

Bring Your Biomarkers to Life.

The #1 best seller for multiplexing using Luminex® technology

Analyte Quarterly, Vol. 3 2014

Immunoassays & MILLIPLEX® MAP Kits:

- Bone Metabolism
- Cancer Biomarkers
- Cardiovascular Disease
- Immunology/
Immune Response
- Intracellular
Cell Signaling
Cellular Metabolism
- Metabolism/
Endocrinology
- Neuroscience
- Toxicity



The Latest in Multiplexing & Single Protein Detection

Discover the Latest in Innovative and Unique Multiplex and Single Protein Assay Kits and Luminex® Instruments

NEW: MILLIPLEX® MAP and Single Protein Detection

MILLIPLEX® MAP Kits	Species	Catalog No.
Adipocyte	Rat	RADPCMAG-82K
Adipokine	Rat	RADPKMAG-80K
Adiponectin	Rat	RADPNMAG-81K-01
CREB Phospho/Total – 2 Plex	Human, Mouse, Rat	48-628MAG
CVD Panel 2	Mouse	MCVD2MAG-77K
IRS1 Phospho/Total – 2 Plex	Human, Mouse	48-626MAG
Kidney Toxicity Expanded Panel 1	Canine	CKT1MAG-97K
Kidney Toxicity Panel 2	Canine	CKT2MAG-97K
Liver Injury Panel	Rat	RLI1MAG-92K
mTOR Phospho/Total – 2 Plex	Human, Mouse, Rat	48-625MAG

GyroMark™ HT Kits	Species	Catalog No.
Clusterin	Rat	GYRCLU-37K
GLP-1 (active)	Multi-species	GYGLP1A-35K
GLP-1 (total)	Multi-species	GYGLP1T-36
Insulin	Rat, Mouse	GYRMI-13K
KIM-1	Rat	GYRKIM1-20K

Coming Soon

MILLIPLEX® MAP Kits	Species	Catalog No.
Angiogenesis Panel 2	Human	Coming Soon!
Cardiac Injury Panel 1 – 7 Plex	Rat	Coming Soon!
Cardiac Injury Panel 2 – 2 Plex	Rat	Coming Soon!
Circadian/Stress Panel – 2 Plex	Human	Coming Soon!
Multi-Pathway (Total) 9 – Plex	Human	Coming Soon!
p38 Phospho/Total – 2 Plex	Human, Mouse, Rat	Coming Soon!
STAT5 Phospho/Total – 2 Plex	Human, Mouse, Rat	Coming Soon!

ELISA Kits	Species	Catalog No.
Betatrophin ELISA	Human	Coming Soon!
PGE2 ELISA	Human	Coming Soon!
C-Peptide ELISA	Canine	Coming Soon!
PGF2α ELISA	Human	Coming Soon!

GyroMark™ HT Kits	Species	Catalog No.
Insulin	Human	Coming Soon!
Glucagon	Human	Coming Soon!
β-2-Microglobulin	Human	Coming Soon!
Cystatin C	Human	Coming Soon!
NGAL/Lipocalin-2	Rat	Coming Soon!

NEW technical guide— The Power of Biomarker Analysis

Get multiplexing tips from the experts in Luminex® technology!

Tip #1: Spin samples down to reduce variability: Centrifuge samples after thawing or if they appear turbid. This is especially recommended for plasma samples.



Be the first to own a copy of this NEW, valuable resource. Request your copy online at: www.merckmillipore.com/mpx_tips Or, contact your local Sales Specialist.

Now Available Online— Key Maintenance Kits for Luminex® Systems

Need → Click → Order. It's That Easy!

Introducing the online availability of key performance, verification, and calibration kits for the complete line of 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.



(Cat. No. 40-049)



(Cat. No. MPXDF-4PK)

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)

Find and Price Your Favorite Analytes & Kits

Two tools to make ordering faster & easier!

NEW MILLIPEX® Analyte Kit Finder

We've made searching for your favorite analytes simple:

1. Select your species of interest; click "Next."
2. To refine your search by research area, select all that apply and click "Next" -or- "See Products Now" to view all kits for that species.
3. To further refine your search, select your analytes of interest and click "Next" -or- "See Products Now" to view all the kits for your species, research areas and analytes of interest.

Find Your MILLIPEX® Assays

Use the assay finder to determine the correct assays for your biomarkers of interest, so you can obtain the best quality data the first time.

Design & Purchase Your Own Kit

Order your MILLIPEX® MAP panels and kits online:

- Streamlined catalog search
- Dynamic kit design based on species, panel type and analyte compatibility
- Fully automated with minimal computer "think time" for rapid, accurate ordering
- Instant pricing

MILLIPLEX[®] MAP

Bring your biomarkers to life with simultaneous multianalyte detection.

- The broadest selection of analytes across a wide range of disease states
- All the components and reagents you need to detect multiple analytes simultaneously
- Quality controls provided to qualify assay performance
- Analytically validated panels yielding consistent analyte profiles within panels
- Comparison of standard & QC lots to a reference lot to ensure lot-to-lot consistency
- Panels meet stringent manufacturing criteria to ensure batch-to-batch reproducibility
- Most of the Cytokine/Chemokine panels provide you the flexibility to:
 - Select a premixed kit using the appropriate catalog number.
 - Choose analytes within a catalog number, or panel to design a "customized" kit.
- How to design a customized kit:
 1. Select your panel of interest: for example, HCYTOMAG-60K.
 2. Choose only the analytes you want from that panel: for example, you may need only 5 analytes
 - IL-2, IL-6, IL-10, GM-CSF, VEGF-A.
 3. Add the number of analytes you chose to the catalog number: HCYTOMAG-60K-05 and list the specific analytes.

