ELISA and multiplex assays

Thermo SCIENTIFIC invitrogen

Protein quantitation guide

Multiplex assays for the Luminex platform and ELISA kits

ThermoFisher SCIENTIFIC

An expansive offering of immunoassays for protein quantitation

Contents

This brochure is best viewed in electronic format. Section headers and catalog product numbers of all products link to more detailed information on our website.

The Novex brand name will be changing to Invitrogen with the same product that you know and trust. Look for the packaging to change in 2016.

Highly referenced kits you can trust

Our ELISA kits have been referenced in over 3,000 publications and our multiplex assays cited in over 1,000 publications.

We offer a wide range of immunodetection-based products—in convenient, ready-to-use formats for sensitive, specific detection of intracellular or extracellular proteins. We have developed antibody pair kits, enzyme-linked immunosorbent assay (ELISA) kits for single-analyte analysis, and multiplex assays for multi-analyte analysis. Our kits undergo a rigorous validation process for criteria such as sensitivity, specificity, precision, and lot-to-lot consistency, helping to enable dependably accurate results. You can use our Invitrogen™ and Thermo Scientific™ immunoassays to investigate any of these popular specific areas and more:

Protein targets	Species	Sample types
• Cytokines	• Human	• Serum
• Chemokines	• Mouse	• Plasma
• Signaling proteins	• Rat	• Cell culture supernatant
• Receptors	• Monkey	• Cell lysate
• Neurobiology markers	• Swine	• Tissue homogenate
• Growth factors	• Bovine	• Urine
• Adhesion molecules		• Cerebrospinal fluid
		• Other sample types

Characteristics of our antibody pair kits, ELISA kits, and multiplex assay kits

	Type of immunoassay		
	Antibody pair kits (page 18)	ELISA kits (page 4)**	Multiplex assay kits (page 20)
Ready-to-use reagents	No; need overnight coating process	Yes	Yes
Analytical sensitivity*	<10 pg/mL	<10 pg/mL	<10 pg/mL
Dynamic range*	<5–250 pg/mL	<5–250 pg/mL	<5–2,000 pg/mL
Incubation time*	4 hr	2.5–4 hr	3.5 hr
Multiplexability	No	No	Yes
Number of targets measured/well	1	1	1–50
Readout	HRP-TMB (colorimetric)	HRP-TMB (colorimetric)	RPE (fluorescent)
Instrumentation needed	Microplate reader	Microplate reader	Luminex™ instrument (Luminex™ 100/200™, MAGPIX™, or FLEXMAP 3D™ System)
Instrument read time	2 min	2 min	20–60 min

* Every assay has its own specifications. Please consult the protocol insert in your specific Invitrogen antibody pair, ELISA, or multiplex assay kit.
** Values in this table refer to standard colorimetric ELISA kits. Ultrasensitive ELISA kits are also available.

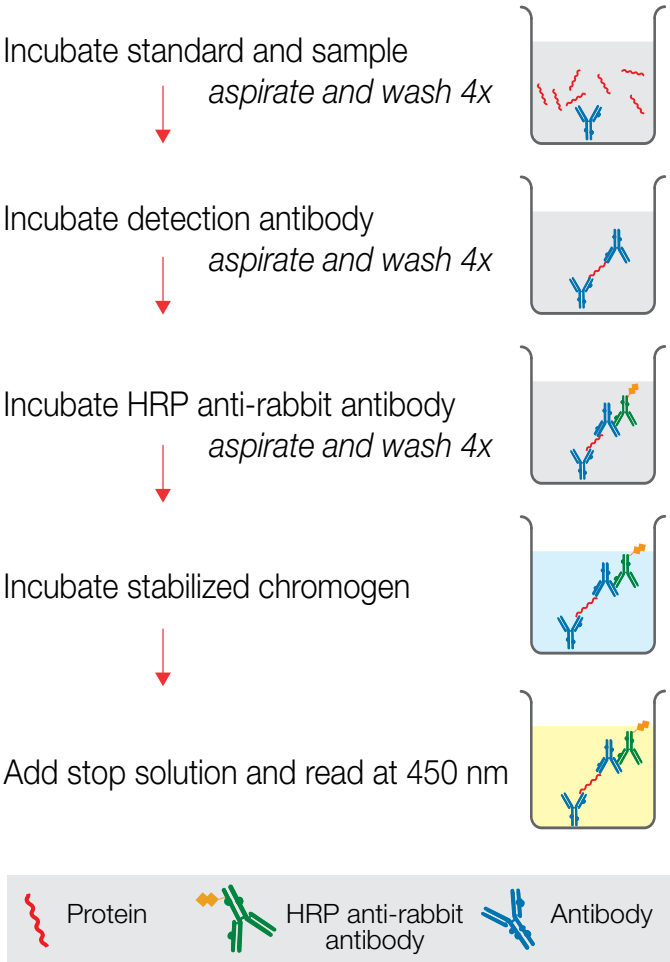
Visit **thermofisher.com/immunoassays** to find:

