. No. MBNMAG-41K)

ACTH	Osteocalcin (OC) Δ
DKK-1	Osteoprotegerin (OPG)
FGF-23	Sclerostin (SOST)
IL-6	TNFα
Insulin	
Leptin	

Mouse RANKL - Single Plex
(Cat. No. MRNKLMAG-41K-01)

RANKL

Cancer Biomarkers

Mouse Angiogenesis / Growth Factor Panel 1
(Cat. No. MAGPMAG-24K)

sALK-1	IL-6
Amphiregulin	IL-17A/CTLA8
Angiopoietin-2 Δ	KC/CXCL1
Betacellulin Δ	Leptin
sCD31/sPECAM-1 Δ	MCP-1/CCL2
EGF	MIP-1α/CCL3
Endoglin	Placental Growth Factor (PLGF-2)
Endothelin-1	Prolactin
sFasL/TNFRSF6	SDF-1/CXCL12
FGF-2/FGF-basic	TNFα
Follistatin (FST)	VEGF-A
G-CSF	VEGF-C
HGF	VEGF-D
IL-1β	

Neuroscience

Mouse Neuropeptide
(Cat. No. RMNPMAG-83K) ■

α-MSH	Orexin A
β-Endorphin	Oxytocin
Neurotensin	Substance P

Toxicity

Mouse Kidney Injury Panel 1
(Cat. No. MKI1MAG-94K)

β-2-Microglobulin	Renin
IP-10/CXCL10	TIMP-1
KIM-1	VEGF-A

Mouse Kidney Injury Panel 2
(Cat. No. MKI2MAG-94K)

Clusterin	NGAL/Lipocalin-2
Cystatin C	Osteopontin (OPN)
EGF	

Immunology

Rat Cytokine / Chemokine
(Cat. No. RECYTMAG-65K)
(Cat. No. RECYMAG65K27PMX) 27
(Bulk Cat. No. RECYMAG65PMX27BK) 27

EGF	IL-10
Eotaxin/CCL11	IL-12 (p70)
Fractalkine /CX3CL1	IL-13
G-CSF	IL-17A/CTLA8
GM-CSF	IL-18
GROα/KC/CINC-1 /CXCL1	IP-10/CXCL10
IFNγ	Leptin
IL-1α	LIX
IL-1β	MCP-1/CCL2
IL-2	MIP-1α/CCL3
IL-4	MIP-2/CCL8
IL-5	RANTES/CCL5
IL-6	TNFα
	VEGF-A

Rat Immunoglobulin Isotyping
(Cat. No. RGAMMAG-302K)

IgA	IgG2b
IgG1	IgG2c
IgG2a	IgM

Rat IgE - Single Plex
(Cat. No. RGAMMAG-302E)

IgE

Metabolism / Endocrinology

Rat Adipokine
Serum/Plasma samples
(Cat. No. RADPKMAG-80K)

IL-1β	MCP-1/CCL2
IL-6	PAI-1 (total)
Insulin	TNFα
Leptin	

Rat Adipocyte
Cell culture samples
(Cat. No. RADPCMAG-82K)

Adiponectin	Leptin
IL-1β	PAI-1 (total)
IL-6	TNFα

Rat Adiponectin - Single Plex
Serum/Plasma samples
(Cat. No. RADPNMAG-81K-01)

Adiponectin

Rat Metabolic Hormone
(Cat. No. RMHMAG-84K)

Amylin (active)	Insulin
C-Peptide 2	Leptin
Ghrelin (active) %	MCP-1/CCL2
GIP (total)	Pancreatic Polypeptide (PP)
GLP-1 (active)	PYY (total)
Glucagon	TNFα
IL-6	

Rat Pituitary
(Cat. No. RPTMAG-86K)

ACTH	LH
BDNF	Prolactin
FSH	TSH
GH	

Rat Stress Hormone
(Cat. No. RSHMAG-69K)

ACTH	Melatonin
Corticosterone	

Rat Thyroid
(Cat. No. RTHYMAG-30K)

T3	TSH
T4	

Cardiovascular

Rat Cardiac Injury Panel 1
(Cat. No. RCI1MAG-87K)

Cardiac Troponin I (cTnI)	FABP3
Cardiac Troponin T (cTnT)	Follistatin-like Protein 1 (FSTL1)
Creatine Kinase Muscle (CKM)	Myosin Light Chain 3 (MYL3)
	TIMP-1

Rat Vascular Injury Panel 1
Serum/Plasma samples
(Cat. No. RV1MAG-26K)

Caveolin-1	PAI-1 (total)
GROα/KC/CINC-1 /CXCL1	TIMP-1
Connective Tissue Growth Factor (CTGF)	TNFα
IL-6	VEGF-A
MCP-1/CCL2	

Rat Vascular Injury Panel 2
Serum/Plasma samples
(Cat. No. RV2MAG-26K)

Adiponectin	von Willebrand Factor (vWF)
sE-Selectin	
sICAM-1	

Cardiovascular, continued

Rat Vascular Injury Panel 3
Serum/Plasma samples
(Cat. No. RV3MAG-26K)

α-1-Acid Glycoprotein (AGP)	Fibrinogen Δ
α-2-Macroglobulin (A2M)	Haptoglobin

Bone Metabolism

Rat Bone Panel 1
Serum/Plasma samples
(Cat. No. RBN1MAG-31K)

ACTH	Osteocalcin (OC)
DKK1	Osteoprotegerin (OPG)
FGF-23	PTH
Insulin	Sclerostin (SOST)
Leptin	

Rat Bone Panel 2
Cell culture samples
(Cat. No. RBN2MAG-31K)

ACTH	Osteopontin (OPN)
DKK-1	Osteoprotegerin (OPG)
FGF-23	PTH
Insulin	Sclerostin (SOST)
Leptin	
Osteocalcin (OC)	

Rat RANKL - Single Plex
(Cat. No. RRNKLMAG-31K-01)

RANKL

Neuroscience

Rat Neuropeptide
(Cat. No. RMNPMAG-83K) ■

α-MSH	Orexin A
β-Endorphin	Oxytocin
Neurotensin	Substance P

Toxicity

Rat Kidney Toxicity Panel 1
Urine samples
(Cat. No. RKTX1MAG-37K)

Calbindin	KIM-1
Clusterin	Osteopontin (OPN)
GSTα	TIMP-1
IP-10/CXCL10	VEGF-A

Rat Kidney Toxicity Panel 2
Urine samples
(Cat. No. RKTX2MAG-37K)

α-1-Acid Glycoprotein (AGP)	Cystatin C
Albumin	EGF
β-2-Microglobulin	NGAL/Lipocalin-2

Rat Liver Injury
(Cat. No. RLI1MAG-92K)

ARG1	5'NT/CD73
GOT1	SDH
GSTα	

Immunology

Canine Cytokine / Chemokine
(Cat. No. CCYTOMAG-90K)
(Cat. No. CCYTMG-90K-PX13) 13
(Bulk Cat. No. CCYTMAG90KPX13BK) 13

GM-CSF	IL-15
IFNγ	IL-18
IL-2	IP-10/CXCL10
IL-6	KC-like
IL-7	MCP-1/CCL2
IL-8/CXCL8	TNFα
IL-10	

Metabolism / Endocrinology

Canine Gut Hormone
(Cat. No. CGTMAG-98K)

Amylin (total)	Insulin
Ghrelin (active) %	Leptin
GIP (total)	Pancreatic Polypeptide (PP)
GLP-1 (active)	PYY (total)
Glucagon	

Canine Pituitary
(Cat. No. CPTMAG-96K)

ACTH	LH
BDNF	Prolactin
FSH	TSH
GH	

Toxicity

Canine Kidney Toxicity Expanded Panel 1
Urine samples
(Cat. No. CKT1MAG-97K)

Clusterin	NGAL/Lipocalin-2
Cystatin C	MCP-1/CCL2
KIM-1	Osteopontin (OPN)
IL-8/CXCL8	

Canine Kidney Toxicity Panel 2
Urine samples
(Cat. No. CKT2MAG-97K)

Albumin	RBP4
β-2-Microglobulin	TFF3

Immunology

Feline Cytokine / Chemokine
(Cat. No. FCYTOMAG-20K)
(Cat. No. FCYTMAG-20K-PMX) 19
(Bulk Cat. No. FCYTMAG20KPX19BK) 19

sFas	IL-13
Flt3 Ligand	IL-18
GM-CSF	GRO/KC
IFNγ	MCP-1/CCL2
IL-1β	PDGF-BB
IL-2	RANTES/CCL5
IL-4	SCF
IL-6	SDF-1/CXCL12
IL-8/CXCL8	TNFα
IL-12 (p40)	

Metabolism / Endocrinology

Feline Metabolic Hormone
(Cat. No. FMHMAG-29K)

Amylin (active)	Insulin
Ghrelin (active) %	Leptin
GIP (total)	Pancreatic Polypeptide (PP)
GLP-1 (active)	PYY (total)
Glucagon	

Immunology

Porcine Cytokine / Chemokine
(Cat. No. PCYTMAG-23K)
(Cat. No. PCYTMG-23K-13PX) 13
(Bulk Cat. No. PCYTMAG23PMX13BK) 13

GM-CSF	IL-6
IFNγ	IL-8/CXCL8
IL-1α	IL-10
IL-1Ra	IL-12
IL-1β	IL-18
IL-2	TNFα
IL-4	

Immunology

Equine Cytokine/Chemokine Panel NEW!
(Cat. No. EQCYTMAG-93K)
(Cat. No. EQCYTMG-93KPX23)
(Cat. No. EQCTMG93KPX23BK)

Eotaxin/CCL11	IL-6
FGF-2/FGF-basic	IL-8/CXCL8
Fractalkine/CX3CL1	IL-10
G-CSF	IL-12 (p70)
GM-CSF	IL-13
GRO	IL-17A/CTLA8
IFNγ	IL-18
IL-1α	IP-10/CXCL10
IL-1β	MCP-1/CCL22
IL-2	RANTES/CCL5
IL-4	TNFα
IL-5	

Immunology

Multi-species TGFβ - Single Plex
(Cat. No. TGFBMAG-64K-01)
(Bulk Cat. No. TGFBMAG-64K-01BK)

TGFβ1

Multi-species TGFβ - 3 Plex ▼
(Cat. No. TGFBMAG-64K-03)

TGFβ1	TGFβ3
TGFβ2	

Metabolism / Endocrinology

Multi-species Steroid/Thyroid Hormone
(Cat. No. STTHMAG-21K)

Cortisol	T3
Estradiol	T4
Progesterone	

Intracellular Multiplex Assays

Take a deeper dive into your research

New challenges, better data

Your research can take you from studying circulating to intracellular biomarkers or even both at the same time. This is where our MILLIPLEX® MAP intracellular multiplex panels and MAPmate™ single plex assays help. Multiplexing, using the Luminex® xMAP® platform, provides faster answers to your intracellular questions compared to traditional Western blots, mass spectrometry and radioactive phosphorylation assays that require large amounts of sample.

We proudly offer the widest range of analytes and techniques in our MILLIPLEX® MAP intracellular portfolios.

Cellular metabolism multiplex assays

- Quickly measure levels of multiple proteins within a metabolic pathway simultaneously
- Compare protein levels with results from activity assays
- Acquire a deeper understanding of intracellular pathways regulating energy production, mitochondrial dysfunction and toxicity, metabolic and neurological disorders, cancer and aging

Cell signaling phosphoprotein + total 2-plex assays

- Directly compare the total vs. phosphoprotein levels in your assay by reading them in the same well
- **All the 2-Plex assays (exceptions noted) can be combined with each other to study multiple total and phosphorylated proteins in the same well**

Cell signaling phosphoprotein & total multiplex assays

- Measure multiple total or phosphoproteins simultaneously in a single sample
- Acquire a deeper understanding of intracellular pathways involved in both homeostasis and disease states that include:
  - Immune response
  - Cardiovascular and metabolic health and disease
  - Neurological disorders and cancer

MAPmate™ phosphoprotein & total single plex kits

- Plex up to 8 individual MAPmate™ kits to design your own custom assays using our Cell Signaling Buffer and Detection Kit*
- Plex additional MAPmate™ kits into existing MILLIPLEX® MAP Cell Signaling kits*
- Use β-tubulin or GAPDH as housekeeping/loading controls by plexing into an existing MILLIPLEX® MAP Cell Signaling kit*

*Refer to the guidelines provided in the protocols. Buffer compatibility information is available in this publication.

