

Cytokines and Chemokines

Human

BDNF	IL-6	MCP-1	RANTES
CTACK [‡]	IL-6R	MCP-2 [‡]	SDF-1 α [‡]
Eotaxin	IL-7	MCP-3 [‡]	TARC
Eotaxin-3	IL-8	MCP-4	TGF- β 1
G-CSF	IL-10	MDC	TGF- β 2 [‡]
GM-CSF	IL-12	MIG	TGF- β 3 [‡]
ENA-78 [‡]	IL-12p40	MIP-1 α	TIMP-1 [*]
GRO- α	IL-12p70	MIP-1 β	TIMP-2 [‡]
IFN- α	IL-13	MIP-3 α	TNF- α
IFN- β	IL-15	MIP-3 β [‡]	TNF-RI
IFN- γ	IL-16	MMP-1	TNF-RII
IL-1 α	IL-17	MMP-2	TSLP [‡]
IL-1 β	IL-18 [‡]	MMP-3	TWEAK [‡]
IL-1ra [‡]	IL-23 [‡]	MMP-8 [‡]	
IL-2	IP-10	MMP-9	
IL-4	I-TAC	MMP-10	
IL-5	M-CSF	NGAL [‡]	

Mouse

GM-CSF	MIP-1 α [‡]
IFN- γ	MIP-1 β [‡]
IL-1 β	MIP-2 [‡]
IL-2	MIP-3 α [‡]
IL-4	MMP-9 [‡]
IL-5	RANTES
IL-6	TNF- α
IL-10	TNF-RI
IL-12	TNF-RII
IL-12p40	
IL-12p70	
IL-13	
IL-17	
KC/GRO/CINC (CXCL1)	
MCP-1	
M-CSF [‡]	

Rat

CINC-2 [‡]	TIMP-1 [‡]
CINC-3 [‡]	TNF- α
CNTF-1 [‡]	
GM-CSF	
IFN- γ	
IL-1 α	
IL-1 β	
IL-2 [‡]	
IL-4	
IL-5	
IL-6	
IL-10 [‡]	
IL-13	
KC/GRO/CINC (CXCL1)	
MCP-1	
MIP-3 α	

Canine

GM-CSF [‡]
IFN- γ [‡]
IL-2
IL-6
IL-8
IL-10
MCP-1 [‡]
TNF- α

[‡] Available through our Prototype Printing Services ^{*} Qualified Kit

Multiplex Panels

Panel	Analytes	Panel	Analytes
Human TH1/TH2 7-Plex	IFN- γ , IL-2, IL-4, IL-5, IL-10, IL-12p70, IL-13	Human Chemokine 9-Plex	Eotaxin, Eotaxin-3, IL-8, IP-10, MCP-1, MCP-4, MDC, MIP-1 β , TARC
Human TH1/TH2 10-Plex	IFN- γ , IL-1 β , IL-2, IL-4, IL-5, IL-8, IL-10, IL-12p70, IL-13, TNF- α	Human Demonstration 4-Plex	IL-1 β , IL-2, IL-6, TNF- α
Human ProInflammatory 4-Plex I	IFN- γ , IL-1 β , IL-6, TNF- α	Human Demonstration 7-Plex	GM-CSF, IL-1 β , IL-2, IL-5, IL-6, IL-8, TNF- α
Human ProInflammatory 4-Plex II	IL-1 β , IL-6, IL-8, TNF- α	Human Demonstration 10-Plex	GM-CSF, IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, TNF- α
Human ProInflammatory 7-Plex	IFN- γ , IL-1 β , IL-6, IL-8, IL-10, IL-12p70, TNF- α	Mouse TH1/TH2 9-Plex	IFN- γ , IL-1 β , IL-2, IL-4, IL-5, KC/GRO/CINC, IL-10, IL-12 total, TNF- α
Human ProInflammatory 9-Plex	GM-CSF, IFN- γ , IL-1 β , IL-2, IL-6, IL-8, IL-10, IL-12p70, TNF- α	Mouse ProInflammatory 7-Plex	IFN- γ , IL-1 β , IL-6, IL-10, IL-12p70, KC/GRO/CINC, TNF- α
Human MMP 2-Plex	MMP-2, MMP-10	Rat Demonstration 7-Plex	IFN- γ , IL-1 β , IL-4, IL-5, IL-13, KC/GRO/CINC, TNF- α
Human MMP 3-Plex	MMP-1, MMP-3, MMP-9	Canine ProInflammatory Panel 3	IL-2, IL-6, IL-8, TNF- α
Human Chemokine 7-Plex	Eotaxin, IL-8, IP-10, MCP-1, MCP-4, MIP-1 β , TARC		