- Our helpful immunoassay selection guide that allows you to search for assays based on your target protein
- Detailed information on all of our antibody pair kits, ELISA kits, and multiplex assay kits
- Important data demonstrating our assay specificity and sensitivity

ELISA kits

Invitrogen and Thermo Scientific ELISA kits allow specific, quantitative measurements of proteins including cytokines, chemokines, beta amyloids, and signaling targets. Our ELISA kits come ready to use with a precoated 96-well plate and all necessary reagents. A detailed, easy-to-follow protocol with kit-specific performance information is also provided. Just add sample, run the assay, and get quantitative results in approximately half a day (Figure 1).

Typical ELISA kit workflow



Each kit typically includes:

- Antibody-coated 96-well plate
- Detector antibody
- Standard
- HRP conjugate
- Diluent buffers
- Wash buffer
- Chromogen
- Stop solution
- Plate covers

Figure 1. Fast and easy, 4-hour typical ELISA kit protocol. Capture antibodies are precoated on the bottom of the 96-well plate. The sample or standard is added to the wells and incubated to allow target proteins to bind. The wells are then washed to remove unbound material and the detection antibody is added and incubated to form a sandwich around the protein of interest. HRP, conjugated either to anti-rabbit antibody (as shown here) or to streptavidin if the detection antibody is conjugated to biotin, is then added. Next, the chromogen substrate for HRP is added and the subsequent enzymatic reaction turns the solution blue. Finally, the reaction is stopped, turning the solution yellow in proportion to the amount of target protein in the sample. Results are read in a microplate reader at 450 nm.

ELISA kits for protein analysis

Watch our online video and learn all about running an ELISA to measure target proteins in serum, plasma, supernatants, lysates, and other sample types. The ELISA is a widely accepted method for quantifying selected proteins and is often used in conjunction with western blotting to analyze proteins in research samples.

Visit **thermofisher.com/elisa** to learn more.

Our ELISA kits are developed to meet industry-standard specifications including standard calibration, precision, sensitivity, specificity, recovery, lot-to-lot consistency, linearity, and parallelism (Tables 1, 2, Figures 2–4). We research each protein to target physiologically relevant sensitivity and test in well-established models when available. Our kits are validated on sample types such as serum, plasma, cell culture supernatant, and cell lysates for signaling or phosphorylated proteins. Our ELISA kit manufacturing includes an ISO 13485 facility with stringent quality control to help provide excellent performance and reproducibility. Our products offer:

- Sensitive, accurate, and consistent performance
- Validation on serum, plasma, tissue culture supernatant, and cell lysates
- Ready-to-use, convenient assay in only half a day

Learn more about our standard and ultrasensitive colorimetric ELISA kits at **thermofisher.com/elisakits**

Table 1. Rigorous assay validation of ELISA kits helps ensure consistent, reliable results.

Specification	Description	What does it mean for you?
Standard calibration	Calibrated to NIBSC, if available	Allows accurate quantitation and consistent standard of reference across multiple platforms
Precision	Avg. inter-assay CV <10%, Avg. intra-assay CV <10%	Consistent results each time
Sensitivity (Figure 2)	Relevant levels of protein	Enables detection of low levels of protein
Specificity	Cross-reactivity tests are performed with similar analytes	Helps to ensure accurate measurement of the protein of interest
Recovery	Buffers are optimized to minimize matrix effects	Helps to ensure accurate quantitation of samples with a complex matrix, including serum and plasma
Lot-to-lot consistency (Figure 3)	In-house controls are tested to measure within set ranges	Helps to ensure consistent results with new lots
Linearity of dilution	Linear results over the quantitative range of the assay	Serial dilution of samples are quantitated accurately
Parallelism (Figure 4)	Recombinant protein standards mimic native proteins	Samples can be measured with confidence

Table 2. Recovery testing. The recovery of recombinant human IL-23 heterodimer added to human serum, EDTA plasma, citrate plasma, heparin plasma, and tissue culture medium containing 10% fetal bovine serum was measured using the Invitrogen Human IL-23 Heterodimer ELISA Kit (Cat. No. KHC0231).