Cellular Metabolism Assays

Human Glycolysis Pathway
(Cat. No. HGPMAG-27K)

Enolase 1 (ENO1)
Glucose-6-Phosphate Isomerase (G7PI)
HIF-1α
Lactate Dehydrogenase A (LDA)
Lactate Dehydrogenase B (LDB)
Pyruvate Kinase Isozyme M2 (PKM2)
Transketolase

Human Oxidative Phosphorylation
(Cat. No. HØXPSMAG-16K) ▼

Complex I (NADH-Ubiquione Oxidoreductase)
Complex II (Succinate Ubiquinone Oxidoreductase)
Complex III (Ubiquione Cytochrome C Oxidoreductase)
Complex IV (Cytochrome C Oxidase)
Complex V (ATP Synthase)
NNT (Nicotinamide Nucleotide Transhydrogenase)

Rat / Mouse Oxidative Phosphorylation
(Cat. No. RMØXPSMAG-17K) ▼

Complex I (NADH-Ubiquinone Oxidoreductase)
Complex III (Ubiquinone Cytochrome C Oxidoreductase)
Complex V (ATP Synthase)

Human Oxidative Stress
(Cat. No. HØXSTMAG-18K) ▼

Catalase
Peroxiredoxin 2 (PRX2/PRDX2)
Superoxide dismutase 1 (SOD1)
Superoxide dismutase 2 (SOD2)
Thioredoxin (TRX1)

Multi-species Pyruvate Dehydrogenase (PDH) Complex
(Cat. No. PDHMAG-13K) ▼

Analyte	Total	Phosphorylated
PDH	✓	
PDH		✓ (Ser232)
PDH		✓ (Ser293)
PDH		✓ (Ser300)

Can be plexed with other 2 Plexes
◊ Cannot plex with other phospho Akt
▼ Premix panel only
AB1: Uses Assay Buffer 1
AB2: Uses Assay Buffer 2
● Recommended
● Acceptable
○ Not Recommended
H Human
M Mouse
R Rat

Cell Signaling Phosphoprotein + Total 2 Plex Assays

Akt1 Phospho/Total - 2 Plex
(Coming Soon) AB2 ▼ ◊

Analyte	Total	Phosphorylated	
Akt1		(Ser473)	H, M, R
Akt1	✓		H, M, R

Akt2 Phospho/Total - 2 Plex
(Coming Soon) AB2 ▼ ◊

Analyte	Total	Phosphorylated	
Akt2		(Ser473)	H, M, R
Akt2	✓		H, M, R

Akt3 Phospho/Total - 2 Plex
(Coming Soon) AB2 ▼ ◊

Analyte	Total	Phosphorylated	
Akt3		(Ser473)	H, M, R
Akt3	✓		H, M, R

Akt Phospho/Total – 2 Plex
(Cat. No. 48-618MAG) AB2 ▼ ◊

Analyte	Total	Phosphorylated	
Akt/PKB		✓ (Ser473)	H, M, R
Akt/PKB	✓		H, M, R

CREB Phospho/Total – 2 Plex
(Cat. No. 48-628MAG) AB2 ▼

Analyte	Total	Phosphorylated	
CREB		✓ (Ser133)	H, M, R
CREB	✓		H, M, R

Erk/MAPK 1/2 Phospho/Total – 2 Plex
(Cat. No. 48-619MAG) AB2 ▼

Analyte	Total	Phosphorylated	
Erk/MAPK 1/2		✓ (Thr185/Tyr187)	H, M, R
Erk/MAPK 1/2	✓		H, M, R

IRS1 Phospho/Total – 2 Plex
(Cat. No. 48-626MAG) AB2 ▼

Analyte	Total	Phosphorylated	
IRS1		✓ (Ser636)	H, M
IRS1	✓		H, M, R

JNK Phospho/Total – 2 Plex
(Cat. No. 48-622MAG) AB2 ▼

Analyte	Total	Phosphorylated	
JNK/SAPK1		✓ (Thr183/Tyr185)	H, M, R
JNK/SAPK1	✓		H, M, R

mTOR Phospho/Total – 2 Plex
(Cat. No. 48-625MAG) AB2 ▼

Analyte	Total	Phosphorylated	
mTOR		✓ (Ser2448)	H, M, R
mTOR	✓		H, M

p38 Phospho/Total – 2 Plex
(Cat. No. 48-624MAG) AB1 or AB2

Analyte	Total	Phosphorylated	
p38/SAPK2A/B		✓ (Thr180/Tyr182)	H, M, R
p38/SAPK2A/B	✓		H, M, R

STAT3 Phospho/Total – 2 Plex
(Cat. No. 48-623MAG) AB2 ▼

Analyte	Total	Phosphorylated	
STAT3		✓ (Tyr705)	H, M, R
STAT3	✓		H, M, R

Cell Signaling

Akt / mTOR (Phosphoprotein) – 11 Plex
(Cat. No. 48-611MAG) AB2 ▼

Analyte	Total	Phosphorylated	
Akt/PKB		✓ (Ser473)	H, M, R
GSK3α		✓ (Ser21)	H, M, R
GSK3β		✓ (Ser9)	H, M, R
IGF1R		✓ (Tyr1135/1136)	H, M
IR		✓ (Tyr1162/1163)	H
IRS1		✓ (Ser636)	H, R
mTOR		✓ (Ser2448)	H, M
p70S6 Kinase		✓ (Thr389/412)	H, M, R
PTEN		✓ (Ser380)	H, M, R
RPS6		✓ (Ser235/236)	H, M, R
TSC2		✓ (Ser939)	H, M, R

Akt / mTOR (Total) – 11 Plex
(Cat. No. 48-612MAG) AB2 ▼

Analyte	Total	Phosphorylated	
Akt/PKB	✓		H, M, R
GSK3α	✓		H, M, R
GSK3β	✓		H, M, R
IGF1R	✓		H, M, R
IR	✓		H, R
IRS1	✓		H, M, R
mTOR	✓		H, M, R
p70S6 Kinase	✓		H, M, R
PTEN	✓		H, M, R
RPS6	✓		H, M, R
TSC2	✓		H, M, R

Early Apoptosis – 7 Plex
(Cat. No. 48-669MAG) AB2 ▼

Analyte	Total	Phosphorylated	
Akt/PKB		✓ (Ser473)	H, M, R
BAD		✓ (Ser112)	H
Bcl-2		✓ (Ser70)	H
Active Caspase 8	✓		H
Active Caspase 9	✓		H
JNK/SAPK1		✓ (Thr183/Tyr185)	H, M, R
p53		✓ (Ser46)	H

Human Late Apoptosis – 3 Plex
(Cat. No. 48-670MAG) AB1 ▼

Analyte	Total	Phosphorylated	
Active Caspase 3	✓		H, M
Cleaved PARP	✓		H
GAPDH	✓		H

Human DNA Damage / Genotoxicity – 7 Plex
(Cat. No. 48-621MAG) AB1 ▼

Analyte	Total	Phosphorylated
ATR	✓	
Chk1		✓ (Ser345)
Chk2		✓ (Thr68)
H2A.X		✓ (Ser139)
MDM2	✓	
p21	✓	
p53		✓ (Ser15)

Human Heat Shock Protein – 5 Plex
(Cat. No. 48-615MAG) AB1 ▼

Analyte	Total	Phosphorylated
HSP27	✓	
HSP27		✓ (Ser78/Ser82)
HSP60	✓	
HSP70	✓	
HSP90α	✓	

MAPK / SAPK (Phosphoprotein) – 10 Plex
(Cat. No. 48-660MAG) AB2 ▼

Analyte	Total	Phosphorylated	
ATF2		✓ (Thr71)	H, M
ErK/MAPK 1/2		✓ (Thr185/Tyr187)	H, M, R
HSP27		✓ (Ser78)	H, M, R
JNK/SAPK1		✓ (Thr183/Tyr185)	H, M, R
c-Jun		✓ (Ser73)	H
MEK1		✓ (Ser222)	H, M, R
MSK1		✓ (Ser212)	H, M, R
p38/SAPK2A/B		✓ (Thr180/Tyr182)	H
p53		✓ (Ser15)	H
STAT1		✓ (Tyr701)	H, M

Human Mitogenesis RTK (Phosphoprotein) – 7 Plex
(Cat. No. 48-672MAG) AB1 ▼

Analyte	Total	Phosphorylated
c-Met/HGFR		✓ (pan Tyr)
EGFR		✓ (pan Tyr)
ErbB2/HER2		✓ (pan Tyr)
ErbB3		✓ (pan Tyr)
ErbB4		✓ (pan Tyr)
IGF1R		✓ (pan Tyr)
IR		✓ (pan Tyr)

Cell Signaling, continued

Human Mitogenesis RTK (Total) – 7 Plex

(Cat. No. 48-671MAG) AB1 ▼

Analyte	Total	Phosphorylated
c-Met/HGFR	✓	
EGFR	✓	
ErbB2/HER2	✓	
ErbB3	✓	
ErbB4	✓	
IGF1R	✓	
IR	✓	

Multi-Pathway (Phosphoprotein) – 9 Plex

(Cat. No. 48-680MAG) AB2 ▼

Analyte	Total	Phosphorylated	
Akt/PKB		✓ (Ser473)	H, M, R
CREB		✓ (Ser133)	H, M, R
Erk/MAPK 1/2		✓ (Thr185/Tyr187)	H, M, R
NFκB		✓ (Ser536)	H
JNK/SAPK1		✓ (Thr183/Tyr185)	H, M, R
p38/SAPK2A/B		✓ (Thr180/Tyr182)	H, M, R
p70S6 Kinase		✓ (Thr389/412)	H, M, R
STAT3		✓ (Ser727)	H, M, R
STAT5A/B		✓ (Tyr694/699)	H, M, R

Multi-Pathway (Total) – 9 Plex

(Cat. No. 48-681MAG) AB2

Analyte	Total	Phosphorylated	
Akt/PLB	✓		H, M, R
CREB	✓		H, M, R
Erk/MAPK 1/2	✓		H, M, R
NFκB	✓		H, M, R
JNK/SAPK1	✓		H, M, R
p38/SAPK2A/B	✓		H, M, R
p70S6 Kinase	✓		H, M, R
STAT3	✓		H, M, R
STAT5A/B			H, M, R

NFκB – 6 Plex

(Cat. No. 48-630MAG) AB1 ▼

Analyte	Total	Phosphorylated	
c-Myc	✓		H
FADD		✓ (Ser194)	H
IκBα		✓ (Ser32)	H
IKKα/β		✓ (Ser177/Ser181)	H
NFκB		✓ (Ser536)	H, M
TNFRI	✓		H

Src Family Kinase Active Site (Phosphoprotein) – 8 Plex

(Cat. No. 48-650MAG) AB2 ▼

Analyte	Total	Phosphorylated	
Blk		✓ (Tyr389)	H, M, R
Fgr		✓ (Tyr412)	H, M, R
Fyn		✓ (Tyr420)	H, M, R
Hck		✓ (Tyr411)	H, M, R
Lck		✓ (Tyr394)	H, R
Lyn		✓ (Tyr397)	H, R
Src		✓ (Tyr419)	H
Yes		✓ (Tyr421)	H, M

STAT (Phosphoprotein) – 5 Plex

(Cat. No. 48-610MAG) AB2 ▼

Analyte	Total	Phosphorylated	
STAT1		✓ (Tyr701)	H, M
STAT2		✓ (Tyr690)	H
STAT3		✓ (Tyr705)	H, M, R
STAT5A/B		✓ (Tyr694/699)	H, M, R
STAT6		✓ (Tyr641)	H

T-Cell Receptor (Phosphoprotein) – 7 Plex

(Cat. No. 48-690MAG) AB2 ▼

Analyte	Total	Phosphorylated	
CD3ε		✓ (pan Tyr)	H
CREB		✓ (Ser133)	H, M, R
Erk/MAPK 1/2		✓ (Thr185/Tyr187)	H, M, R
LAT		✓ (pan Tyr)	H
Lck		✓ (pan Tyr)	H, M, R
Syk		✓ (pan Tyr)	H
ZAP-70		✓ (pan Tyr)	H

TGFβ - 6 Plex

(Cat. No. 48-614MAG) AB2 ▼

Analyte	Total	Phosphorylated	
Akt/PKB		✓ (Ser473)	H
Erk/MAPK 1/2		✓ (Thr185/Tyr187)	H, M, R
SMAD2		✓ (Ser465/467)	H, M, R
SMAD3		✓ (Ser423/425)	H, M, R
SMAD4	✓		H, M, R
TGFβRII	✓		H

Cell Signaling, continued

Human RTK (Phosphoprotein)
(Choose Analytes that Meet your Needs)

Coming Soon

Analyte	Total	Phosphorylated
c-Kit		(pan Tyr)
c-Met/HGFR		(pan Tyr)
EGFR		(pan Tyr)
ErbB2/HER2		(pan Tyr)
ErbB3/HER3		(pan Tyr)
ErbB4/HER4		(pan Tyr)
FGFR1		(pan Tyr)
Flt3		(pan Tyr)
IGF1R		(pan Tyr)
IR		(pan Tyr)
MSCFR		(pan Tyr)
PDGFRα		(pan Tyr)
PDGFRβ		(pan Tyr)
TIE1		(pan Tyr)
TIE2		(pan Tyr)
VEGFR1/Flt-1		(pan Tyr)
VEGFR2/KDR/Flk-1		(pan Tyr)
VEGFR3/Flt-4		(pan Tyr)

MAPmate™ Phosphoprotein & Total Single Plex Kits

Plex up to 8 individual MAPmate™ assays together using our Cell Signaling Buffer and Detection Kit or include them in existing MILLIPLEX® MAP Cell Signaling Panels to enhance the panel or serve as controls within the guidelines provided in the protocols.