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Disease-focused Biomarkers

Metabolic Markers

Adiponectin (human, mouse, rat)	Total GLP-1 (ver. 2)
C-Peptide (human, rat)	Total GLP-1 (human/mouse/rat)
Active Ghrelin (human) [‡]	Glucagon (human/mouse/rat)
Ghrelin (mouse/rat)	Insulin (human, mouse/rat)
Active GLP-1 (ver. 2)	Leptin (human, mouse, rat)
Active GLP-1 (7-36) amide	Resistin (human, mouse/rat)
Active GLP-1 (human/mouse/rat)	sRAGE (human, mouse, rat) [‡]
sFas (human) [‡]	Total PAI-1 (human, mouse) [‡]
FasL (human) [‡]	Total PYY (human, mouse/rat) [‡]
GLP-1 (x-36) amide	

Multiplex Panels

Adiponectin, Resistin (mouse)	Active GLP-1 (7-36) amide, Insulin, Glucagon, Leptin (human)
Leptin, Insulin (human, mouse, rat)	Insulin Signaling Panel (Total Protein) (IR, IGF-1R, IRS-1)
Glucagon, Insulin (mouse/rat)	Insulin Signaling Panel (Phosphoprotein) (pIR, pIGF-1R, pIRS-1)
Active GLP-1(7-36) amide, Insulin, Glucagon (mouse/rat)	
Active GLP-1, Insulin, Glucagon (mouse/rat)	
GLP-1(7-36) amide, Insulin, Glucagon (human, mouse/rat)	
Active GLP-1, Insulin, Glucagon, Leptin (human)	

Alzheimer's Disease

Abeta 38 (human, rodent)	sAPPβ sw (human, mouse/rat)
Abeta 40 (human, rodent)	β-Secretase (activity assay)
Abeta 42 (human, rodent)	Tau (human, mouse)
sAPPα (human)	Total Abeta (human)
sAPPβ (human, mouse/rat)	

Multiplex Panels

Abeta 38, Abeta 40, Abeta 42 — 6E10 detection (human)
Abeta 38, Abeta 40, Abeta 42 — 4G8 detection (human, mouse, rat)
Abeta 38, Abeta 40, Abeta 42, Total Tau (human)
Abeta 38, Abeta 40, Abeta 42, pTau (T231) (human)
Abeta 38, Abeta 40, Abeta 42, sAPPα (human)
Abeta 40, sAPPβ sw (human)
sAPPα, sAPPβ (human)
Tau (pT231), Total Tau (human, mouse)

[‡] Available through our Prototype Printing Services * Qualified Kit

Vascular & Growth Factors Markers

Angiopoietin 1 (human) [‡]	sICAM-1 (human, rat) [‡]	TGF-β3 (human) [‡]
Angiopoietin 2 (human) [‡]	sICAM-3 (human)	Thrombomodulin (human)
E-Cadherin (human)	KDR (sVEGFR2) (human)	sVCAM-1 (human)
P-Cadherin (human)	sMet (human) [‡]	VEGF _(121/165) (human, mouse/rat)
β-Catenin (human)	β-NGF (human)	VEGF-C (human) [‡]
c-Kit (human)	PEDF/Serpin F1 (human) [‡]	VEGF-D (human) [‡]
CRP (human)	PIGF (human)	
EGF (human) [‡]	SAA (human)	
Endoglin (human) [‡]	E-Selectin (human)	
FGF acidic (human) [‡]	L-Selectin (rat) [‡]	
bFGF (human)	P-Selectin (human)	
sFlt-1 (sVEGFR1) (human)	TGF-β1 (human)	
HGF (human)	TGF-β2 (human) [‡]	

Multiplex Panels

Vascular Injury Panel I (human) (sICAM-3, E-Selectin, P-Selectin, Thrombomodulin)	Growth Factor Panel I (human) (bFGF, VEGF, sFlt-1, PIGF)
Vascular Injury Panel II (human) (CRP, sICAM-1, sVCAM-1, SAA)	Growth Factor Panel II (human) (c-Kit, KDR)
c-Kit (pY721), Total c-Kit (human)	Acute Phase Protein Panel 1 (rat) (A2M, AGP) [*]

Cardiac Markers

Apolipoprotein A1 (human) [‡]
Apolipoprotein C3 (human) [‡]
CKMB (human)
CRP (human)
LBP (human)
MPO (human)
Myoglobin (human)
NTproBNP (human)
Troponin-I (cTnI) (human)
Troponin-ITC Complex (rat)
Troponin-T (cTnT) (human)

Multiplex Panels

Cardiac Injury Panel 1 (human) (cTnI, CKMB, Myoglobin)
Cardiac Injury Panel 2 (rat) [*] (cTnI, cTnT, FABP3)
Cardiac Injury Panel 3 (rat) [*] (cTnI, cTnT, FABP3, MyI3)