Sample type	Average recovery
Serum	99%
EDTA plasma	88%
Citrate plasma	83%
Heparin plasma	86%
RPMI + 10% fetal bovine serum	116%*
DMEM + 10% fetal bovine serum	100%

* Occasional estimated recovery >100% is within the range of experimental values.

Find ELISA kits by target

Search, find, and compare by research target, gene symbol, and species. Visit **thermofisher.com/findelisa** to learn more.

ELISA kits

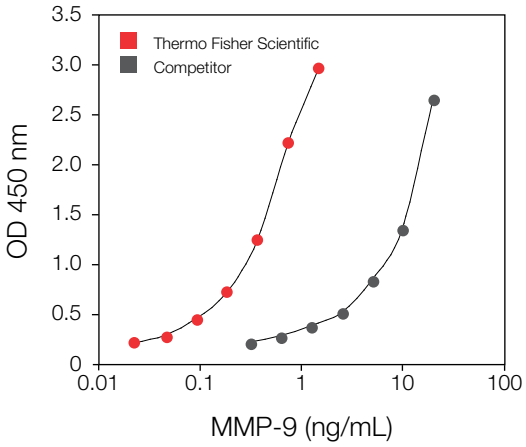


Figure 2. Higher sensitivity levels. The standard curves demonstrate the ability to measure lower levels of MMP-9 protein with the Invitrogen ELISA Kit (Cat. No. KHC3061) than with a competitor's kit.

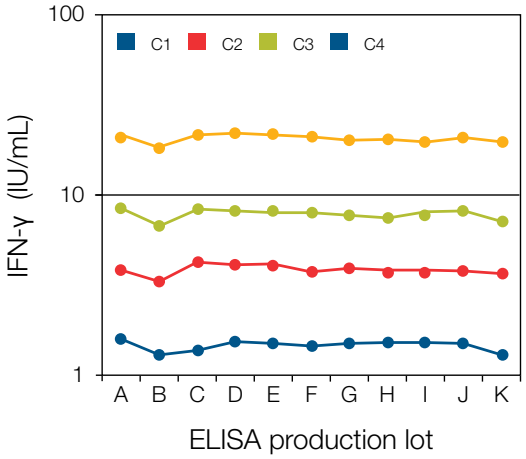


Figure 3. Lot-to-lot consistency. Individual production lots were analyzed using 4 levels of control specimens (C1–C4), which ensured low variation between lots (<20%).

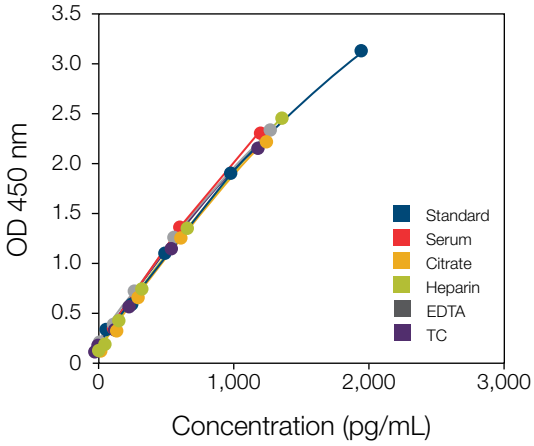


Figure 4. Parallelism testing to ensure recombinant standards are equivalent to natural samples. The data obtained with the recombinant sample standard (blue line) correlated very well with the data from serum, citrate, heparin, EDTA, and tissue culture (TC) using the Invitrogen Rat IL-6 ELISA Kit (Cat. No. KRC0061), helping ensure accurate quantitation.