Important MAPmate™ rules

Consult the protocol prior to use.

- All magnetic MAPmate™ assays require the Cell Signaling Buffer & Detection Kit **(48-602MAG)**.
  This kit contains all necessary reagents except the MAPmate™ assay. Both a filter and flat bottom plate are included for convenience
- To select the appropriate buffer for your MAPmate™ assays, please refer to the protocols, this publication or the buffer selection tables on the website

The following MAPmate™ assays should not be plexed together:

- MAPmate™ assays that require different assay buffers
- Phospho-specific and total MAPmate™ pairs, e.g. total GSK3β and phospho-GSK3β (Ser9)
- Pan Tyr and site-specific MAPmate™ assays, e.g. phospho-EGF Receptor (pan Tyr) and phospho-STAT1 (Tyr701)
- More than 1 phospho-MAPmate™ assay for a single target, e.g. pAkt, pSTAT3
- GAPDH and β-Tubulin assays cannot be plexed with kits or MAPmate™ assays containing pan Tyr assays

Magnetic Bead MAPmate™ kits	Cat. No.	Species Homology	AB1	AB2
β-Tubulin (Total)	46-713MAG	H,M,R	●	●
GAPDH (Total)	46-667MAG	H	○	●
Akt/PKB (assay buffer 2) (Ser473)	46-677MAG	H,M,R	●	●
Akt/PKB (assay buffer 2) (Total)	46-675MAG	H,M,R	●	●
BAD (Ser112)	46-694MAG	H,M	●	●
Caspase 3 (Active)	46-604MAG	H,M	●	●
c-Jun (Ser73)	46-622MAG	H,M,R	●	●
c-Kit (total)	46-620MAG	H	●	●
c-Met/HGFR (total)	46-650MAG	H	●	●

Cell Signaling, continued

Magnetic Bead MAPmate™ kits	Cat. No.	Species Homology	AB1	AB2
CREB (Ser133)	46-631MAG	H,M,R	●	●
CREB (Total)	46-632MAG	H,M,R	●	●
EGF Receptor (Total)	46-606MAG	H	●	●
ERK/MAPK 1/2 (Thr185/Tyr187)	46-602MAG	H,M,R	○	●
ERK/MAPK 1/2 (Total)	46-609MAG	H,M,R	●	●
GSK3β (Ser9)	46-690MAG	H,M,R	●	●
GSK3β (Total)	46-689MAG	H,M,R	●	●
H2A.X (Ser139)	46-692MAG	H,M	●	●
HSP27 (Ser78)	46-607MAG	H	●	●
HSP27 (Total)	46-608MAG	H	●	●
IκBα (Ser32)	46-643MAG	H	●	●
IκBα (Total)	46-644MAG	H	●	●
JNK/SAPK1 (Thr183/Tyr185)	46-613MAG	H,M	●	●
JNK/SAPK1 (Total)	46-618MAG	H,M	○	●
MEK1 (Ser222)	46-670MAG	H,M,R	●	●
MEK1 (Total)	46-669MAG	H,M	●	●
mTOR (Ser2448)	46-686MAG	H,M,R	●	●
mTOR (Total)	46-685MAG	H,M,R	●	●
NFκB (Ser536)	46-702MAG	H	●	●
NFκB (Total)	46-701MAG	H	●	●
p21 (Total)	46-621MAG	H	●	●
p38/SAPK2A/B (Thr180/Tyr182)	46-610MAG	H,M,R	○	●
p38/SAPK2A/B (Total)	46-612MAG	H,M,R	○	●
p53 (Ser15)	46-663MAG	H	●	●
p53 (Total)	46-662MAG	H	●	●
p70S6K (Thr389/412)	46-629MAG	H,M,R	●	●
p70S6K (Total)	46-630MAG	H,M,R	●	●
Cleaved PARP (Total)	46-656MAG	H	●	●
PTEN (Total)	46-678MAG	H,M,R	●	●
RPS6 (Ser235/Ser236)	46-714MAG	H,M,R	●	●
RPS6 (Total)	46-715MAG	H,M,R	●	●
Src (Tyr419)	46-710MAG	H,M,R	●	●
STAT1 (Tyr701)	46-655MAG	H,M	●	●
STAT1 (Total)	46-654MAG	H,M	●	●
STAT3 (Ser727)	46-624MAG	H,M,R	●	●
STAT3 (Tyr705)	46-623MAG	H,M,R	●	●
STAT3 (Total)	46-625MAG	H,M,R	●	●
STAT5A/B (Tyr694/Tyr699)	46-641MAG	H,M,R	●	●

Cell Signaling, continued

Lysates

Lysate Description	Cat. No.
A431: EGF	47-210
A549: Camptothecin	47-218
Daudi: IL-4	47-217
HEK293: Serum	47-233
HeLa: IFNα	47-226
HeLa: Lambda Phosphatase	47-229
HeLa: TNFα+CalA	47-230
HeLa: Unstim	47-205
HeLa:HS/Ars	47-211
HepG2: DCA	47-232
HepG2: Insulin	47-227
HepG2: TGFβ	47-235
HepG2: Unstim (1)	47-231
HepG2: Unstim(2)	47-234

Lysate Description	Cat. No.
HepG2: Unstim(3)	47-239
HL-60: PVD	47-225
HUVEC: Serum	47-238
Jurkat: Anisomycin	47-207
Jurkat: H_2O_2	47-208
Jurkat: Paclitaxel	47-220
Jurkat: Unstim	47-206
MCF7: IGF-1	47-216
MCF-7: Unstim	47-242
NIH3T3: Anisomycin	47-219
NTERA-2: Unstim	47-241
Ramos: PVD	47-224
Rat Heart Lysate	50-100

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- Assay development
- Manufacturing (commercial kits for research use only)
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Bring your biomarkers to life with Luminex® systems and MILLIPLEX® Analyst 5.1 software that drive assay consistency

Balance your assay variability with Merck Millipore's Luminex® instrument solutions. Combined with the largest portfolio of multiplex analytes available, we provide you the maximum power of Luminex® xMAP® technology, the trusted, widely used platform for biomarker screening and protein analysis. As a Luminex® partner, Merck Millipore is a preferred distributor of Luminex® instruments, accessories and software. Our ongoing dedication and industry leading experience with multiplex technology enable you to gain more information faster and reliably

xMAP® technology offers many advantages compared with other immunoassay methods:

- **Accuracy**: xMAP® technology generates real-time analysis and accurate quantification of antibody-antigen interactions
- **Low sample volume**: With minimal hands-on time, you can screen more than 40 analytes in a single sample using as little as 25 µL
- **Magnetic bead–based format**: Responds rapidly and efficiently to a magnetic field, enabling better and faster washing techniques, including high-throughput options
- **Reproducibility**: High-volume production of xMAP® microspheres allows assay standardization that solid-phased flat arrays cannot provide
- **Speed/High throughput**: Simultaneously measure the concentration of a large number of different analytes in a single sample, enabling you to do your work faster, gaining early and comprehensive data so critical to your work

Luminex® Instruments for xMAP® Technology

Complete instrument solutions combined with the largest portfolio of multiplex analytes, MILLIPLEX® Analyst 5.1 software and technical support give you the maximum power of Luminex® xMAP® technology for biomarker screening and protein analysis. As a Luminex® partner, Merck Millipore is a preferred distributor of Luminex® instruments, accessories and software.

MAGPIX® System

(Cat. No. 40-072 - MAGPIX®)

- **Low-cost** – Small footprint, low energy system to measure up to 50 analytes in as little as 25 µL
- **Powerful** - More than 120 (and growing) MILLIPLEX® MAP magnetic bead kits – the largest offering of customizable magnetic bead assay panels for the MAGPIX® instrument
- **Easy to use** - Magnetic bead detection using CCD imaging
- **Small and portable** – Saves room on your bench, requiring only 3 ft (91 cm) of space and only minimal setup

Luminex 200™ System

(Cat No. 40-012- MILLIPLEX® Analyzer)

- **Flexible** – Run both magnetic and non-magnetic bead assays
- **Multiplex** – Up to 100 analytes per well of a 96-well plate in as little as 25 µL of sample
- **Easy to use** – User-friendly programming
- **Scalable** – Bar code reader included

FLEXMAP 3D® System

(Cat. No. 40-014 - FLEXMAP 3D®)

- **Highest multiplexing** - Each bead contains different concentrations of a combination of dyes. Monitoring the three signals enables discrimination of up to 500 different bead sets
- **Ultra-fast** - Quantify 48,000 analytes in under one hour. Dual sample fluidics paths and increased syringe injection speed facilitate faster sample injection
- **96- and 384-well capability** - Greater sample volume flexibility and increased throughput
- **Automation/LIS compatibility** - New xPONENT® 4.0 Software controls the system and offers interfacing options for Laboratory Information Systems (LIS) and automation

Choose the Multiplex Instrument that's right for you!

Specifications

Instrument	FLEXMAP 3D® System	Luminex 100/200™ System	MAGPIX® System
Software	xPONENT® 4.2	xPONENT® 3.1	xPONENT® 4.2
Optic	Lasers/ APDs/ PMTs	Lasers/ APDs/ PMTs	LED/ CCD Camera
Hardware	Flow Cytometry-based	Flow Cytometry-based	Fluorescent Imager
Bead Compatibility	Magnetic and nonmagnetic	Magnetic and nonmagnetic	Magnetic
Multiplex Capacity	500 (80 for MagPlex®)	100 (80 for MagPlex®)	50
Read Time	~20 min/96-well plate	~40 min/96-well plate	~60 min/96-well plate
Applications	Protein/ Nucleic Acid	Protein/ Nucleic Acid	Protein/ Nucleic Acid
Dynamic Range	4.5 logs	3.5 logs	3.5 logs
Microtiter Plate	96-well & 384-well	96-well	96-well
Footprint including PC (linear bench space)	64.8 cm (24")	80.0 cm (32")	64.8 cm (24")
Weight (Analyzer)	77.1 kg (170 lbs)	49 kg (113 lbs)	17.5 kg (38.5 lbs)

Luminex System 1 Year Warranty Plans	Cat. No.	Unlimited Remote Support	Unlimited Emergency Repair	1 (PM)	2 (PM)
FLEXMAP 3D®, Silver	SVCLUMSLVFM3D	●	○	●	
FLEXMAP 3D®, Bronze	SVCLUMBRZFM3D	●			
FLEXMAP 3D®, Gold	SVCLUMGLDFM3D	●	○	●	
FLEXMAP 3D®, Gold 360*	SVCLUMGLD360FM3D	●	○	●	●
FLEXMAP 3D®, Platinum	SVCLUMPLTFM3D	●	●		●
FLEXMAP 3D®, Platinum 360*	SVCLUMPLT360FM3D	●	●		●
Luminex 200™, Bronze	SVCLUMBRZ	●			
Luminex 200™, Silver	SVCLUMSLV	●	○	●	
Luminex 200™, Gold	SVCLUMGLD	●	○	●	
Luminex 200™, Gold 360*	SVCLUMGLD360	●	○	●	
Luminex 200™, Platinum	SVCLUMPLT	●	●		●
Luminex 200™, Platinum 360*	SVCLUMPLT360	●	●		●
MAGPIX®, Standard	SVCLUMGLDMAGPIX	●	○		
MAGPIX®, Gold	SVCMAGPIXGOLDPM	●	○	●	
MAGPIX®, Platinum	SVCMAGPIXPLATPM	●	●		●

Luminex® Systems Installation Qualification (IQ) and Operational Qualification (OQ)

IQ/OQ Protocol	Protocol No.
FLEXMAP 3D® for xPONENT® 4.2 platform	VP-FM3D-4.2
Luminex 200™ xPONENT® 3.1 platform	VP-LX200-3.1
MAGPIX® xPONENT® 4.2 platform	VP-MAGPIX-4.2
Field Service**	92-00040-00-001

● Onsite 1-business day response
○ Onsite 2-business day response

1 (PM) = includes 1 preventive maintenance
2 (PM) = includes 2 preventive maintenances

* 360 service includes on-site support for assays developed by Luminex only (for MILLIPLEX MPX assay support see TRONSITE).