Custom Assay Development

Need to develop a specific, sensitive, analytically validated assay for your laboratory? We develop reliable, custom multiplexed assays (using Lumines[®] xMAP[®] technology), as well as single detection (ELISAs, GyroMark[™] HT and RIAs) assays for protein research, providing you with:

- Reagents (immunogen design and antibody development)
- Assay development
- Manufacturing (commercial kits for research use only)

Contact your Protein Specialist or e-mail us at: customassay@merckmillipore.com today!

Biomarker Wish List

Is there an analyte, panel or species you would like to see in our portfolio?

Make your wish at: biomarkerwish@merckmillipore.com



Bone Metabolism

Human Bone

(Cat. No. HBNMAG-51K)

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

Human Single Plex Bone Kits

(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	SCF
FGF-2/FGF-basic	TGF α
HCG β	TNF α
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 Cancer / Metastasis Biomarker Panel 1

(Cat. No. HCMBMAG-22K)

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

Human Angiogenesis / Growth Factor

(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	

Contact your Sales Specialist to obtain your copy of our featured white papers and wall charts!

MILLIPLEX[®] MAP Human Angiogenesis / Growth Factor, Lit. No. AN4466ENEU

MILLIPLEX[®] MAP Human CVD Biomarkers Lit. No. TN5533ENEU

MILLIPLEX[®] MAP Cancer Signaling Wall Chart, Lit. No. PS4992ENEU

MILLIPLEX[®] MAP Immunology Signaling Wall Chart, Lit. No. PS4992ENEU

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	sL-Selectin
α 1-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

Immunology/Immune Response

Human Cytokine / Chemokine Panel I

(Cat. No. HCYTOMAG-60K)

(Cat. No. HCYTMAG-60K-PX29) ²⁹(Cat. No. HCYTMAG-60K-PX30) ³⁰(Cat. No. HCYTMAG-60K-PX38) ³⁸(Cat. No. HCYTMAG-60K-PX41) 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 [◆]
IFN α 2 [◆]	MCP-3/CCL7
IFN γ [◆]	MDC/CCL22
IL-1 α [◆]	MIP-1 α /CCL3 [◆]
IL-1 β [◆]	MIP-1 β /CCL4 [◆]
IL-1Ra [◆]	PDGF-AA Δ
IL-2 [◆]	PDGF-AB/BB Δ
IL-3 [◆]	RANTES/CCL5 [◆] Δ
IL-4 [◆]	TGF α
IL-5 [◆]	TNF α [◆]
IL-6 [◆]	Lymphotoxin α (LTA)
IL-7 [◆]	TNF β [◆]
IL-8/CXCL8 [◆]	VEGF-A [◆]

Human Cytokine / Chemokine Panel II

(Cat. No. HCYP2MAG-62K)

(Cat. No. HCP2MAG-62K-PX23) ²³

6Ckine/CCL21	I-309/CCL1
BCA-1/CXCL13	LIF
CTACK/CCL27	MCP-2/CCL8
ENA-78/CXCL5	MCP-4/CCL13
Eotaxin-2/CCL24/ MIPF-2	MIP-1 δ /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	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/IFN λ 1	MIP-3 α /CCL20
I-TAC/CXCL11	MIP-3 β /CCL19
LIX/CXCL6/GCP-2	NAP-2/CXCL7 Δ
Lymphotoxin/XCL1	

Human High Sensitivity T Cell

(Cat. No. HSTCMAG-28SK)

(Cat. No. HSTCMAG28SPMX13) [◆] ¹³(Cat. No. HSTCMAG28SPMX21) ²¹

Fractalkine/CX3CL1	IL-12 (p70) [◆]
GM-CSF [◆]	IL-13 [◆]
IFN γ [◆]	IL-17A
IL-1 β [◆]	IL-21
IL-2 [◆]	IL-23
IL-4 [◆]	I-TAC/CXCL11
IL-5 [◆]	MIP-1 α /CCL3
IL-6 [◆]	MIP-1 β /CCL4
IL-7 [◆]	MIP-3 α /CCL20
IL-8/CXCL8 [◆]	TNF α [◆]
IL-10 [◆]	

Human Soluble Cytokine Receptor

(Cat. No. HSCRMAG-32K)

(Cat. No. HSCRMAG32KPX14) ¹⁴

sCD30	sIL-6R
sEGFR	sRAGE
sgp130	sTNF RI
sIL-1RI	sTNF RII
sIL-1RII	sVEGF R1
sIL-2R α	sVEGF R2
sIL-4R	sVEGF R3

Human Th17

(Cat. No. HTH17MAG-14K)

(Cat. No. HT17MG-14K-PX25) ²⁵

GM-CSF	IL-17E/IL-25
IFN γ	IL-17F
IL-1 β	IL-21
IL-2	IL-22
IL-4	IL-23
IL-5	IL-27
IL-6	IL-28A
IL-9	IL-31
IL-10	IL-33
IL-12 (p70)	MIP-3 α /CCL20
IL-13	TNF α
IL-15	Lymphotoxin α (LTA)
IL-17A	TNF β

Human CD8+ T Cell

(Cat. No. HCD8MAG-15K)

(Cat. No. HCD8MAG15K17PMX) ¹⁷

sCD137/4-1BB	IL-5
sFas	IL-6
sFasL	IL-10
GM-CSF	IL-13
Granzyme A	MIP-1 α /CCL3
Granzyme B	MIP-1 β /CCL4
IFN γ	Perforin
IL-2	TNF α
IL-4	

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
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- ⁺ 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
- % Requires a protease inhibitor during sample collection

Immunology/Immune Response, continued

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 Single Plex Immuno-globulin Isotyping Kits

(Cat. No. HGAMMAG-303E)

IgE

Human Sepsis Panel 1

(Cat. No. HSP1MAG-63K)

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

Human Sepsis Panel 2

(Cat. No. HSP2MAG-63K)

Granzyme B	MIP-1 α /CCL3
HSP70	MIP-1 β /CCL4
IL-1 α	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)

Elastase-2	Proteinase-3 (PRTN-3)
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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	Resistin
NGAL/Lipocalin-2	

Human Adipokine Panel 2

Serum/Plasma samples
(Cat. No. HADK2MAG-61K)

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

Human Adipocyte

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

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

Human Metabolic Hormone

(Cat. No. HMHEMAG-34K)

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

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	

Human IGF

(Cat. No. HIGFMAG-52K)

IGF-1	IGF-2
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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
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† Cannot be plexed together:
1. Amylin (active) and Amylin (total)
2. GLP-1 (active) and GLP-1 (total)

% Requires a protease inhibitor during sample collection

■ Requires Sample Extraction

Contact your Sales Specialist to obtain your copy of our featured wall chart!