Target	Quantity	Cat. No.
Human		
Activin A	96 assays	EHACTIVINA
ADAM11 (MDC)	96 assays	EHADAM11
ADAM9	96 assays	EHADAM9
Adiponectin	96 assays	KHP0041
Aggrecan	96 assays	KAP1461
AGRP	96 assays	EHAGRP
AHSG (Fetuin A)	96 assays	EHAHSG
Albumin (ALB)	96 assays	EHALB
ALCAM (CD166)	96 assays	EHALCAM
Alpha-fetoprotein	96 assays	EHAFP
Amphiregulin	96 assays	EHAREG
Angiogenin	96 assays	EHANG
Angiopoieti-4	96 assays	EHANGPT4
Angiopoietin-like 4	96 assays	EHANGPTL4
Angiopoietin-1	96 assays	EHANGPT1
Angiopoietin-2	96 assays	KHC1641
Angiostatin	96 assays	EHANGIOSTATIN
Apo E (AD2)	96 assays	EHAPOE
APO/FAS	96 assays	KHS9501
Apolipoprotein A1	96 assays	EHAPOA1
Apolipoprotein C1	96 assays	EHAPOC1
Apolipoprotein C2	96 assays	EHAPOC2
Apolipoprotein C3	96 assays	EHAPOC3
Apolipoprotein E3	96 assays	EHAPOE3
Apolipoprotein E4	96 assays	EHAPOE4
APRIL	96 assays	KHC3051
AXL	96 assays	EHAXL
B2M	96 assays	EHB2M
BCAM	96 assays	EHBCAM
BCL2L2 (BCL-W)	96 assays	EHBwCL2L2
Beta-NGF	96 assays	EHNGF
Beta-secretase 1	96 assays	EHBACE1
BIRC2 (cIAP2)	96 assays	EHBIRC2
BMP2	96 assays	EHBMP2
BMP-4	96 assays	EHBMP4
BMP-4 (lysates)	96 assays	EHBMP4CL
BMP-5	96 assays	EHBMP5
BMP-6	96 assays	EHBMP6
BMP-7	96 assays	EHBMP7
BTC (Betacellulin)	96 assays	EHBTC
C5a	96 assays	EHC5A
CA19-9	96 assays	EHCA199
CA9	96 assays	EHCA9
Cardiotrophin 1	96 assays	EHCTF1
CCL1 (I-309)	96 assays	EHCCL1
CCL13 (MCP-4)	96 assays	EHCCL13
CCL14 (HCC-1)	96 assays	EHCCL14
CCL16 (HCC-4)	96 assays	EHCCL16
CCL17 (TARC)	96 assays	EHCCL17
CCL21 (6Ckine)	96 assays	EHCCL21
CCL24 (Eotaxin-2)	96 assays	EHCCL24
CCL27 (CTACK)	96 assays	EHCCL27
CCL8 (MCP-2)	96 assays	EHCCL8

Target	Quantity	Cat. No.
CD125 (IL5RA)	96 assays	EHIL5RA
CD14	96 assays	EHCD14
CD163 (M130)	96 assays	EHCD163
CD200	96 assays	EHCD200
CD226 (DNAM-1)	96 assays	EHCD226
CD23	96 assays	KAS0251
CD26 (DPP4)	96 assays	EHDPP4
CD40 (TNFRSF5)	96 assays	EHCD40
CD40L (soluble)	96 assays	KHS4001
CEA	96 assays	EHCEA
CEACAM1 (BGP)	96 assays	EHCEACAM1
CFC1B (Cripto-1)	96 assays	EHCFC1B
CFD (Adipsin)	96 assays	EHCFD
CHI3L1 (YKL-40)	96 assays	EHCHI3L1
CKMB (CKM/CKB)	96 assays	EHCKMB
Clusterin	96 assays	EHCLU
c-Met	96 assays	KHO2031
CNTF	96 assays	EHCNTF
C-Reactive Protein	96 assays	KHA0031
CSF1 (M-CSF)	96 assays	EHCSF1
CTSS (Cathepsin S)	96 assays	EHCTSS
CX3CL1 Fractalkine	96 assays	EHCX3CL1
CXCL1 (MGSA alpha)	96 assays	EHCXCL1
CXCL13 (BLC)	96 assays	EHCXCL13
CXCL14 (BRAK)	96 assays	EHCXCL14
CXCL16	96 assays	EHCXCL16
CXCL5 (ENA-78)	96 assays	EHCXCL5
CXCL6 (GCP-2)	96 assays	EHCXCL6
CXCL9 (MIG)	96 assays	EHCXCL9
Cystatin C (CST3)	96 assays	EHCST3
DCN (Decorin)	96 assays	EHDCN
D-DIMER	96 assays	EHDDIMER
DKK-1	96 assays	EHDKK1
DKK-3	96 assays	EHDKK3
DKK-4	96 assays	EHDKK4
DLL1	96 assays	EHDLL1
DMP1	96 assays	EHDMP1
E-cadherin	96 assays	991700
EGF	96 assays	EHEGF
EGF	192 assays	EHEGF2
EGF	480 assays	EHEGF5
EGF	96 assays	KHG0061
EGF	192 assays	KHG0062
EG-VEGF (PROK1)	96 assays	EHPROK1
ELAM-1 (soluble)	96 assays	KHS2011
ENC1 (CCL28)	96 assays	EHENC1
Endoglin	96 assays	EHENG
Endostatin	96 assays	EHCOL18A1
Eotaxin (CCL11)	96 assays	KAC2231
EPO Receptor	96 assays	EHEPOR
ErbB2 (HER2)	96 assays	EHERBB2
ErbB3 (HER3)	96 assays	EHERBB3
ERK	96 assays	EMS2ERKP
Estradiol	96 assays	KAQ0621