** Optional for Luminex 200™ and required for FLEXMAP 3D®

Key Maintenance Kits for Luminex Systems

All Luminex® instruments using the xMAP® technology, operating on xPONENT® software, require regular calibration and performance verification testing to ensure that the system is operating correctly and maintaining data accuracy.

Additionally, the MAGPIX® instrument requires drive fluid and the Luminex 100/200™ and FLEXMAP 3D® systems require sheath fluid to serve as the delivery medium to transport the sample to the instrument's optics.

Description	Pack Size	Cat. No.
MAGPIX® Drive Fluid	4 pack, 750 mL ea	MPXDF-4PK
Sheath Fluid for Luminex 100/200™ & FLEXMAP 3D® Systems	20 L	SHEATHFLUID
MAGPIX® Calibration Kit	25 uses	40-049
MAGPIX® Performance Verification Kit	25 uses	40-050
Luminex 200™ Calibration Kit (xPONENT®)	25 uses	40-275
Luminex 200™ Performance Verification Kit (xPONENT®)	25 uses	40-276
FLEXMAP 3D® Calibration Kit	25 uses	40-028
FLEXMAP 3D® Performance Verification Kit	25 uses	40-029

(Cat. No. 40-276)

(Cat. No. MPXDF-4PK)

(Cat. No. 40-049)

MILLIPLEX® Analyst 5.1 and Luminex® xPONENT® Software

Get the most advanced curve fitting algorithm, based on self-learning improvements using real-life data sets

Analyzing data from multiplexed biomarker assays can be difficult when working with diverse sample and analyte types. This diversity can lead to a wide range of possible analyte levels and assay signal intensity with respect to those analyte levels, neither of which are always easy to predict or determine accurately. MILLIPLEX® Analyst 5.1 software was designed to generate the most meaningful quantitative analyte data with a focus on data derived from the low and high ends of standard curves. Data in these regions can be important and are commonly missed by existing multiplex data analysis packages.

In developing the new curve fitting algorithms for MILLIPLEX® Analyst® 5.1, simulations were run on 600+ data sets using actual experimental standard curves to determine the curve fit that would give the lowest CVs at the low and high ends of the curves and that works well even with standard curves of low quality.

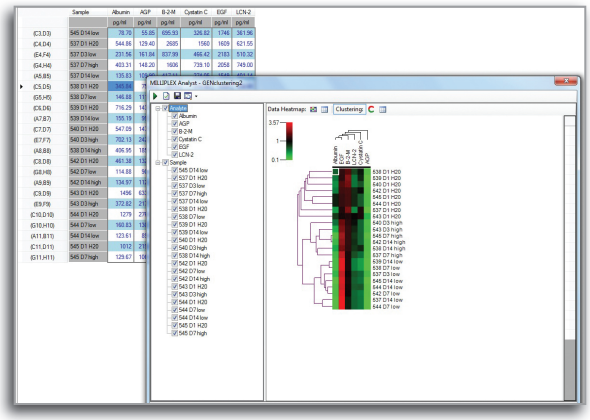
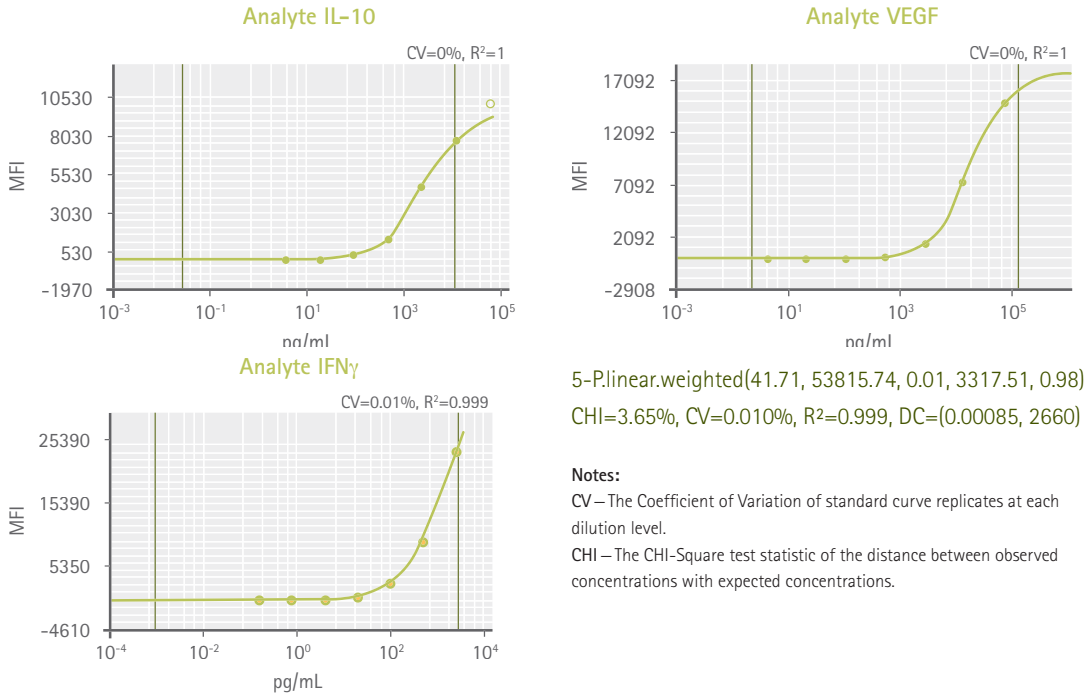


Figure 5. Hierarchical cluster (based on Pearson correlation coefficients) generated by MILLIPLEX® Analyst 5.1 software.

Description	Cat. No.
MILLIPLEX® Analyst 5.1 Software – 1 seat license	40-086
MILLIPLEX® Analyst 5.1 Software – 5 seat license	40-087
MILLIPLEX® Analyst 5.1 Software Database Edition - 1 seat license	40-088
MILLIPLEX® Analyst 5.1 Software Database Edition - 5 seat license	40-089

MILLIPLEX® Analyst 5.1 detailed report

Easily export complete multiplex data for use in presentations and record keeping.



5-P.linear.weighted(41.71, 53815.74, 0.01, 3317.51, 0.98)
CHI=3.65%, CV=0.010%, R²=0.999, DC=(0.00085, 2660)

Notes:
CV – The Coefficient of Variation of standard curve replicates at each dilution level.
CHI – The CHI-Square test statistic of the distance between observed concentrations with expected concentrations.

Figure 6. Detailed reports generated by MILLIPLEX® Analyst 5.1 software.

Location	Expected pg/mL(i)	MFI(i)	pg/mL(i)	MFI	pg/mL	CV	Recovery
1C1	0.13	45	0.09	46.5	0.13	4.56%	100.37%
1D1		48	0.17				
1E1	0.64	66	0.68	64.5	0.63	3.29%	99.08%
1F1		63	0.59				
1G1	3.2	164	3.48	153.25	3.17	9.92%	99.12%
1H1		142.5	2.86				
1A2	16	592	16.17	610.75	16.74	4.34%	104.6%
1B2		629.5	17.3				
1C2	80	2456	76.33	2578	80.51	6.67%	100.64%
1D2		2699	84.73				
1E2	400	9938	411.35	9154	367.15	12.11%	91.79%
1F2		8370	325.53				
1G2	2000	23685	2131	23298	2031	2.35%	101.53%
1H2		22912	1936				

Samples

Location	Sample	MFI(i)	pg/mL(i)	MFI	pg/mL	CV
1A3	QC1	1630	48.75	1599	47.72	2.81%
1B3		1567	46.69			
1C3	QC2	8054	309.44	8581	336.49	8.69%
1D3		9108	364.64			

MILLIPLEX® Analyst 5.1 software options

Curve
Calibration Curve
Fitting Model
Import from File
Predefined Curve
Individual Curve Fitting
Curve Quality Criterion Threshold
CV %
Hook %
Slope
Data Analysis
Background Subtraction
Neg-Ctrl Subtraction
Pos-Ctrl Analyte Global Normalization
Pos-Ctrl Analyte Normalization
Pos-Ctrl Sample Normalization
Outlier Threshold
Curve Fitting
Replicate Value
Output
Curves Info
Options Settings
Sample Details
General Info
Data Sort By
Default Report
Reportable Range
Data High Limit
Data High Limit Ignore
Data High Limit Label
Data Low Limit
Data Low Limit Ignore
Data Low Limit Label
High Bead CV (%)
Low Bead Count
Output X Unit
Output Y Unit
Individual Reportable Range
View
BarChart Error Box
BarChart Group By
BarChart with Units
Graphic Zero Baseline
List w/o Colors

Table 1.

Comprehensive multiplex data analysis options in MILLIPLEX® Analyst 5.1 software including curve fitting model, curve quality thresholds, multiple normalization methods and reportable range.

See for yourself how MILLIPLEX® Analyst 5.1 software can help with your multiplex data sets.

Download the risk-free trial version at: www.merckmillipore.com/mpx_demo

Washing solutions for MILLIPLEX® MAP Assays

In partnership with BioTek®, we now offer the latest advancements in multiplex washing: a fully automated system designed to quickly wash an entire plate through biomagnetic separation, washing and vacuum filtration. Both systems offer magnetic and vacuum filtration options—with the 405 TS model now offering an easy to use and glove usable touch screen. These newest BioTek® Washers come pre-loaded with Merck Millipore-validated wash protocols.

BioTek® Washer advantages:

- Fast and hands-free full plate washing
- MILLIPLEX® MAP and Luminex® xMAP®-approved
- High-energy neodymium iron boron magnets for rapid separation of multiplex beads with superior retention
- 405 TS models have state-of-the-art, high resolution LED backlit touch screen user interface for intuitive and flexible onboard instrument
- 405 TS models come with the built in Ultrasonic Advantage™ enabling for easy cleaning even with the toughest of sample types

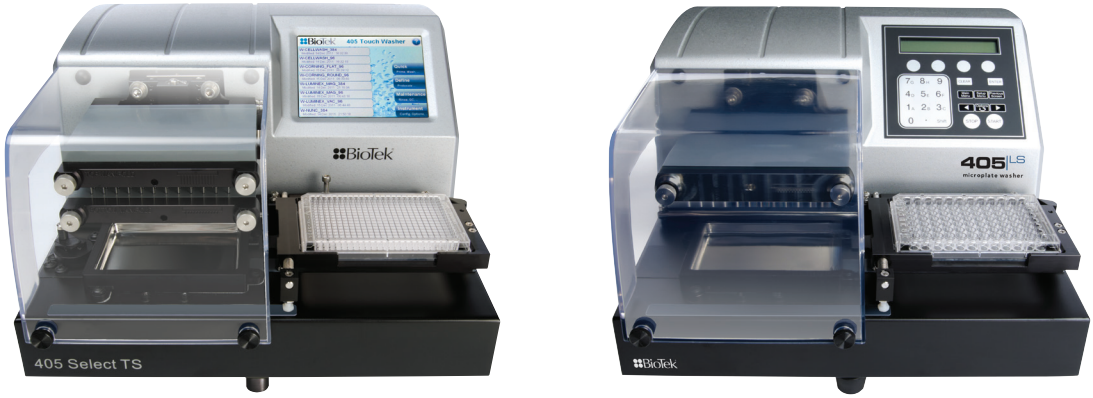


Figure 7. Biotek® plate washer model 405 LS (left) and models 40-094 and 40-095 (right).