Hypoxia Markers

EPO (human, mouse/rat)
HIF-1α (human)
IGFBP-1 (human)
VEGF _(121/165) (human, mouse/rat)

Multiplex Panels

EPO, VEGF (human)
Hypoxia Panel (mouse/rat) (EPO, VEGF)
Hypoxia Panel (human) (EPO, IGFBP-1, VEGF)

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Disease-focused Biomarkers

Toxicology Assays

α GST (rat)[‡]
 Clusterin (rat)^{*}
 Cystatin C (human)[‡]
 Luteinizing Hormone (LH) (human)^{*}
 NGAL (human)[‡]
 Skeletal Troponin I (rat)^{*}
 TIM-1/KIM-1/HAVCR (rat)^{*}
 TIMP-1 (human^{*}, rat[‡])

Multiplex Panels

Acute Phase Protein Panel 1 (rat)^{*}
 (A2M, AGP)
 Argutus AKI Test[®] (rat)^{*}
 (α GST, GSTYb1, RPA-1)
 Cardiac Injury Panel 2 (rat)^{*}
 (cTnI, cTnT, FABP3)
 Cardiac Injury Panel 3 (rat)^{*}
 (cTnI, cTnT, FABP3, MyI3)
 Inflammation Panel 1 (rat)^{*}
 (Lipocalin-2, TSP-1, TIMP-1, MCP-1)
 Kidney Injury Panel 1 (rat)^{*}
 (Lipocalin-2, Osteopontin, Albumin, TIM-1)
 Kidney Injury Panel 2 (rat)[‡] (Clusterin, α GST, TIM-1,
 Cystatin C, Lipocalin-2, Osteopontin, Albumin)
 Muscle Injury Panel 1 (rat)^{*}
 (cTnI, cTnT, sTnI, FABP3, MyI3)
 Muscle Injury Panel 2 (rat)[‡] (Parvalbumin, TIMP-1, CK)

Fertility Markers

Estradiol (human, mouse, rat)
 FSH (human)
 HCG (human)[‡]
 Luteinizing Hormone (LH) (human)^{*}
 Progesterone (human)
 Prolactin (human)
 TSH (human)[‡]
 T3 (human, mouse, rat)[‡]
 T4 (human, mouse, rat)[‡]

Multiplex Panels

Fertility Panel I (human)
 (LH, FSH, Progesterone)
 Steroid Hormone Panel 1 (human/mouse/rat)
 (Estradiol, Progesterone, Testosterone and DHEA)[‡]

Bone Markers

ALP (human)
 Calprotectin (human)[‡]
 Osteoprotegerin (human)
 Osteocalcin (human)
 Osteonectin (human)
 Osteopontin (human)
 Sclerostin (human)

Multiplex Panels

Bone Panel I (human)
 (ALP, Sclerostin, Osteoprotegerin)
 Bone Panel II (human)
 (Osteocalcin, Osteonectin, Osteopontin)

[‡] Available through our Prototype Printing Services ^{*} Qualified Kit

Oncology Markers

AFP (human)
 bFGF (human)
 E-Cadherin (human)
 P-Cadherin (human)
 Cancer Antigen 125 (human)
 Cancer Antigen 19.9 (human)
 Cancer Antigen 15.3 (human)[‡]
 CEA (human)
 c-Kit (human)
 sEGFR (human)
 sErbB2 (human)
 sFas (human)[‡]
 MMP-9 (human)
 Osteopontin (human)
 uPA (human)[‡]
 PSA (human)[‡]
 TIMP-1 (human^{*}, rat[‡])
 sVCAM-1 (human)
 VEGF_(121/165) (human, mouse/rat)

BioProcess Assays

CHO HCP
 Methotrexate (MTX)
 Protein A (ProA)
 Insulin

Multiplex Panels

Bioprocess Panel I (CHO, ProA)
 Bioprocess Panel II (CHO, MTX, Insulin)

Additional Applications

Intact (Whole) Antibodies (human)
 Isotyping Panel 1 (mouse)
 (IgGA, IgG1, IgG2a, IgG2b, IgG3, IgM)
 Immunoglobulin Isotyping and Quantification
 Cell-Based Antibody Screening
 cAMP
 Immunogenicity
 Neutralization Assays
 Pharmacokinetic Assays for Protein Therapeutics