Target	Quantity	Cat. No.
FABP2 (intestinal)	96 assays	EHFABP2
FABP3 (cardiac)	96 assays	EHFABP3
FAP	96 assays	EHFAP
Fas Ligand	96 assays	KHS9521
FCER2 (CD23)	96 assays	EHFCER2
FcGR2BC (CD32 B/C)	96 assays	EHFCGR2B
Ferritin	96 assays	EHFTL
FETUB (Fetuin B)	96 assays	EHFETUB
FGF1 (FGF-alpha)	96 assays	EHFGF1
FGF-19	96 assays	EHFGF19
FGF-4	96 assays	EHFGF4
FGF-4 (lysates)	96 assays	EHFGF4CL
FGF-6	96 assays	EHFGF6
FGF-7 (KGF)	96 assays	EHFGF7
FGF-9	96 assays	EHFGF9
FGF-basic	96 assays	KHG0021
FGF-basic	192 assays	KHG0022
Fibronectin	96 assays	EHFN1
FLT-3 Ligand	96 assays	EHFLT3LG
FST (follistatin)	96 assays	EHFST
FSTL3 (FLRG)	96 assays	EHFSTL3
Furin	96 assays	EHFURIN
Galectin-3	96 assays	EHLGALS3
Galectin-7	96 assays	EHLGALS7
G-CSF	96 assays	KHC2031
G-CSF	192 assays	KHC2032
GDF-15	96 assays	EHGDF15
GDNF	96 assays	EHGDNF
GLP 7-36a	96 assays	EHGLP
Glucagon (GCG)	96 assays	EHGCG
GM-CSF	96 assays	EHGMCSF
GM-CSF	192 assays	EHGMCSF2
GM-CSF	480 assays	EHGMCSF5
GM-CSF	96 assays	KHC2011
Growth Hormone	96 assays	KAQ1081
Growth Hormone	96 assays	EHGH1
GSK-3 β	96 assays	EMS2GSK3P
GSK-3 β	96 assays	EMSGSK3T
HB-EGF	96 assays	EHHBEGF
hCG	96 assays	EHCG
HGF	96 assays	KAC2211
HIF-1A	96 assays	EHIF1A
HSPA4 (HSP70)	96 assays	EHHSPA4
HSPB1 (HSP27)	96 assays	EHHSPB1
HTRA2 (OMI)	96 assays	EHHTRA2
ICAM-1 (soluble)	96 assays	KHS5411
ICOS (CD278)	96 assays	EHICOS
IFN-γ	96 assays	EHIFNG
IFN-γ	192 assays	EHIFNG2
IFN-γ	480 assays	EHIFNG5
IFN-ω (omega)	96 assays	413951
IFN-α	96 assays	KHC4011
IFN-α	96 assays	411001
IFN-α	480 assays	411002

* Kit configuration differs from description on page 4. Please consult the specific assay protocol for additional details on kit configuration, antibody conjugation, and more.