Description	Cat. No.
BioTek® 405 LS Magnetic 96-well Washer	40-094
BioTek® 405 LS Magnetic/Vacuum Filtration 96-well Washer	40-095
BioTek® 405 TS Magnetic 96-well Washer Complete with Touch Screen and Ultrasonic Cleaning	40-096
BioTek® 405 TS Magnetic/Vacuum Filtration 96-well Washer Complete with Touch Screen and Ultrasonic Cleaning	40-097

BioTek® Magnetic 96-well Strip Washer — Hands-free washing with a small footprint

Better together: ELx50 washer with MILLIPLEX® MAP Magnetic Bead Assays

- Reduced hands-on time for multiplex assays
- Optimized magnet for strip wells and flat-bottom magnetic bead assay plates
- Self-contained, programmable washer enables precise fluidic delivery—ensuring complete control while washing multiplex assay plates

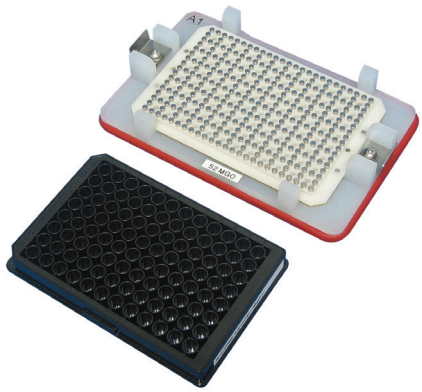
Description	Cat. No.
BioTek® ELx50 Magnetic 96-well Strip Washer	40-062

Figure 8. BioTek® Magnetic 96-well strip washer.

Handheld Magnetic Separator Block for 96-Well Flat Bottom or Conical Well Plates

Merck Millipore offers a low-cost alternative to automated washing of MILLIPLEX® MAP magnetic immunoassays without loss in assay performance. The handheld magnetic separator allows the liquid contents of the 96-well plate to be removed by simply decanting or "flicking" the contents into a sink and blotting off the remainder on a paper towel. Magnetic beads are securely held to the sides by 9 magnets surrounding each well.

- Top magnetic frame is white polycarbonate, with a corrosion-resistant steel plate underneath, all mounted to a polypropylene base
- Adjustable clip system holds a wide variety of microplates to the separator block
- O-Ring on base plate facilitates gripping for all sizes of hands
- Magnetic strength: 52 Mega Gauss Oersteds (MGO)



Description	Cat. No.
Handheld Magnetic Separator Block for 96-well Flat Bottom or Conical Well Plates	40-285

TRONSITE onsite training

As your partners in research, our highly qualified specialists will ensure you have all the tools you need. Our TRONSITE Onsite Training is now available for your team when you purchase a Luminex® instrument, MILLIPLEX® MAP kits, MILLIPLEX® Analyst 5.1 data analysis software and BioTek® microplate washer. Receive certification of training in the following categories:

Installation & Training: Instruments

- Installation and set-up of instrument and software on bench, ready for use
- Instruction on correct care and maintenance of instrument (daily, weekly, monthly and yearly)
- Set-up of protocols, batches, multi-batches and analysis thereof
- Assistance with pre-site evaluation form (FLEXMAP 3D® System)

Description	Cat. No.
FLEXMAP 3D® System Onsite Installation/Training	TRONSITE-FM3D
Luminex 200™ System Onsite Installation/Training	TRONSITE-LX200
MAGPIX® System Onsite Installation/Training	TRONSITEMAGPIX

Installation & Training: MILLIPLEX® MAP Kits

- Assistance in selecting appropriate kit for training or initial studies (prior to onsite training)
- Training on how to run a MILLIPLEX® MAP kit with pre-determined kit and samples
- Optimization of protocol techniques and data analysis
- Running kits using Luminex® instrument with xPONENT® software
- Analysis of raw data file using installed MILLIPLEX® Analyst 5.1 software (if purchased)
- Tips and tricks for optimizing sample collection and using a MILLIPLEX® MAP kit

Description	Cat. No.
MILLIPLEX® MAP Kits Onsite Installation/Training	TRONSITE-MPX

Installation & Training: MILLIPLEX® Analyst 5.1 Software

- Installation of software, licensing and correct use of single seat and multi-seat licenses
- Import of raw data files, analysis through protocol, plate-map and analysis parameters
- Report creation- Word, PDF and Excel® formats
- Demonstration of Standard Curve finding, heat-map and multi-curve comparison features

Description	Cat. No.
MILLIPLEX® Analyst 5.1 Software Onsite Installation/Training	TRONSITE-MA

Installation & Training: BioTek® Washer

- Set-up of unit on lab bench—can include magnetic plate and/or vacuum attachments
- Programming of unit for use with MILLIPLEX® MAP kits
- Testing of units for functionality and bead retention

Description	Cat. No.
BioTek® Washer Onsite Installation/ Training	TRONSITE-BIOTEK

Advanced customer training (ACT)

Hands-on training—available on site, or at one of Merck Millipore's global training centers

Whether the training is at your site or at one of Merck Millipore's world renowned global training facilities, we'll provide you with the training you need to become an expert at multiplex and related assays. Training typically lasts 1.5 days**. Plus, we offer the full line of Luminex® systems for your training (FLEXMAP 3D®, Luminex 200™ and MAGPIX® systems) and our complete line of BioTek® Plate Washers.

Customized training agenda includes:

- Technology and protocol discussions
- MILLIPLEX® assay set-up
- Equipment
- Precautions
- Data analysis and review
- Maintenance
- Troubleshooting

Web-based Training

Our web-based training is built around your needs and typically will not exceed one day.

Available options:

- Basic MILLIPLEX® Analyst 5.1 software training
- Advanced MILLIPLEX® Analyst 5.1 software training (for the user with modified/alternate assay needs or complex requirements, e.g. clustering, potency, Watch-Dog functionality)
- Different levels of xPONENT® training

Choose from hands-on or or web-based training...

Description	Cat. No.
Training at Merck Millipore site	40-091*
Training at customer site	40-092
Training, web-based	40-090

* Merck Millipore site hands-on training available only in North America, China and India (Coming soon in Europe—speak with your local protein specialist). ** Based on your specific needs training session can be extended; not to exceed 5 working days.

Balance your assay variability with our single-protein analysis solutions

Measuring single protein biomarkers? Merck Millipore's ELISAs, RIAs, and GyroMark™ HT assays are unique. Unlike other kits that leave you on your own to establish reproducibility, our kits provide:

- Standards validated to match reference lots
- Serum matrix for generating standard curves that accurately simulate conditions of native analyte conditions in serum or plasma
- In-assay controls

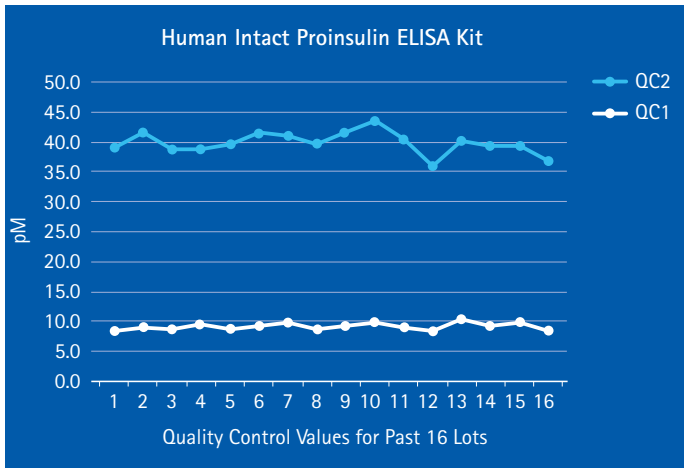


Figure 9.
Low and high quality control values show consistent values for the past 16 lots (±10% of reference lot).

World Health Organization standards are available and used for final quality control testing.

Introducing the latest addition to our single protein detection portfolio: SMC® immunoassay kits, enabling you to detect protein biomarkers at femtomolar concentrations

Choose the platform that meets your single protein detection needs with Merck Millipore's:

- ELISA/RIA kits
- GyroMark™ HT kits
- SMC® immunoassay kits

ELISA and RIA kits

Neuroscience: Neuropeptide & Neurodegenerative ELISA Kits

Get a complete picture of the complex, interconnected nervous system functions and dysfunctions with reliable quantification of biomarkers. Trust Merck Millipore's neuropeptide and neurodegenerative ELISA kits to precisely quantify soluble biomarkers in sera and lysates.

Neuroscience

Description	Species	Standard Curve Range	Sensitivity	Sample Volume	Cat. No.
α-Synuclein	Human, Mouse, Rat	3–60 ng/mL	3 ng/mL	100 µL	NS400
Amyloid β, 1-40	Human	16–500 pg/mL	4 pg/mL	50 µL	EZHS40
Amyloid β, 1-42	Human	16–500 pg/mL	5 pg/mL	50 µL	EZHS42
Amyloid β, Set	Human	Contains 1 each of EZHS40 and EZHS42			EZHS-SET
Amyloid β (Brain), 1-40	Human	16–500 pg/mL	4 pg/mL	50 µL	EZBRAIN40
Amyloid β (Brain), 1-42	Human	16–500 pg/mL	5 pg/mL	50 µL	EZBRAIN42
Amyloid β (Brain), Set	Human	Contains 1 each of EZBRAIN40 and EZBRAIN42			EZBRAIN-SET
BDNF (Brain-Derived Neurotrophic Factor)	Human, Rat	7.8–500 pg/mL	7.8 pg/mL	50 µL	CYT306
GFAP (Glial Fibrillary Acidic Protein)	Human, Mouse, Rat	1.5-100 ng/mL	1.5 ng/mL	100 µL	NS830
NGF (Nerve Growth Factor)	Mouse, Rat	10–1000 pg/mL	10-15 pg/mL	50 µL	CYT304
NPY (Neuropeptide Y)	Human	5-1000 pg/mL	2 pg/mL	50 µL	EZHNPY-25K
NPY (Neuropeptide Y)	Mouse, Rat	0.01-2 ng/mL	0.004 ng/mL	20 µL	EZRMNPY-27K
PEDF (Pigment Epithelium-Derived Factor)	Human	0.9–62.5 ng/mL	0.9 ng/mL	50 µL	CYT420
Phosphorylated Neurofilament, (pNF-H) Sandwich	Multi-species	0.0293–15 ng/mL	0.0585 ng/mL	1-10 µL	NS170
S100B	Human	2.7-2000 pg/mL	1.3 pg/mL	50 µL	EZHS100B-33K

Metabolic/Endocrine ELISAs

Get a complete picture of metabolism and endocrinology with sensitive, specific and reliable quantitation of circulating biomarkers. Our broad range of ELISA kits can help elucidate therapeutic mechanisms of action, reveal the possibility for early diagnosis of disease, predict toxicity, and more, particularly for studies of metabolic disease.

ELISAs for Circulating Metabolism and Endocrine Biomarkers

Description	Species	Standard Curve Range	Sensitivity	Sample Volume	Cat. No.	Bulk Packaging Cat. No.*
Adiponectin	Human	1.56–200 ng/mL	0.2 ng/mL	10 µL	EZHADP-61K	EZHADP-61BK
Adiponectin	Mouse	1–50 ng/mL	0.2 ng/mL	10 µL	EZMADP-60K	EZMADP-60BK
Adiponectin	Rat	3.125–200 ng/mL	0.4 ng/mL	10 µL	EZRADP-62K	
Amylin (active)	Human	1–100 pM	0.7 pM	50 µL	EZHA-52K	EZHA-52BK
C-Peptide	Human	0.2–20 ng/mL	0.05 ng/mL	10 µL	EZHCP-20K	EZHCP-20BK
C-Peptide	Canine	0.2-10 ng/mL	0.24 ng/mL	25 µL	EZCCP-47K	EZCCP-47BK
C-Peptide 2	Mouse, Rat	25–1600 pM	15.0 pM	20 µL	EZRMCP2-21K	
FGF-21	Human	31.25–2000 pg/mL	10.0 pg/mL	50 µL	EZHFGF21-19K	
FGF-21	Mouse, Rat	49.4–12,000 pg/mL	10.0 pg/mL	10 µL	EZRMFGF21-26K	
FGF-23	Human	9.9–2400 pg/mL	3.5 pg/mL	50 µL	EZHFGF23-32K	EZHFGF23-32BK
FGF-23	Mouse	0.137 - 100 ng/mL	0.69 pg/mL	20 µL	EZMFGF23-43K	
FGF-23	Rat	0.082-20 ng/mL	0.05 ng/mL	50 µL	EZRFGF23-42K	
Ghrelin (active)	Human	25–2000 pg/mL	15.0 pg/mL	20 µL	EZGRA-88K	EZGRA-88BK
Ghrelin (active)	Mouse, Rat	25–2000 pg/mL	8.0 pg/mL	20 µL	EZRGRA-90K	
Ghrelin (total)	Human	100–5000 pg/mL	50.0 pg/mL	20 µL	EZGRT-89K	EZGRT-89BK
Ghrelin (total)	Mouse, Rat	0.1–10 ng/mL	0.04 ng/mL	20 µL	EZRGRT-91K	
GIP (total)	Human	8.2–2000 pg/mL	4.2 pg/mL	20 µL	EZHGIP-54K	EZHGIP-54BK
GIP (total)	Mouse, Rat	8.2–2000 pg/mL	4.2 pg/mL	10 µL	EZRMGIP-55K	EZRMGIP-55BK
GLP-1 (active)	Multi-species	2–100 pM	1.0 pM	100 µL	EGLP-35K •	EGLP-35BK
GLP-1 High Sensitivity (active) Δ	Multi-species	See data sheet	0.14 pM	50 µL	**EZGLPHS-35K ••**	EZGLPHS-35BK
GLP-1 (total)	Multi-species	4.1-1000 pM	1.0 pM	20-50 µL	EZGLP1T-36K	EZGLP1T-36BK
GLP-2	Multi-species	1-64 ng/mL	0.3 ng/mL	50 µL	EZGLP2-37K	

* Bulk packaging now available on select kits – more environmentally friendly and saves space (10 kit equivalent).