MMILLIPLEX[®] MAP Neuroendocrine Mechanisms in Appetite & Obesity
Lit. No. PS2550ENEU

Neuroscience

Human Neurodegenerative Disease Panel 1

(Cat. No. HNDG1MAG-36K)

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

Human Neurodegenerative Disease Panel 2

(Cat. No. HNDG2MAG-36K)

α -2-Antitrypsin (A1AT)	MIP-4/PARC/CCL18 PEDF
Complement C4 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)

A β 1-40	sRAGE
A β 1-42	S100B
GDNF	

Human Neurological Disorders Panel 1

CSF samples

(Cat. No. HND1MAG-39K)

α -Synuclein	PARK7/DJ1
NGF β	Tau (Thr231)
Neuron-Specific Enolase (NSE)	Tau (total)
PARK5/UCHL1	

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

Toxicity

Human Kidney Injury Panel 1

Urine samples

(Cat. No. HKI1MAG-99K)

Calbindin	KIM-1
Collagen IV	Osteoactivin
FABP1	Renin
GST α	TFF-3
GST π	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)
GST α	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
GST π	Uromodulin
NGAL/Lipocalin-2	

Human Kidney Injury Panel 6

Serum/Plasma samples

(Cat. No. HKI6MAG-99K)

β -2-Microglobulin	Cystatin C
Clusterin	RBP4

Contact your Sales Specialist to obtain your copy of our featured wall chart!

MMILLIPLEX[®] MAP Inflammation in Neurodegenerative Disease
Lit. No. PS5724ENEU

Immunology

Non-Human Primate Cytokine/Chemokine

(Cat. No. PRCYTOMAG-40K)

(Cat. No. PCYTMG-40K-PX23)

23

sCD40L	IL-12/23 (p40)
G-CSF	IL-13
GM-CSF	IL-15
IFN γ	IL-17A/CTLA8
IL-1 β	IL-18
IL-1ra	MCP-1/CCL2
IL-2	MIP-1 α /CCL3
IL-4	MIP-1 β /CCL4
IL-5	TGF α
IL-6	TNF α
IL-8/CXCL8	VEGF-A
IL-10	

Non-Human Primate Cytokine/Chemokine Panel 2

(Cat. No. PRCYT2MAG40K)

(Cat. No. PRCYTMAG40K-PX24)

24

(Cat. No. PRCYTMAG40K-PX25)

25

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

Metabolism/ Endocrinology

Non-Human Primate Metabolic Hormone

(Cat. No. NHPMHMAG-45K)

Amylin (active)	Insulin
C-Peptide	Leptin
Ghrelin (active) %	MCP-1/CCL2
GIP (total)	Pancreatic Polypeptide
GLP-1 (active)	PYY (total)
Glucagon	TNF α
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
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Bone Metabolism

Mouse Bone

(Cat. No. MBNMAG-41K)

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

Mouse Single Plex Bone Kits

(Cat. No. MRNKL MAG-41K-01)

RANKL

Cancer Biomarkers

Mouse Angiogenesis / Growth Factor Panel 1

(Cat. No. MAGPMAG-24K)

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

- ◆ Available in cat. no. listed
- Δ These analytes cannot be plexed with other analytes in this panel in serum/plasma
- % Requires a protease inhibitor during sample collection

Cardiovascular

Mouse CVD1

(Cat. No. MCVD1MAG-77K)

sCD31/sPECAM-1	PAI-1 (total)
sE-Selectin	sP-Selectin
sICAM	Thrombomodulin
MMP-9	

Mouse CVD2

(Cat. No. MCVD2MAG-77K) **NEW!**

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	CRP
α -1-Acid Glycoprotein (AGP)	Haptoglobin
α -2-Macroglobulin	Serum Amyloid P

Immunology/Immune Response

Mouse Cytokine / Chemokine Panel I

(Cat. No. MCYTOMAG-70K)

(Cat. No. MCYTOMAG-70K-PMX) **25**

(Cat. No. MCYTOMAG-70K-PX32) **32**

Eotaxin/CCL11	IL-13 \blacklozenge
G-CSF \blacklozenge	IL-15 \blacklozenge
GM-CSF \blacklozenge	IL-17A/CTLA8 \blacklozenge
IFN γ \blacklozenge	IP-10/CXCL10 \blacklozenge
IL-1 α \blacklozenge	KC/GRO α /CXCL1 \blacklozenge
IL-1 β \blacklozenge	LIF
IL-2 \blacklozenge	LIX/CXCL6/GCP-2
IL-3	MCP-1/CCL2 \blacklozenge
IL-4 \blacklozenge	M-CSF
IL-5 \blacklozenge	MIG/CXCL9
IL-6 \blacklozenge	MIP-1 α /CCL3 \blacklozenge
IL-7 \blacklozenge	MIP-1 β /CCL4 \blacklozenge
IL-9 \blacklozenge	MIP-2/CXCL2 \blacklozenge
IL-10 \blacklozenge	RANTES/CCL5 \blacklozenge
IL-12 (p40) \blacklozenge	TNF α \blacklozenge
IL-12 (p70) \blacklozenge	VEGF-A