ELISA kits *continued*

Target	Quantity	Cat. No.
IFN-α	96 assays	411051
IFN-α	480 assays	411052
IFN-α	96 assays	411101
IFN-α	480 assays	411102
IFN-α	96 assays	421201
IFN-α (multi-subtype)	192 assays	KHC4032
IFN-β	96 assays	414101
IFN-β	480 assays	414102
IFN-β	96 assays	424001
IFN-γ	96 assays	KAC1231
IFN-γ	96 assays	KHC4021
IFN-γ	480 assays	KHC4021C
IFN-γ	192 assays	KHC4022
IGF-1R	96 assays	EHIGF1R
IGFBP-1	96 assays	EHIGFBP1
IGFBP-2	96 assays	EHIGFBP2
IGFBP-3	96 assays	EHIGFBP3
IGFBP-4	96 assays	EHIGFBP4
IGFBP-5	96 assays	EHIGFBP5
IGFBP-6	96 assays	EHIGFBP6
IgG	192 assays	991000
IgG1	96 assays	EHIGG1
IL-1 R4 (IL1RL1)	96 assays	EHIL1RL1
IL-10	96 assays	EHIL10
IL-10	192 assays	EHIL102
IL-10	480 assays	EHIL105
IL-10	96 assays	KAC1321
IL-10	96 assays	KHC0101
IL-10	480 assays	KHC0101C
IL-10	192 assays	KHC0102
IL-10	192 assays	KHC0103
IL-10	192 assays	KHC0104
IL-10	480 assays	KHC0104C
IL-10Ra (CD210a)	96 assays	EHIL10RA
IL-10Rb	96 assays	EHIL10RB
IL-11	96 assays	EHIL11
IL-12	96 assays	EH2IL12T
IL-12	192 assays	EH2IL12T2
IL-12	480 assays	EH2IL12T5
IL-12 (p40/p70)	96 assays	KAC1561
IL-12 (p40/p70)	96 assays	KHC0121
IL-12 (p40/p70)	192 assays	KHC0122
IL-12 (p70)	96 assays	EHIL12
IL-12 (p70)	192 assays	EHIL122
IL-12 (p70)	480 assays	EHIL125
IL-12 (p70)	96 assays	KAC1568
IL-13	96 assays	EHIL13
IL-13	192 assays	EHIL132
IL-13	480 assays	EHIL135
IL-13	96 assays	KHC0131
IL-13	192 assays	KHC0132
IL-13	192 assays	KHC0133
IL-13	96 assays	KHC0134

Target	Quantity	Cat. No.
IL-13R alpha 2	96 assays	EHIL13RA2
IL-15	96 assays	EHIL15
IL-16	96 assays	EHIL16
IL-16	192 assays	EHIL162
IL-16	480 assays	EHIL165
IL-17	96 assays	KAC1591
IL-17A	96 assays	EHIL17A
IL-17A	192 assays	EHIL17A2
IL-17A	480 assays	EHIL17A5
IL-17A	96 assays	EHIL17ALPHA
Il-17B	96 assays	EHIL17B
IL-17F	96 assays	EHIL17F
IL-17R	96 assays	EHIL17R
IL-18	96 assays	KHC0181
IL-18BP	96 assays	EHIL18BP
IL-18RB (IL18RAP)	96 assays	EHIL18RAP
IL-1a	96 assays	EH2IL1A
IL-1a	192 assays	EH2IL1A2
IL-1a	480 assays	EH2IL1A5
IL-1R1 (IL-1RA)	96 assays	EHIL1R1
IL-1R2 (IL-1RB)	96 assays	EHIL1R2
IL-1ra	96 assays	KAC1181
IL-1α	96 assays	KAC1191
IL-1β	96 assays	KAC1211
IL-1β	96 assays	EH2IL1B
IL-1β	192 assays	EH2IL1B2
IL-1β	480 assays	EH2IL1B5
IL-1β	96 assays	KHC0011
IL-1β	480 assays	KHC0011C
IL-1β	192 assays	KHC0012
IL-1β	96 assays	KHC0014
IL-2	96 assays	EH2IL2
IL-2	192 assays	EH2IL22
IL-2	480 assays	EH2IL25
IL-20	96 assays	EHIL20
IL-21	96 assays	EHIL21
IL-22	96 assays	EHIL22
IL-23 Heterodimer	96 assays	KHC0231
IL-28A	96 assays	EHIL28A
IL-29 (IFNL1)	96 assays	EHIFNL1
IL-2R	96 assays	EH2IL2R
IL-2R	192 assays	EH2IL2R2
IL-2R	480 assays	EH2IL2R5
IL-2RA	96 assays	EHIL2RA
IL-2RB	96 assays	EHIL2RB
IL-3	96 assays	KHC0031
IL-33	96 assays	EHIL33
IL-36G (IL-1F9)	96 assays	EHIL36G
IL-37 (FIL1/IL1F7)	96 assays	EHIL37
IL-4	96 assays	KAC1281
IL-4	96 assays	EH3IL4
IL-4	192 assays	EH3IL42
IL-4	480 assays	EH3IL45

* Kit configuration differs from description on page 4. Please consult the specific assay protocol for additional details on kit configuration, antibody conjugation, and more.