• Please consider using the GLP-1 High Sensitivity Assay, EZGLPHS-35K

•• Preferred assay for measuring GLP-1 (active)

Δ Chemiluminescent assay

ELISAs for Circulating Metabolism and Endocrine Biomarkers (continued)

	Description	Species	Standard Curve Range	Sensitivity	Sample Volume	Cat. No.	Bulk Packaging Cat. No.*
WHO	Glucagon Δ	Human, Mouse, Rat	0.02-2 ng/mL	0.003 ng/mL	150-300 µL	EZGLU-30K	EZGLU-30BK
	Growth Hormone	Mouse, Rat	0.7–50 ng/mL	0.07 ng/mL	10 µL	EZRMGH-45K	EZRMGH-45BK
WHO	Insulin	Human	2–200 µU/mL	1.0 µU/mL	20 µL	EZHI-14K	EZHI-14BK
	Insulin	Rat, Mouse	0.2–10 ng/mL	0.1 ng/mL	10 µL	EZRMI-13K	EZRMI-13BK
	Insulin (Animal serum free)	Human	2–200 µU/mL	0.85 µU/m	20 µL	EZHIASF-14K	
	Leptin	Canine	0.78–50 ng/mL	0.21 ng/mL	20 µL	EZCL-31K	
	Leptin	Mouse	0.2–30 ng/mL	0.05 ng/mL	10 µL	EZML-82K	EZML-82BK
	Leptin	Rat	0.2–30 ng/mL	0.08 ng/mL	10 µL	EZRL-83K	EZRL-83BK
WHO	Leptin "Dual Range"	Human	0.5–100 ng/mL	0.2 ng/mL	25 µL	EZHL-80SK	EZHL-80BK
	Omentin-1	Human	2-200 ng.mL	0.23 ng/mL	20 µL	EZHØMNTN1-29K	
	Pancreatic Polypeptide	Human	12.6–3000 pg/mL	12.3 pg/mL	50 µL	EZHPP-40K	EZHPP-40BK
	Procollagen Type IIA N-Propeptide (PIIANP)	Human	lot dependent	30.0 ng/mL	5 µL	EZPIIANP-53K	
WHO	Proinsulin (total)	Human	2–200 pM	0.5 pM	20 µL	EZHPI-15K	EZHPI-15BK
	PYY (total)	Human	10–2000 pg/mL	6.5 pg/mL	20 µL	EZHPYYT66K	
	RBP4	Human	0.14–100 ng/mL	0.07 ng/mL	10 µL	EZHRBP4-18K	
	Resistin	Human	0.16–5 ng/mL	0.02 ng/mL	20 µL	EZHR-95K	EZHR-95BK
	SAA-3	Mouse	0.078-5 µg/mL	0.078 µg/mL	10 µL	EZMSAA3-12K	

Cytokine / Chemokine ELISA Kits

Cytokines are soluble proteins and peptides that modulate activities of cells and tissues, under both normal and pathological conditions. Merck Millipore's high-quality, cost-effective cytokine/chemokine ELISAs provide consistent and reliable measurements for your studies of inflammation, immune response, metabolism, neurological disorders and more.

ELISAs for Circulating Cytokines

Description	Species	Cat. No.
CRP	Human	CYT298
CRP	Rat	CYT294
IFNγ	Human	EZHIFNG
IFNγ	Mouse	EZMIFNG
IL-1β	Human	EZHIL1B
IL-2	Human	EZHIL2
IL-2	Mouse	EZMIL2
IL-4	Human	EZHIL4
IL-4	Mouse	EZMIL4
IL-6	Human	EZHIL6
IL-6	Mouse	EZMIL6

Description	Species	Cat. No.
IL-6	Rat	EZRIL6
IL-8	Human	EZHIL8
IL-10	Human	EZHIL10
IL-10	Mouse	EZMIL10
IL-12(p70)	Human	EZHIL12
IL-13	Human	EZHIL13
IL-15	Human	EZHIL15
IL-17A	Rat	EZRIL17A
IL-17F	Mouse	EZMIL17F
TNF-α	Human	EZHTNFA
TNF-α	Mouse	EZMTNFA
TNF-α	Rat	EZRTNFA

Cell Signaling ELISAs

STAR (Signal Transduction Assay Reaction) ELISA kits are a fast, sensitive method to for measuring relative levels of total and phosphorylated signaling proteins with phospho-specific antibodies. Easily quantitate the phosphorylation states of key signaling proteins, second messengers transmitting intracellular signals and apoptosis pathway proteins using these kits in less than five hours with minimal hands-on time.

STAR ELISAs

Description	Cat. No.
cAMP HTS (5X)	17-518
cAMP HTS	17-418
ERK 1/2	17-463
Phospho-Akt (Ser473)	17-457
Phospho-EGFR (Tyr1173)	17-461
Phospho-ERK1/2 (T183/Y187)	17-464
Phospho-IκB (Ser32)	17-486

Extracellular Matrix (ECM)

Gain deeper insights into cell adhesion, migration, differentiation, invasion and survival by quantitating circulating ECM proteins using our sensitive, specific and reliable ECM ELISA kits.

ECMs

Description	Species	Cat. No.
Quantimatrix Fibronectin	Human	ECM300
Quantimatrix Laminin	Human	ECM310
E-Selectin	Human	ECM330
ICAM-1	Human	ECM335
VCAM-1	Human	ECM340
SCD26	Human	ECM345
MMP-2	Human	ECM492
MMP-9	Human	ECM494
TIMP-1	Human	ECM496
TIMP-2	Human	ECM498

Radioimmunoassays (RIAs)

RIAs have long been considered a valuable, economical and accurate way to measure protein concentration. However, as many researchers move away from using radioactive material, we would like to recommend that you consider using our ELISA or MILLIPLEX® MAP kits for you research needs.

RIAs

Description	Species	Standard Curve Range	Sensitivity	Sample Volume	Cat. No.
Adiponectin	Human	lot dependent	1 ng/mL	5 µL	HADP-61HK
C-Peptide	Canine	0.156–20 ng/mL	0.15 ng/mL	50 µL	CCP-24HK
C-Peptide	Human	0.1–5 ng/mL	0.1 ng/mL	50 µL	HCP-20K
Ghrelin (active)	Human	lot dependent	7.8 pg/mL	50 µL	GHRA-88HK
Ghrelin (total)	Human	lot dependent	93 pg/mL	50 µL	GHRT-89HK
GLP-1 (active)	Multi-species	10–500 pM	3 pM	300 µL	GLP1A-35HK
GLP-1 (total)	Multi-species	10–1000 pM	3 pM	300 µL	GLP1T-36HK
Glucagon	Multi-species	20–400 pg/mL	20 pg/mL	50 µL	GL-32K
Insulin	Porcine	2–200 µU/mL	2 µU/mL	50 µL	PI-12K
Insulin	Rat	0.1–10 ng/mL	0.1 ng/mL	50 µL	RI-13K
Insulin LisPro	Multi-species	2.5–250 µU/mL	2.5 µU/mL	100 µL	LPI-16K
Insulin (sensitive)	Rat	0.02–1 ng/mL	0.02 ng/mL	50 µL	SRI-13K
Insulin Specific	Human	2-200 µU/mL	2 µU/mL	50 µL	HI-14K
Leptin	Human	0.5–100 ng/mL	0.5 ng/mL	50-100 µL	HL-81K
Leptin	Multi-species	1–50 ng/mL	1 ng/mL	50 µL	XL-85K
Leptin (sensitive)	Human	0.05–10 ng/mL	0.05 ng/mL	50 µL	SHL-81K
Proinsulin	Human	2–100 pM	2 pM	100-200 µL	HPI-15K
PYY	Mouse, Rat	lot dependent	15.6 pg/mL (78.1 pg/mL)	100 µL (20 µL)	RMPYY-68HK
PYY (3-36)	Human	lot dependent	20 pg/mL	<100 µL	PYY-67HK
PYY (total)	Human	lot dependent	10 pg/mL	<100 µL	PYYT-66HK

GyroMark™ HT Assays

Fully qualified kits for the Gyrolab® platform!

As a Gyrolab® user, you know how reliable and fast the technology can be. But developing your own kits can be time-consuming and costly, especially when you need to support a long-term biomarker study through every phase.

Merck Millipore, your trusted supplier of multiplex biomarker panels and ELISAs, has partnered with Gyros to be the first company to provide high quality, robust and reproducible kits to save you time and money!

Our off-the-shelf kits contain all the components you need to efficiently complete your project in days instead of weeks.

Kit	Species	Catalog No.
Clusterin	Rat	GYRCLU-37K
Cystatin C	Rat	GYRCYSC-48K
GLP-1 Active	Multi-species	GYGLP1A-35K
GLP-1 Total	Multi-species	GYGLP1T-36K
Glucagon	Multi-species	coming soon!
Insulin	Human	GYHINS-14K
Insulin	Rat/Mouse	GYRMI-13K
KIM-1	Rat	GYRKIM1-20K
NGAL/Lipocalin-2	Rat	GYRNGAL-50K
β-2 Microglobulin	Rat	GYRB2M-49K

Contact Custom Assay Development at: customassay@merckmillipore.com

We also have the expertise and staff to develop custom assays, using your antibodies or ours.

Description	Species	Status
IL-6	Human	Custom
TNFα	Human	Custom
IL-6	Mouse	Custom
TNFα	Mouse	Custom

Looking to get more data with less time, sample and people?

Gyros technology delivers high quality immunoassay data over a broad dynamic range, and helps you save time, sample and reagents. This is achieved through precise, automated control of centrifugal and capillary forces to steer liquid flow in proprietary nanoliter-scale microfluidic structures.

- High-quality data from pg to µg. Minimize dilutions and repeats.
- Minimize matrix effects. Maximize simplicity and flexibility.
- Nanoliter precision. Reduced consumption.
- Move your assay from conventional ELISA to the Gyros platform with confidence.
- Open platform. Full flexibility.

Considering owning your own Gyrolab® workstation?
Visit: **www.gyros.com**

Or, contact your local Protein Specialist to discuss which option is best for your laboratory.

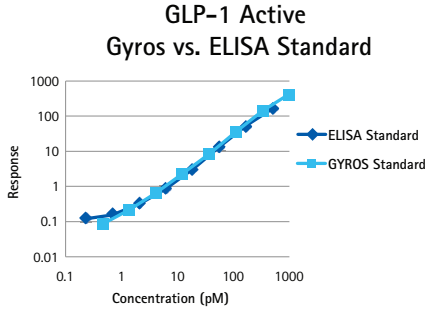


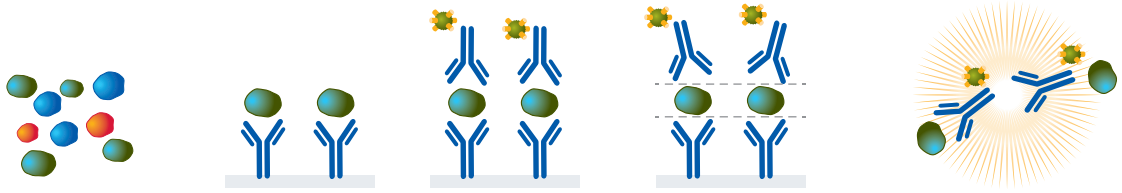
Figure 9. High correlation to ELISA data. Excellent overlap of GLP-1 Active standards between the GyroMark™ Multi-Species GLP-1 Active Assay (Cat. No. GYGLP1A-35K) for the Gyrolab® xP Workstation and Merck Millipore's Multi-Species GLP-1 Active ELISA assay (Cat. No. EGLP-35K). Sample volume was 1,000 nL and samples were diluted 1:2.