Mouse Cytokine / Chemokine Panel II

(Cat. No. MCYP2MAG-73K)

IL-21	MCP-5/CCL12
IL-22	MIP-3 α /CCL20
IL-17E/IL-25	MIP-3 β /CCL19
IL-28B	TARC/CCL17

Mouse Cytokine / Chemokine Panel III

(Cat. No. MCYP3MAG-74K)

IL-20	IL-33
IL-23	MDC/CCL22
IL-27	TIMP-1

Mouse Soluble Cytokine Receptor

(Cat. No. MSCRMAG-42K)

sCD30	sRAGE
sgp130	sTNF RI
sIL-1RI	sTNF RII
sIL-1RII	sVEGF R1
sIL-2R α	sVEGF R2
sIL-4R	sVEGF R3
sIL-6R	

Mouse Th17

(Cat. No. MTH17MAG-47K)

(Cat. No. MT17MAG47K-PX25) **25**

sCD40L	IL-17E/IL-25
GM-CSF	IL-17F
IFN γ	IL-21
IL-1 β	IL-22
IL-2	IL-23
IL-4	IL-27
IL-5	IL-28B
IL-6	IL-31
IL-10	IL-33
IL-12 (p70)	MIP-3 α /CCL20
IL-13	TNF α
IL-15	Lymphotoxin α (LTA)
IL-17A/CTLA8	TNF β



Immunology/Immune Response, continued

Mouse CD8+ T Cell

(Cat. No. MCD8MAG-48K)

(Cat. No. MCD8MAG48K-PX15)

15

sCD137/4-1BB	IL-5
sFas	IL-6
sFasL	IL-10
GM-CSF	IL-13
Granzyme B	MIP-1 β /CCL4
IFN γ	RANTES/CCL5
IL-2	TNF α
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 Single Plex Immunoglobulin Isotyping Kits

(Cat. No. MGAMMAG-300E)

IgE

▫ Requires a protease inhibitor during sample collection

■ Requires Sample Extraction

△ Fibrinogen cannot beplexed with other analytes in this panel in serum/plasma

Metabolism/Endocrinology

Mouse Adipokine

Serum/Plasma samples

(Cat. No. MADKMAG-71K)

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

Mouse Adipocyte

Cell culture samples

(Cat. No. MADCYMAG-72K)

Adiponectin	PAI-1 (total)
IL-6	Resistin
Leptin	TNF α
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
GIP (total)	PYY (total)
GLP-1 (active)	Resistin
Glucagon	TNF α
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
GH3	

Neuroscience

Rat/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	

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 Single Plex Bone Kits

(Cat. No. RBNMAG-31K-10C)

(Cat. No. RBNMAG-31K-10PN)

(Cat. No. RRNKLMAG-31K-01)

Osteocalcin (OC)	RANKL
Osteopontin (OPN)	

Immunology/Immune Response

Rat Cytokine / Chemokine

(Cat. No. RECYTMAG-65K)

(Cat. No. RECYMAG65K27PMX) **NEW!**

EGF	IL-12 (p70)
Eotaxin/CCL11	IL-13
Fractalkine /CX3CL1	IL-17A/CTLA8
G-CSF	IL-18
GM-CSF	IP-10/CXCL10
GRO α /KC/CINC-1/CXCL1	Leptin
IFN γ	LIX/CXCL6/GCP-2
IL-1 α	MCP-1/CCL2
IL-1 β	MIP-1 α /CCL3
IL-2	MIP-2/CCL8
IL-4	RANTES/CCL5
IL-5	TNF α
IL-6	VEGF-A
IL-10	

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) **NEW!**

IL-1 β	MCP-1/CCL2
IL-6	PAI-1 (active)
Insulin	PAI-1 (total)
Leptin	TNF α

Rat Adipocyte

Cell culture samples

(Cat. No. RADPCMAG-82K) **NEW!**

Adiponectin	PAI-1 (active)
IL-1 β	PAI-1 (total)
IL-6	TNF α
Leptin	

Rat Adiponectin

Serum/Plasma samples

(Cat. No. RADPNMAG-81K-01) **NEW!**

Adiponectin

Rat Metabolic Hormone

(Cat. No. RMHMAG-84K)

Amylin (active)	Insulin
C-Peptide 2	Leptin
Ghrelin (active) %	MCP-1/CCL2
GIP (total)	Pancreatic Polypeptide
GLP-1 (active)	PYY (total)
Glucagon	TNF α
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	

Neuroscience

Rat/Mouse 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. RKTIX1MAG-37K)

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

Rat Kidney Toxicity Panel 2

Urine samples

(Cat. No. RKTIX2MAG-37K)

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

Rat Liver Injury Panel

(Cat. No. RLI1MAG-92K) **NEW!**

ARG1	5'NT/CD73
GOT1	SDH
GST α	

Rat Vascular Injury Panel 1

Serum/Plasma samples

(Cat. No. RV1MAG-26K)

Caveolin-1	PAI-1 (total)
GRO α /KC/CINC-1/CXCL1	TIMP-1
Connective Tissue Growth Factor (CTGF)	TNF α
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	

Rat Vascular Injury Panel 3

Serum/Plasma samples

(Cat. No. RV3MAG-26K)

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

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MILLIPIX® MAP Rat Kidney Toxicity
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Immunology

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

GM-CSF	IL-15
IFN γ	IL-18
IL-2	IP-10/CXCL10
IL-6	KC-like
IL-7	MCP-1/CCL2
IL-8/CXCL8	TNF α
IL-10	

Metabolism/ Endocrinology

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

Amylin (total)	Insulin
Ghrelin (active) %	Leptin
GIP (total)	Pancreatic Polypeptide
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) **NEW!**