MESO SCALE DISCOVERY Assays and Kits



Cell Signaling Pathways

Singleplex Kits

4EBP1	<i>pT37/46</i> [‡]	Histone H3	<i>pS10</i>	PARP	<i>D214 (cleaved)</i>
AKT	<i>pS473</i> <i>pT308</i> Total	HSP27	<i>pS15</i> <i>pS78</i> <i>pS82</i> Total	PDGFR-β	<i>pY751</i>
AMPK-α1	<i>pS485</i> [‡] <i>pT174/172</i> [‡] Total [‡]	HSP70	Total	Rb	<i>pS608</i> <i>pS780</i> Total
Aurora A	<i>pT288</i>	IGF-1R	<i>pY</i> Total	S6RP	<i>pS235/236</i> <i>pS240/244</i> Total
BAD	<i>pS112</i> Total	IR	<i>pY</i> Total	STAT3	<i>pY705</i>
c-Jun	<i>pS63</i>	IRS-1	<i>pS312</i> Total	STAT4	<i>pY693</i> Total
c-Kit	<i>pY721</i> Total	JNK	<i>pT183/pY185</i> Total	STAT5a/b	<i>pY694</i> Total
Caspase-3	<i>p20/p17 (cleaved)</i> Total	MAPKAPK-2	<i>pT334</i>	Tau	<i>pT231</i> <i>pS202</i> <i>pS262</i> [‡] <i>pS396</i> [‡] <i>pT181</i> Total
EGFR	<i>pY1173</i> <i>pY1068</i> Total	MEK1/2	<i>pS217/221</i> Total	Tuberin	<i>pT1462</i> [‡]
ErbB2	<i>pY1248</i> Total	MEK2	Total	VASP	<i>pS157</i> <i>pS239</i> Total
ErbB3 (HER3)	<i>pY</i> [‡]	Met	<i>pY1349</i> Total	VEGFR2	<i>pY1054</i> <i>pY1175</i> Total
ERK1/2	<i>(pT202/pY204), (pT185/pY187)</i> Total	mTOR	<i>pS2448</i>		
ERK5	<i>pT218/pY220</i>	NFκB	<i>pS536</i> <i>pS468</i> Total [‡]		
GAPDH [‡]		p38	<i>pT180/pY182</i> Total		
GSK-3α	<i>pS21</i> Total [‡]	p53	<i>pS15</i> Total		
GSK-3β	<i>pS9</i> Total	p70S6K	<i>pT421/pS424</i> <i>pT389</i> Total		
HIF-1α	Total				

[‡] Available through our Prototype Printing Services

Multiplex Kits

Activated/Total Panels

Akt (pS473), Total Akt	p53 (pS15), Total p53
BAD (pS112), Total BAD	p70S6K (pT421/pS424), Total p70S6K
Caspase-3 (Cl. p20/p17), Total Caspase-3	Rb (pS608), Total Rb
EGFR (pY1173), Total EGFR	Rb (pS780), Total Rb
ErbB2 (pY1248), Total ErbB2	S6RP (pS240/244), Total S6RP
ERK1/2 (pT202/pY204)/(pT185/pY187), Total ERK1/2	STAT5a/b (pY694), Total STAT5a/b
GSK-3β (pS9), Total GSK-3β	Tau (pT231), Total Tau
HSP27 (pS15), Total HSP27	VASP (pS157), VASP (pS239), Total VASP
HSP27 (pS78), Total HSP27	
HSP27 (pS82), Total HSP27	
JNK (pT183/pY185), Total JNK	
c-Kit (pY721), Total c-Kit	
MEK1/2 (pS217/221), Total MEK1/2	
Met (pY1349), Total Met	
mTOR (pS2448), Total mTOR	
p38 (pT180/pY182), Total p38	

Multiplex Kits

MAP Kinase Panel (Phosphoprotein) (pERK1/2, pJNK, pp38)
MAP Kinase Panel (Total Protein) (ERK1/2, JNK, p38)
EGFR Family Panel (pEGFR, pErbB2, pIGF-1R)
Akt Signaling Panel (Phosphoprotein) (pAkt, pp70S6K, pGSK-3β)
Akt Signaling Panel (Total Protein) (Akt, p70S6K, GSK-3β)
Akt Signaling Panel II (Phosphoprotein) (pAkt, pp70S6K, pGSK-3β, pS6RP)
Apoptosis Panel (pp53, p53, Cl. Caspase-3, Cl. PARP)
ERK-STAT3 Cascade Panel (pERK1/2, pMEK1/2, pSTAT3)
Insulin Signaling Panel (Phosphoprotein) (pIR, pIGF-1R, pIRS-1)
Insulin Signaling Panel (Total Protein) (IR, IGF-1R, IRS-1)

Ubiquitin Pathway Kits

MDM2 - p53 complex
Total MDM2
Ubiquitinated MDM2
Total p53
Ubiquitinated p53
Self-Ubiquitinated MDM2 (Activity Assay)
Multiplex Panels
MDM2 (Ub), Total MDM2
p53 (Ub), Total p53

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