Erenna® immunoassay system powered by SMC® technology

Single Molecule Counting (SMC®) Technology: Reduced background + increased signal

SMC® technology provides maximum immunoassay performance while following a workflow very similar to traditional ELISA technology, as shown below. By combining a unique assay elution step and robust digital counting, SMC® technology achieves improved signal-to-noise ratios over traditional immunoassay technologies, thus providing quantification at both low and high levels of expression on one complete system.

STANDARD — PROPRIETARY



1 **Analyte of Interest in Solution**

2 **Capture on Plate or Bead**

3 **Detect**

4 **Elute**
Complex is chemically broken apart

5 **Quantify**
Sample flows past laser; detection tags counted

SMC® Assay Workflow

During the capture and detection steps, specific antibodies translate each biomarker into a signal. During the modified elution step, fluorescent dye-labeled detection antibodies are released from the immune complexes. The eluate is then drawn into the Erenna® System capillary tube, which contains a very small interrogation space that is illuminated by a laser. Single fluorescently labeled molecules are detected as they generate intense flashes of light when passing through the interrogation space. Detected signals with peak intensity above the threshold of background fluorescence are counted as digital events.

Digital counting improves sensitivity and dynamic range

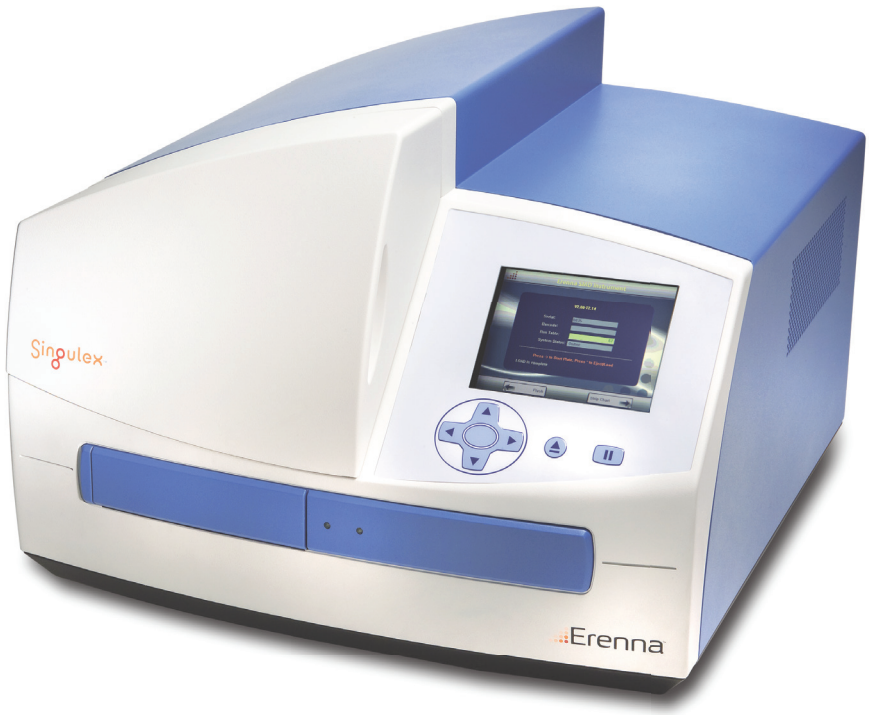
The Erenna® instrument captures the sum of all digital events counted. At high concentrations, a proprietary algorithm computes the total sum of all photons recorded. Thus, SMC® technology improves assay sensitivity and extends dynamic measuring range far beyond what could be achieved with traditional technologies.

Erenna® Immunoassay System Specifications

Minimum Instrument Performance Specifications

Metric	Specification
Slope	>20 DE/fM*
Background	<100 DE
Limit of detection (LoD)	<1 fM*
Precision	<7% CV†
Dynamic Range	>4 logs

*Determined from calibrator set: 0-300 fM of 150 kD antibody labeled with fluorophore
†DE measurements from 30 fM calibrator, n=20



NETWORK/PC REQUIREMENT

- Microsoft Windows® 7 Operating Systems
- A static IP address and an FTP server
- Sgx link Operating and Analysis software included

READ PLATE FORMAT

- 384-well plate

ASSAY FORMAT

- Plate-Based Assays
- Bead-Based Assays

INSTRUMENT DIMENSIONS AND WEIGHT

- H: 400 mm (15.75 in)
- W: 540 mm (21.25 in)
- D: 575.6 mm (22.7 in)
- W: 31.3 kg (69 lbs)

POWER REQUIREMENT

- U.S.: 115 VAC, 50-60 Hz (operating range 90-125 V)
- Int.: 230 VAC, 50-60 Hz (operating range 180-250 V)

Verified Immunoassay Kits

Analyte	Catalog No.	Assay Format	LLoQ (pg/mL)	Median Endogenous (pg/mL)	Species *	Sample Type †
KIM-1	03-0118-00	PBA	3.91	P: 65; S: 75; U: 147	H	P, S, U
AKT1 – pSer473	03-0100-01	BBA	0.98	NA	H, M, R	L
AKT1 – total	03-0099-01	BBA	7.8	NA	H, M, R	L
cTnI	03-0092-00	BBA	0.4	1.75	H, Cy, R, C, GP	P, S
G-CSF	03-0047-00	BBA	0.08	17	H	P
GM-CSF	03-0067-00	BBA	0.02	0.2	H	P
GLP-1 – active	03-0024-03	BBA	0.4	3.46	H, M, R, C	P
GLP-1 – total	03-0025-06	BBA	0.2	17.8	H, M, R, C	P
IFN-γ	03-0049-00	BBA	0.2	0.79	H	P
IL-1α	03-0072-00	BBA	0.39	1.06	H	P
IL-1β	03-0028-00	BBA	0.2	0.08	H	P
IL-2	03-0051-00	BBA	0.05	0.21	H	P, S
IL-4	03-0052-00	BBA	0.04	0.02	H	P
IL-5	03-0053-00	BBA	3.91	4.52	H	P
IL-6	03-0089-01	BBA	0.08	1.3	H	P
IL-7	03-0094-00	BBA	0.39	4.91	H	P, S
IL-8	03-0055-00	BBA	0.24	3.6	H	P, S
IL-10	03-0056-00	BBA	0.39	1.01	H	P
IL-12	03-0057-00	BBA	0.05	0.13	H	P, S
IL-13	03-0109-02	BBA	0.04	0.21	H	P, S
IL-15	03-0058-00	BBA	0.1	3.38	H	P, S
IL-17A	03-0103-00	BBA	0.03	0.12	H	P, S
IL-17F	03-0102-00	BBA	0.2	0.86	H	P, S
IL-17A/F Heterodimer (V2)	03-0119-00	BBA	1.2	2.75	H	P, S
IL-21	03-0014-07	BBA	0.2	0.53	H	S
IL-22	03-0059-01	BBA	0.2	3.3	H	P
IL-23	03-0112-00	BBA	0.1	0.18	H	P, S
TNF-α (Human)	03-0088-00	BBA	0.1	2.3	H	P
TNF-α (Mouse)	03-0108-00	BBA	0.4	38.6	M	S
VEGF (Human)	03-0068-00	BBA	0.2	66.5	H	P

* Optimized for the first species type listed. Other listed species have been tested, but not optimized for peak performance.
KEY: H = human; M = mouse; R = rat; GP = guinea pig; Cy = cynomolgus monkey; C = canine

† Optimized for use in sample type(s) listed. **KEY:** P = EDTA plasma; S = serum; L = lysate; U = urine

Validation criteria for verified immunoassays

A comprehensive set of criteria evaluating ultimate quantitative performance are used to qualify Verified Immunoassays

Lower limit of quantitation

Lowest point on standard curve with CV <20% and accuracy within 20% of expected values

Inter- and intra-assay precision

Samples run on multiple plates over multiple days. Spiked and un-spiked samples within 20% across experiments

Spike recovery

Minimum of 10 samples spiked with acceptable recovery between 80-120%

Dilutional linearity

Assays target a quantifiable range of 3-4 logs

Endogenous range

Minimum of 10 samples from individual donors assessed for ability to quantify baseline biomarker levels

Plate-Based Discovery Immunoassay Kits

Analyte	Catalog No.	LLoQ (pg/mL)	Sample Type
Mouse IL-4	03-0136-00	0.49	Serum
Mouse IL-5	03-0132-00	0.24	Serum
Mouse IL-10	03-0134-00	6.2	Serum
Mouse IL-13	03-0133-00	3.91	Serum
Mouse IL-17A	03-0123-00	0.98	Serum
Mouse IL-17F	03-0125-01	0.49	Serum
Mouse IL-21	03-0126-00	4.9	Serum
Mouse IL-22	03-0127-00	100	Serum
Mouse TNF-α	03-0137-00	0.49	Serum

Discovery Immunoassays are provided as complete kits to run on your Erenna® platform.

- LOW-COST
- REPRODUCIBLE LLOQ
- SIMPLE WORKFLOW
- MINIMAL SAMPLE VOLUME

Trusted outsourcing services

Merck Millipore Custom Services is powered by a scientific team with core expertise in SMC® technology. Whether you need fit-for-purpose sample testing, biomarker analysis using one of our currently available Erenna® SMC immunoassays, or development and manufacture of an immunoassay for your novel target of interest, Merck Millipore Custom Services will partner with you to develop a project specific to your program requirements.

For more information contact your Protein Specialist or email us: **customassay@merckmillipore.com today!**

Singulex SMC® immunoassay development & optimization kits

Take advantage of ultrasensitive digital Single Molecule Counting (SMC®) technology while developing your own application-specific immunoassays in either Plate or Bead format. The Assay Development and Optimization Kits provide everything you need to build your own high performing SMC® immunoassay for use with the Erenna® System. Our offering includes a full range of buffers, controls and consumables.

How to use the appendix

Circulating Analytes appear in alphabetic order. The alphabetic letter in the chart represents the platform:
E = ELISA; G = GyroMark HT; M = MULTIPLEX; R = RIA; and S = SMC (Single Molecule Counting).
The color of the platform letter identifies the species, e.g. Cool Gray = Human, Dark Red = Mouse, etc.

For example, M = the analyte of interest is found in Human multiplex kits; E = the analyte of interest is found in Rat ELISA kits

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
5'-NT			M						
6CKine/Exodus-2/	M								
ACTH	M	M	M	M			M		
ADAMTS13	M								
Adiponectin	M E R	M E	M E						
Adiponectin- High Molecular Weight	E								
Adipsin/Factor D	M	M							
Agouti-Related Protein (AgRP)	M						M		
Albumin (urine)	M		M	M					
ALDH1A1	M								
sALK-1		M							
α–1-Acid Glycoprotein (AGP)	M	M	M						
α–1-Microglobulin	M		M						
α–2-Antitrypsin	M								
α–2–Macroglobulin			M						
α–Fetoprotein (AFP)	M								
α–MSH	M	M	M						
α–Synuclein	E	E	E						
Amphiregulin		M							
Amylin (active)	M E	M	M		M		M		
Amylin (total)	M			M					
Amyloid beta 1-40	M E								
Amyloid beta 1-42	M E								
Angiopoietin-2	M	M							
Angiostatin	M								
Angiotensinogen (AGT)	M								
ANGPTL3	M								
ANGPTL4	M								
ANGPTL6	M								
Antithrombin III	M								
Apelin	M								
Apo AI	M								
Apo AII	M								
Apo B	M								
Apo CII	M								
Apo CIII	M								
Apo E	M								
APRIL/TNFSF13	M								
ARG1			M						