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) **NEW!**

Albumin	RBP4
β -2-Microglobulin	TFF3

Immunology

Feline Cytokine / Chemokine
(Cat. No. FCYTOMAG-20K)
(Cat. No. FCYTMAG-20K-PMX) **13**

sFas	IL-13
Flt3 Ligand	IL-18
GM-CSF	GRO/KC
IFN γ	MCP-1/CCL2
IL-1 β	PDGF-BB
IL-2	RANTES/CCL5
IL-4	SCF
IL-6	SDF-1
IL-8/CXCL8	TNF α
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. PCYTOMAG-23K)
(Cat. No. PCYTMG-23K-13PX) **13**

GM-CSF	IL-6
IFN γ	IL-8/CXCL8
IL-1 α	IL-10
IL-1Ra	IL-12
IL-1 β	IL-18
IL-2	TNF α
IL-4	

Immunology

Multi-species TGF β - Single
Plex ▼
(Cat. No. TGFBMAG-64K-01)

TGF β 1	
---------------	--

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

TGF β 1	TGF β 3
TGF β 2	

Metabolism/ Endocrinology

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

Cortisol	T3
Estradiol	T4
Progesterone	

% Requires a protease inhibitor during sample collection

▼ Panel only premix

Intracellular Multiplex Assays

Phosphoprotein and Total Detection

New Challenges, Faster Answers

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Cellular Metabolism Multiplex Assays

- Quickly measure levels of multiple proteins within panels using small samples
- 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
- Conduct these measurements using minimal sample volumes

Cell Signaling Phosphoprotein & Total Multiplex Assays

- Measure multiple total or phosphoproteins in a single sample
- Conduct these measurements using minimal sample volumes

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-1 α
Lactate Dehydrogenase A (LDA)
Lactate Dehydrogenase B (LDB)
Pyruvate Kinase Isozyme M2 (PKM2)
Transketolase

Rat/Mouse Oxidative Phosphorylation

(Cat. No. RMOXPSMAG-17K) ▼

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

Human Oxidative Phosphorylation

(Cat. No. HOXPSMAG-16K) ▼

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

Multi-species Pyruvate Dehydrogenase (PDH) Complex

(Cat. No. PDHMAG-13K) ▼

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

Cell Signaling Phosphoprotein + Total 2 Plex Assays

Akt Phospho/Total – 2 Plex

(Cat. No. 48-618MAG) AB2 ▼

Analyte	Total	Phosphorylated
Akt/PKB		✓ (Ser473)
Akt/PKB	✓	

CREB Phospho/Total – 2 Plex

(Cat. No. 48-628MAG) AB1 ▼

NEW!

Analyte	Total	Phosphorylated
CREB		✓ (Ser133)
CREB	✓	

Erk/MAPK 1/2 Phospho/Total – 2 Plex

(Cat. No. 48-619MAG) AB2 ▼

Analyte	Total	Phosphorylated
Erk/MAPK 1/2		✓ (Thr185/Tyr187)
Erk/MAPK 1/2	✓	

IRS1 Phospho/Total – 2 Plex

(Cat. No. 48-626MAG) AB2 ▼

NEW!

Analyte	Total	Phosphorylated
IRS1		✓ (Ser636)
IRS1	✓	

mTOR Phospho/Total – 2 Plex

(Cat. No. 48-625MAG) AB2 ▼

NEW!

Analyte	Total	Phosphorylated
mTOR		✓ (Ser2448)
mTOR	✓	

JNK Phospho/Total – 2 Plex

(Cat. No. 48-622MAG) AB2 ▼

Analyte	Total	Phosphorylated
JNK/SAPK1		✓ (Thr183/Tyr185)
JNK/SAPK1	✓	

STAT3 Phospho/Total – 2 Plex

(Cat. No. 48-623MAG) AB2 ▼

Analyte	Total	Phosphorylated
STAT3		✓ (Tyr705)
STAT3	✓	

Cell Signaling

Akt/mTOR (Phosphoprotein) – 11 Plex

(Cat. No. 48-611MAG) AB2 ▼

Analyte	Total	Phosphorylated
Akt/PKB		✓ (Ser473)
GSK3 α		✓ (Ser21)
GSK3 β		✓ (Ser9)
IGF1R		✓ (Tyr1135/1136)
IR		✓ (Tyr1162/1163)
IRS1		✓ (Ser636)
mTOR		✓ (Ser2448)
p70S6 Kinase		✓ (Thr389/412)
PTEN		✓ (Ser380)
RPS6		✓ (Ser235/236)
TSC2		✓ (Ser939)

Akt/mTOR (Total) – 11 Plex

(Cat. No. 48-612MAG) AB2 ▼

Analyte	Total	Phosphorylated
Akt/PKB	✓	
GSK3 α	✓	
GSK3 β	✓	
IGF1R	✓	
IR	✓	
IRS1	✓	
mTOR	✓	
p70S6 Kinase	✓	
PTEN	✓	
RPS6	✓	
TSC2	✓	

Early Apoptosis – 7 Plex

(Cat. No. 48-669MAG) AB2 ▼

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

Early Apoptosis – 7 Plex

(Cat. No. 48-669MAG) AB2 ▼

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

Human Late Apoptosis – 3 Plex

(Cat. No. 48-670MAG) AB1 ▼

Analyte	Total	Phosphorylated
Active Caspase 3	✓	
Cleaved PARP	✓	
GAPDH	✓	

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	✓	
HSP90 α	✓	

▼ Premix panel only

AB1: Uses Assay Buffer 1

AB2: Uses Assay Buffer 2

Cell Signaling, continued

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

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

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)

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)
CREB		✓ (Ser133)
Erk/MAPK 1/2		✓ (Thr185/Tyr187)
NFκB		✓ (Ser536)
JNK/SAPK1		✓ (Thr183/Tyr185)
p38/SAPK2A/B		✓ (Thr180/Tyr182)
p70S6 Kinase		✓ (Thr389/412)
STAT3		✓ (Ser727)
STAT5A/B		✓ (Tyr694/699)

Human NFκB – 6 Plex
(Cat. No. 48-630MAG) AB1 ▼

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

Src Family Kinase Active Site
(Phosphoprotein) – 8 Plex
(Cat. No. 48-650MAG) AB2 ▼

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

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MILLIPLEX® MAP DNA Damage/Gen
Lit. No. TN3300EUNU

STAT (Phosphoprotein) – 5 Plex

(Cat. No. 48-610MAG) AB2 ▼

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

T-Cell Receptor (Phosphoprotein) – 7 Plex

(Cat. No. 48-690MAG) AB2 ▼

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

TGFβ – 6 Plex

(Cat. No. 48-614MAG) AB2 ▼

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

▼ Premix panel only

AB1: Uses Assay Buffer 1

AB2: Uses Assay Buffer 2

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:
- Magnetic and non-magnetic bead MAPmate™ assays
 - 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 1) (Ser473)	46-601MAG	H,M,R	●	○
Akt/PKB (assay buffer 1) (Thr308)	46-645MAG	H,M,R	●	○
Akt/PKB (assay buffer 1) (Total)	46-605MAG	H,M,R	●	○
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	●	●
BAD (Total)	46-695MAG	H,M	●	●
Caspase 3 (Active)	46-604MAG	H,M	●	●
c-Jun (Ser73)	46-622MAG	H,M,R	●	●
c-Kit (pan Tyr)	46-619MAG	H	●	●
c-Kit (Total)	46-620MAG	H	●	●
c-Met/HGFR (pan Tyr)	46-651MAG	H	●	●
c-Met/HGFR (Total)	46-650MAG	H	●	●
CREB (Ser133)	46-631MAG	H,M,R	●	●
CREB (Total)	46-632MAG	H,M,R	●	●
EGF Receptor (pan Tyr)	46-603MAG	H	●	●
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	●	●
HIF-1α (Total)	46-665MAG	H,M,R	●	●

Magnetic Bead MAPmate™ kits	Cat. No.	Species Homology	AB1	AB2
HSP27 (Ser78)	46-607MAG	H	●	●
HSP27 (Total)	46-608MAG	H	●	●
IRS1 (pan Tyr)	46-627MAG	H,M,R	●	●
IRS1 (Total)	46-628MAG	H,M,R	●	●
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	○	●
Lck (Tyr394)	46-712MAG	H,M,R	●	●
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 (Ser380)	46-679MAG	H,M,R	●	●
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	●	●
Src (Total)	46-709MAG	H,M,R	●	●
STAT1 (Tyr701)	46-655MAG	H,M	●	●
STAT1 (Total)	46-654MAG	H,M	●	●
STAT3 (Ser727)	46-623MAG	H,M,R	●	●
STAT3 (Tyr705)	46-624MAG	H,M,R	●	●
STAT3 (Total)	46-625MAG	H,M,R	●	●
STAT5A/B (Tyr694/Tyr699)	46-641MAG	H,M,R	●	●
Tie2 (pan Tyr)	46-716MAG	H	●	●
Tie2 (Total)	46-717MAG	H	●	●
VEGFR2 (pan Tyr)	46-718MAG	H	●	●
VEGFR2 (Total)	46-719MAG	H	●	●

● Recommended	H Human	AB1: Assay Buffer 1
● Acceptable	M Mouse	AB2: Assay Buffer 2
○ Not Recommended	R Rat	

Cell Signaling, continued

Lysates

Lysate Description	Cat. No.
HeLa: Unstim	47-205
Jurkat: Unstim	47-206
Jurkat: Anisomycin	47-207
Jurkat: H ₂ O ₂	47-208
A431: EGF	47-210
HeLa:HS/Ars	47-211
NIH3T3: PDGF-AB	47-213
MCF7: IGF-1	47-216
Daudi: IL-4	47-217
A549: Camptothecin	47-218
NIH3T3: Anisomycin	47-219
Jurkat: Paclitaxel	47-220
Ramos: PVD	47-224
HL-60: PVD	47-225
HeLa: IFN α	47-226

Lysate Description	Cat. No.
HepG2: Insulin	47-227
HeLa: Lambda Phosphatase	47-229
HeLa: TNF α +CaLA	47-230
HepG2: Unstim (1)	47-231
HepG2: DCA	47-232
HEK293: Serum	47-233
HepG2:Unstim (2)	47-234
HepG2: TGF β	47-235
THP-1: Serum	47-236
HFF-1: Serum	47-237
HUVEC: Serum	47-238
HepG2: Unstim(3)	47-239
NTERA-2: Unstim	47-241
MCF-7: Unstim	47-242
Rat Heart Lysate	50-100



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** – Entry-level platform to measure up to 50 analytes in as little as 25 μ L
- **Powerful** – More than 110 (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 μ L 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



For complete information on MILLIPLEX® Analyst 5.1 software, BioTek® Plate washing solutions, and Advanced Customer Training (ACT) please see our Luminex® xMAP® Technology Brochure (Literature Code DS0012ENEU).