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
sAXL	M								
BAFF/Blys	M								
BCA-1/CXCL13	M								
BDNF	M E R	M	M E	M			M		
Betacellulin		M							
β–Endorphin	M	M	M						
β–2 Microglobulin	M	M	M R	M					
BMP-9	M								
BNP	M								
BRAK/CXCL14	M								
C1Q	M								
C2	M								
C3	M								
C3b	M								
C4	M								
C4b	M								
C5	M								
C5a	M								
C9	M								
CA125	M								
CA15-3	M								
CA19-9	M								
Calbindin	M		M						
Carbonic Anhydrase 9 (CA9)	M								
Cathepsin D	M								
Caveolin-1			M						
CCL28	M								
sCD137	M	M					M		
sCD30	M	M							
sCD31/sPECAM-1	M	M							
sCD40L	M	M					M		
CD44	M								
CEA	M								
Ceruloplasmin (CP)	M								
sc-Kit/sSCFR	M								
Clusterin	M	M	M G	M					
sc-Met/HGFR	M								
CNTF	M						M		
Collagen IV	M		M						
Connective Tissue Growth Factor (CTGF)			M						
Contactin-1	M								
Corticosterone			M						
Cortisol	M								M
C-Peptide	M R			E R			M		
C-Peptide 2		M E	M E						
Creatine Kinase Muscle (CKM)	M		M						
CRP	M E	M	E	E					
CTACK/CCL27	M								

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
CXCL16	M	M							
CYFRA21-1	M								
Cystatin C	M	M	M G	M					
D-dimer	M								
DKK1	M		M						
dPAPP-A	M								
EGF	M	M	M						
sEGFR	M								
ENA-78/CXCL5	M								
Endocan-1		M							
Endoglin	M	M							
Endothelin-1	M	M							
Eotaxin/CCL11	M	M	M				M	M	
Eotaxin-2	M								
Eotaxin-3/CCL26	M								
EpCAM	M								
sErbB2/sHER2	M								
Erythropoietin (EPO)									M
sE-Selectin	M	M	M						
Estradiol									M
Exodus-2/6CKine		M							
Extracellular Matrix Protein 1 (ECM1)	M								
FABP1	M		M						
FABP3	M		M						
FABP4	M								
Factor B	M								
Factor H	M								
Factor I	M								
sFas	M	M			M				
sFasL	M	M					M		
Ferritin	M								
Fetuin A	M								
FGF-1/FGF-acidic	M								
FGF-2/FGF-basic	M	M					M	M	
FGF-13	M								
FGF-19	M								
FGF-21	M E	E	E						
FGF-23	M E	M E	M E						
Fibrinogen	M		M						
Fibroblast Activation Protein (FAP)	M								
Fibronectin	M								
Flt3 Ligand	M				M				
Follistatin (FST)	M	M							
Follistatin-like Protein 1 (FSTL1)	M		M						
Fractalkine/CX3CL1	M	M	M				M	M	
FSH	M	M	M	M			M		
Galectin 3	M								
G-CSF	M S	M	M				M	M	

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
GDF-15	M								
GDNF	M								
GH	M	M	M	M			M		
Ghrelin (active)	M E R	M E	M E	M	M		M		
Ghrelin (total)	E R		E						
GIP (total)	M	M	M	M	M		M		
Glial Fibrillary Acidic Protein	E	E	E						
GLP-1 (active)	M S	M S	M E S	M S	M		M		E G R
GLP-1 High Sensitivity (active)									E
GLP-1 (total)	M S	S	S	S					E G R
GLP-2 (total)	E		E						G
Glucagon	M E	M E	M E	M	M		M		R G
GM-CSF	E S	E M	M	M	M	M	M	M	
GOT1			M						
sGP130	M	M							
Granzyme A	M						M		
Granzyme B	M	M					M		
GRO	M				M			M	
GRO/KC/CINC-1/CSCL1		M	M						
GSTα	M		M						
GSTπ	M		M						
Haptoglobin	M	M	M						
HB-EGF	M								
HCC-1/CCL14	M								
HCC-4/CCL16	M								
HCGκ	M								
HE4	M								
Hepsin	M								
sHER3/sEGFR3/sErbB3	M								
HGF	M	M							
HMGB1	M								
HSP70	M								
Human Serum Albumin (HSA)	M								
I-309/CCL1	M								
sICAM-1	M		M						
IFNα2	M								
IFNβ	M								
IFNβ1		M							
IFNγ	M S	M	M	M	M	M	M	M	
IgA	M	M	M						
IgE	M		M						
IGF-1	M	M							
IGF-2	M								
IGFBP1	M	M							
IGFBP2	M	M							
IGFBP3	M	M							
IGFBP4	M								
IGFBP5	M	M							

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
IGFBP6	M	M							
IGFBP7	M	M							
IgG1	M	M	M						
IgG2	M								
IgG2a		M	M						
IgG2b		M	M						
IgG2c			M						
IgG3	M	M							
IgG4	M								
IgM	M	M	M						
IL-1α	M S	M	M			M	M	M	
IL-1β	M E S	M	M		M	M	M	M	
IL-1Ra	M					M	M		
sIL-1RI	M	M							
sIL-1RII	M	M							
IL-2	M E S	E M	M	M	M	M	M	M	
sIL-2Rα	M	M							
IL-3	M	M							
IL-4	ES	E	M		M	M	M	M	
sIL-4R	M	M							
IL-5	S		M				M	M	
IL-6	M E S	E M	EM	M	M	M	M	M	
sIL-6R	M	M							
sIL-6Rα	M								
IL-7	M S	M		M					
IL-8/CXCL8	S			M	M	M	M	M	
IL-9	M	M							
IL-10	M E S	M E	M	M		M	M	M	
IL-11	M	M							
IL-12	S								
IL-12 (p40)	M	M			M				
IL-12/23 (p40)							M		
IL-12 (p70)	M E S	EM	M					M	
IL-13	M E S	M	M		M		M	M	
IL-14/α-Taxilin	M								
IL-15	M E S	M		M			M		
IL-16	M	M					M		
IL-17A	M S	M	M E				M	M	
IL-17A/F	S	M							
IL-17F	S	E							
Il-17E/IL-25	M	M					M		
IL-18			M	M	M	M	M	M	
IL-19	M								
IL-20	M	M							
IL-21	S						M		
IL-22	S						M		
IL-23	M S	M					M		
IL-24	M								
IL-27	M	M							
IL-28A	M						M		

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
IL-28B	M	M							
IL-29	M								
IL-31	M	M					M		
IL-32α	M								
IL-33	M	M					M		
IL-34	M								
IL-35	M								
IL-36/IL-1F8	M								
IL-37/IL-1F7	M								
IL-38/IL-1F10	M								
Insulin	M E G	E G	E R G	M	M	R	M		
Insulin (Animal Serum Free)	E								
Insulin Lispro	R								
Insulin Specific	R								
Involucrin	M								
IP-10/CLCL10	M	M	M	M			M	M	
Irisin	M								
I-TAC/CXCL11	M								
Kallekrein-6	M								
KC		M							
KC-like Protein				M					
Keratin-1, 10	M								
Keratin-6	M								
KIM-1	M	M	M R	M					
Laminin	E								
Lectin (MBL)	M								
Leptin	M E R	M E	M E	M E	M		M		R
LH	M	M	M	M			M		
LIF	M	M							
LIGHT	M	M							
LIX/CXCL6	M	M	M						
LPS	M								
L-Selectin	M								
Lymphotactin	M								
Mannose-binding	M								
MCP-1/CCL2	M	M	M	M	M		M	M	
MCP-2/CCL8	M								
MCP-3/CCL7	M								
MCP-4/CCL13	M								
MCP-5/CCL13		M							
M-CSF	M	M							
MDC/CCL22	M								
Melanoma Inhibitory Activity (MIA)	M								
Melatonin	M		M						
Mesothelin	M								
Midkine	M								
MIF	M								
MIG/CXCL9	M	M							
MIP-1α/CCL8	M	M	M				M		

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
MIP-1β/CCL4	M	M					M		
MIP-1δ/MIP-5/CCL15	M								
MIP-2/CXCL2		M	M						
MIP-3α/CCL20	M	M					M		
MIP-3β/CCL19	M	M							
MIP-4/PARC/CCL18	M								
MMP-1	M								
MMP-2	M	M							
MMP-3	M	M							
MMP-7	M								
MMP-8	M	M							
MMP-9	M	M							
MMP-10	M								
MMP-12	M	M							
MMP-13	M								
MPIF/CCL23	M								
MPO	M								
MYL3			M						
Myoglobin	M								
Myostatin	M								
NAP-2/CXCL7	M								
sNCAM	M								
NCAML1/L1CAM/CD171	M								
Nerve Growth Factor (NGF)		M E	M E						
Neuropeptide Y (NPY)	E	E	E						
sNeuropilin-1	M								
Neurotensin	M	M	M						
Neutrophil Elastase-2 (ELA2)	M								
NGAL/Lipocalin-2	M	M	M G	M					
NSE	M								
NT proBNP	M								
OLFM-4	M								
Omentin-1	E								
Oncostatin-M	M	M							
Orexin A	M	M	M						
Osteoactivin	M		M						
Osteocalcin (OC)	M	M	M						
Osteocrin/Musclin	M								
Osteonectin/SPARC	M								
Osteopontin (OPN)	M	M	M	M					
Osteoprotegerin (OPG)	M	M	M						
Oxytocin	M	M	M						
PAI-1 (total)	M	M	M						
Pancreatic Polypeptide (PP)	M E	M	M	M	M		M		
PARK1/DJ1	M								
PDGF-AA	M								
PDGF-AB/BB	M								
PDGF-BB					M				
sPECAM-1	M	M							

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
PEDF	M								
Pentraxin-3	M	M							
Perforin	M						M		
Periostin	M								
PF4	M								
Phosphorylated Neurofilament (pNF-H)									E
Pigment Epithelium Derived Factor (PEDF)	M E								
PLGF	M								
PLGF-2		M							
Prealbumin	M								
Progesterone									M
Proinsulin	ER								
Prolactin	M	M	M	M			M		
Properdin	M								
PRTN-3	M								
PSA (Free)	M								
PSA (Total)	M								
sP-Selectin	M	M							
PTH	M		M						
PYY (3-36) Specific	R								
PYY (total)	M E R	M	M	M	M		M		
sRAGE	M	M							
RANKL	M	M	M						
RANTES/CCL5	M	M	M		M		M	M	
RBP4	E M		M	M					
Renin	M	M	M						
Resistin	M E	M							
S100B	M E								
SAA-3		M E							
SCF	M				M				
Sclerostin (SOST)	M	M	M						
SDF-1	M	M			M				
SDH			M						
Serum Amyloid A	M								
Serum Amyloid P	M	M							
Sex Hormone Binding Globulin (SHBG)	M								
SPARC/Osteonectin	M								
Substance P	M	M	M						
Soluble Superoxide Dismutase 1 (sSOD1)	M								
Soluble Superoxide Dismutase 2 (sSOD2)	M								
T3			M						M
T4			M						M
TARC/CCL17	M	M							
Tau (Thr181)	M								
Tau (Thr231)	M								
Tau (total)	M								

The Analyte Appendix

Analyte	Human	Mouse	Rat	Canine	Feline	Porcine	Primate	Equine	Multi-species
Tenascin-C	M								
TFF-3	M		M						
TGFα	M						M		M
TGFβ1									M
TGFβ2									M
TGFβ3									M
Thrombomodulin	M								
Thrombospondin-1 (TSP-1)	M								
Thrombospondin-2 (TSP-2)	M								
sTie-2	M								
TIMP-1	M	M	M						
TIMP-2	M								
TIMP-3	M								
TIMP-4	M								
Tissue Factor (TF)	M								
TNFα	M E S	M E S	M E	M	M	M	M	M	
TNFβ	M	M					M		
TPO	M								
TRAIL	M								
Transglutaminase 2 (TGM2)	M								
TRAP5	M								
Troponin I (TnI)	M	M	M						
Troponin T (TnT)	M	M	M						
cardiac Troponin I (cTnI)	S		M S	S			S		
cardiac Troponin T (cTNT)			M						
TSH	M	M	M	M			M		
TSLP	M								
TWEAK	M								
UCHL1/PARK5	M								
suPAR	M								
Uromodulin	M								
sVCAM-1	M								
VEGF-A	M	M	M				M		
VEGF-C	M	M							
VEGF-D	M	M							
sVEGFR1	M	M							
sVEGFR2	M	M							
sVEGFR3	M	M							
Vitamin D Binding Protein	M								
Vitronectin	M								
YKL40/1CHI3L1	M								
von Willebrand Factor (vWF)	M		M						

Appendix Notes

To Place an Order or Receive Technical Assistance

In Europe, please call Customer Service:

France: 0825 045 645

Germany: 069 86798021

Italy: 848 845 645

Spain: 901 516 645 Option 1

Switzerland: 0848 645 645

United Kingdom: 0870 900 4645

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