MILLIPIX® Analyst 5.1 Software

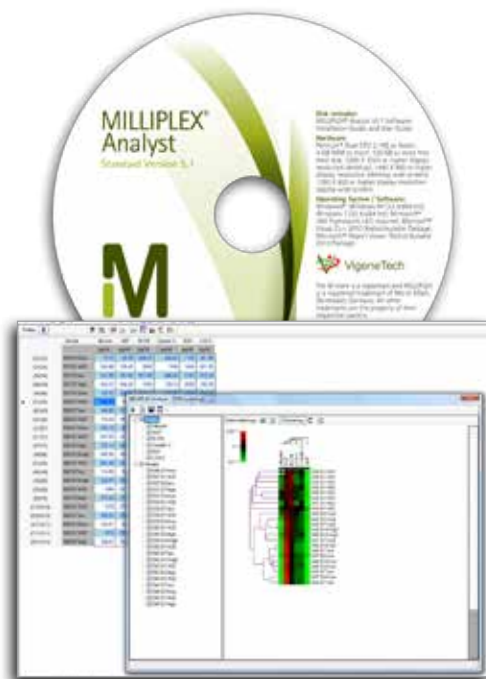
MILLIPIX® Analyst 5.1

(Cat. No. 40-086 MILLIPIX® Analyst 5.1 – 1 seat license)

(Cat. No. 40-087 MILLIPIX® Analyst 5.1 – 5 seat license)

MILLIPIX® Analyst software offers simple integration with the Luminex® xPONENT® system

- Seamless loading of data via the Quick Start "Wizard"
- Automatic importing of data from Luminex® instruments using our novel "Watchdog" feature
- Our superior algorithms yield better data from the low and high ends of the standard curve
- Comprehensive, detailed reports and enhanced visualization



New features and improvements of MILLIPIX® Analyst 5.1 software

- Complete with CD and Dongle USB/Thumb drive for quick and easy installation
- Auto-detect feature for standards, quality controls, and samples
- Easily analyze data from multiple sources including Luminex® 1.7 file formats, Microsoft Excel®, Bio-Plex®, and other Luminex® data analysis-related software programs
- The best curve fit possible using our unique algorithms
- Qualitative analysis allows for relative comparisons between samples and analytes
- Curve Potency feature (comparing two or more standard curves)
- Create custom formats for importing data
- Export compatible: PDF and Microsoft Excel® formats
- Reports values for CHI, Recovery, and CVs
- Even very large data sets are calculated in seconds
- Full support of Microsoft Windows® 7, 32-bit and 64-bit
- Complete support from our world-class technical service team

Bring your biomarkers to life. GyroMark™ HT Assays

Introducing new, fully qualified kits for the Gyrolab™ platform!

Kit	Species	Catalog No.
Clusterin	Rat	GYRCLU-37K NEW!
GLP-1, Active	Multi-species	GYGLP1A-35K NEW!
GLP-1, Total	Multi-species	GYGLP1T-36K NEW!
KIM-1	Rat	GYRKIM1-20K NEW!
Insulin	Rat/Mouse	GYRMI-13K NEW!
Insulin	Human	Coming Soon!
Glucagon	Human	Coming Soon!
NGAL/Lipocalin-2	Rat	Coming soon!
β-2-Microglobulin	Human	Coming Soon!
Cystatin C	Human	Coming Soon!

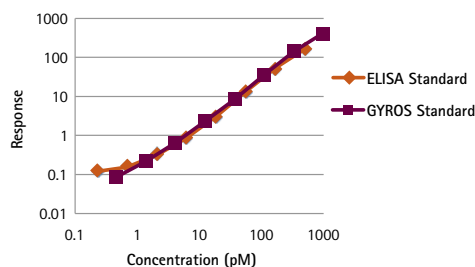


We build custom kits to meet your specific needs!

Advantages of using Merck Millipore off-the-shelf or custom-made assays, compared to developing and validating your own Gyrolab™ assays:

- Fully qualified, robust and reproducible assays
- High correlation to ELISAs and Luminex® assays
- Order specific lots of reagents to minimize variation and lot-to-lot drift
- Off-the-shelf kits including all the components to run an assay
- Merck Millipore has over 25 years experience in kit development

GLP-1 Active Gyros vs. ELISA Standard



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.

GyroMark™ HT Kits—everything you need in one, easy-to-use format:

- Buffers (specifically made for the Gyrolab™ platform)
- Standards (recombinant proteins validated to World Health Organization standards, when available)
- Quality Controls (low, middle and high concentration values to confirm kit performance)
- Capture and Detection Antibody Pairs (selected for optimal performance)
- Preloaded CD (produced by Gyros)

Single Protein Analysis

Quantify critical targets and interpret cell-based assays using Merck Millipore's highly validated, preconfigured ELISA and RIA assays and reagents. Our gold standard immunoassays will provide your research team with the sensitivity and reliability you have come to know and trust. We advance your research in many research areas including metabolic disease (diabetes, obesity, cardiovascular), inflammation, immunology, neuroscience, oncology and cell signaling. Plus, some of our most popular ELISAs are available in a 10-pack format.

Cytokine ELISAs

Kit	Species	Catalog No.
IL-1 β	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
IL-6	Rat	EZRIL6
IL-8/CXCL8	Human	EZHIL8
IL-10	Human	EZHIL10
IL-10	Mouse	EZMIL10
IL-12 (p70)	Human	EZHIL12P70
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	RZRTNFA

Neuroscience ELISAs

Kit	Species	Catalog No.
α -Synuclein	Human/Rat/ Mouse	NS400
Amyloid Beta, 1-40	Human	EZHS40
Amyloid Beta, 1-42	Human	EZHS42
Amyloid Beta, SET	Human	EZHS-SET
Amyloid Beta (Brain), 1-40	Human	EZBRAIN40
Amyloid Beta (Brain), 1-42	Human	EZBRAIN42
Amyloid Beta (Brain), SET	Human	EZBRAIN-SET
Brain Derived Neurotrophic Factor (BDNF)	Human/Rat	CYT306
Glial Fibrillary Acidic Protein (GFAP)	Human/Rat/ Mouse	NS830

Kit	Species	Catalog No.
Nerve Growth Factor (NGF)	Rat/Mouse	CYT304
Neuropeptide Y (NPY)	Human	EZHNPY-25K
Neuropeptide Y (NPY)	Rat/Mouse	EZRMNPY-27K
Phosphorylated Neurofilament (pNF-H)	Multi- species	NS170
Pigment Epithelium Derived Factor (PEDF)	Human	CYT420
S100B	Human	EZHS100B-33K

ELISA – Circulating Biomarkers

Kit	Species	Catalog No.
Adiponectin 10 - Pack	Human	EZHADP-61K EZHADP-61BK
Adiponectin 10 - Pack	Mouse	EZMADP-60K EZMADP-60BK
Adiponectin	Rat	EZRADP-62K
Adiponectin	Canine	EZCADP63K
Adiponectin – High Molecular Weight 10 - Pack	Human	EZHMWA-64K EZHMWA-64BK
Amylin (active) [•] 10 - Pack	Human	EZHA-52K EZHA-52BK
Apo AIV	Human	EZHAPOA4-73K
BDNF	Human/Rat	CYT306
Chemerin	Human	EZHCMRN-57K
C-Peptide 10 - Pack	Human	EZHCP-20K EZHCP-20BK
C-Peptide 2	Rat/Mouse	EZRMCP2-21K
CRP	Human	CYT298
CRP	Rat	CYT294

Contact your Sales Specialist to obtain your copy of our featured white papers!

Glucagon ELISA, Lit. No. AN4993ENEU

S100B as a Biomarker, Lit. No. TB3664ENEU

Measure Cytokine Levels, Lit. No. AN4323ENEU

ELISA – Circulating Biomarkers, continued

Kit	Species	Catalog No.
CRP	Canine	CYT296
FABP-3 10 - Pack	Human	EZHFBP3-38K EZFBP3-38BK
FGF-21	Human	EZHFGF21-19K
FGF-21	Rat/Mouse	EZRMFGF21-26K
FGF-23 10 - Pack	Human	EZHFGF23-32K EZHFGF23-32BK
FGF-23 10 - Pack	Rat	EZRFGF23-42K EZRFGF23-42BK
FGF-23 10 - Pack	Mouse	EZMFGF23-43K EZMFGF23-43BK
Ghrelin (active) 10 - Pack	Human	EZGRA-88K EZGRA-88BK
Ghrelin (active)	Rat/Mouse	EZRGRA-90K
Ghrelin (total) 10 - Pack	Human	EZGRT-89K EZGRT-89BK
Ghrelin (total)	Rat	EZRGRT-91K
GIP (total) 10 - Pack	Human	EZHGIP-54K EZHGIP-54BK
GIP (total) 10 - Pack	Rat/Mouse	EZRMGIP-55K EZRMGIP-55BK
GLP-1 (active) • 10 - Pack	Multi-species	EGLP-35K EGLP-35BK
GLP-1 High Sensitivity (active) 10 - Pack	Multi-species	EZGLPHS-35K EZGLPHS-35BK
GLP-1 (total) 10 - Pack	Multi-species	EZGLP1T-36K EZGLP1T-36BK
GLP-2 (total) 10 - Pack	Human/Rat	EZGLP2-37K EZGLP2-37BK
Glucagon ■ 10 - Pack	Human/Rat/ Mouse	EZGLU-30K EZGLU-30BK
Growth Hormone 10 - Pack	Rat/Mouse	EZRMGH-45K EZRMGH-45BK
IFN α	Human	CYT271
Insulin 10 - Pack	Human	EZHI-14K EZHI-14BK
Insulin 10 - Pack	Rat/Mouse	EZRMI-13K EZRMI-13BK
Insulin (Animal Serum Free)	Human	EZHIASF-14K
Laminin	Human	ECM310
Leptin Dual Range 10 - Pack	Human	EZHL-80SK EZHL-80BK
Leptin 10 - Pack	Mouse	EZML-82K EZML-82BK
Leptin 10 - Pack	Rat	EZRL-83K EZRL-83BK
Leptin	Canine	EZCL-31K
NGAL/Lipocalin-2 10 - Pack	Mouse	EZMNGAL-39K EZMNGAL-39BK
Omentin-1	Human	EZHOMNTN1-29K
Pancreatic Polypeptide 10 - Pack	Human	EZHPP40K EZHP-40BK

Kit	Species	Catalog No.
Procollagen Type IIA - N-Propeptide (PIIANP)+	Human	EZPIIANP-53K
Proinsulin (Intact)	Human	EZHIPI-17K
Proinsulin (total) 10 - Pack	Human	EZHPI-15K EZHIPI-15BK
PYY (total) 10 - Pack	Human	EZHPIYYT66K EZHPIYYT-66BK
RBP4	Human	EZHRBP4-18K
Resistin 10 - Pack	Human	EZHR-95K EZHR-95BK
SAA-3	Mouse	EZMSAA3-12K

RIA

Kit	Species	Catalog No.
Adiponectin	Human	HADP-61HK
C-Peptide	Human	HCP-20K
C-Peptide	Canine	CCP-24HK
Ghrelin (active)	Human	GHRA-88HK
Ghrelin (total)	Human	GHRT-89HK
GLP-1 (active)	Multi-species	GLP1A-35HK
GLP-1 (total)	Multi-species	GLP1T-36HK
Glucagon	Multi-species	GL-32K
Insulin	Rat	RI-13K
Insulin	Porcine	PI-12K
Insulin Lispro		LPI-16K
Insulin Specific	Human	HI-14K
Insulin	Rat	SRI-13K
Leptin	Human	HL-81K
Leptin	Multi-species	XL-85K
Proinsulin	Human	HPI-15K
PYY (3-36) Specific	Human	PYY-67HK
PYY (total)	Human	PYYT-66HK

- Solid Plate Format
- Requires Sample Extraction



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Lit. No. PF1089ENEU Rev. X 11/2014 MIL-187 BS GEN-14-10850-EX
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