Target	Quantity	Cat. No.
IL-4	96 assays	KHC0041
IL-5	96 assays	EHIL5
IL-5	96 assays	KHC0051
IL-6	96 assays	KAC1261
IL-6	96 assays	EH2IL6
IL-6	192 assays	EH2IL62
IL-6	480 assays	EH2IL65
IL-6	96 assays	KHC0061
IL-6	480 assays	KHC0061C
IL-6	192 assays	KHC0062
IL-6R	96 assays	KHR0061
IL-7	96 assays	EHIL7
IL-8	96 assays	KAC1301
IL-8	96 assays	EH2IL8
IL-8	192 assays	EH2IL82
IL-8	480 assays	EH2IL85
IL-8	96 assays	KHC0081
IL-8	480 assays	KHC0081C
IL-8	192 assays	KHC0082
IL-8	192 assays	KHC0083
IL-8	96 assays	KHC0084
Insulin	96 assays	KAQ1251
IP-10	96 assays	KAC2361
ITAC	96 assays	EHITAC
ITAC	192 assays	EHITAC2
ITAC	480 assays	EHITAC5
I-TAC (CXCL11)	96 assays	EHCXCL11
JNK	96 assays	EMSJNKP
JNK 1/2	96 assays	KHO0121
KLK-10	96 assays	EHKLK10
KLK14	96 assays	EHKLK14
KLK6	96 assays	EHKLK6
LAG-3	96 assays	EHLAG3
LDLR	96 assays	EHLDLR
Leptin	96 assays	KAC2281
Leukotriene	96 assays	KHL1741
Leukotriene	96 assays	EHLTB4
LH	96 assays	EHLH
LIF-HILDA	96 assays	KAC1351
LIGHT (TNFSF14)	96 assays	EHTNFSF14
LIMP-II (SCARB2)	96 assays	EHSCARB2
Lipocalin-2	96 assays	EHLCN2
LOX-1 (OLR1)	96 assays	EHOLR1
L-Selectin (SELL)	96 assays	EHSELL
LT-alpha (TNFB)	96 assays	EHLTA
Lymphotactin XCL1	96 assays	EHXCL1
LYVE-1	96 assays	EHLYVE1
Marapsin (PRSS27)	96 assays	EHPRSS27
MBL	96 assays	KIT029
MBL (MBL2)	96 assays	EHMBL2
MCP-1	96 assays	EH2MCP1
MCP-1	192 assays	EH2MCP12
MCP-1	480 assays	EH2MCP15

Target	Quantity	Cat. No.
MCP-1 (CCL2)	96 assays	KHC1011
MCP-1 (CCL2)	192 assays	KHC1012
MEK	96 assays	EMS2MEKT
MEK	96 assays	EMSMEKP
Mer (MERTK)	96 assays	EHMER
MICA	96 assays	EHMICA
MICB	96 assays	EHMICB
MIF	96 assays	EHMIF
MIP-1δ (CCL15)	96 assays	EHCCL15
MIP-1α (CCL3)	96 assays	KAC2201
MIP-1β (CCL4)	96 assays	KAC2291
MIP-3a (CCL20)	96 assays	EHCCL20
MIP-3a (CCL20)	96 assays	EHCCL20CL
MIP-3b (CCL19)	96 assays	EHCCL19
MMP-1	96 assays	EHMMP1
MMP-1	96 assays	EHMMP1CL
MMP-10	96 assays	EHMMP10
MMP-13	96 assays	EHMMP13
MMP-2	96 assays	KHC3081
MMP-2	192 assays	KHC3082
MMP-3	96 assays	KAC1541
MMP-8	96 assays	EHMMP8
MMP-9	96 assays	KHC3061
MPIF-1 (CCL23)	96 assays	EHCCL23
MSP (MST1)	96 assays	EHMST1
MUCIN 1 (CA15-3)	96 assays	EHMUC1
Mucin 16 (CA125)	96 assays	EHMUC16
NAP-2 (PPBP)	96 assays	EHPPBP
N-CAM1	96 assays	EHNCAM1
Neprilysin (MME)	96 assays	EHMME
NGAL	96 assays	KIT036
NGAL	96 assays	KIT037
NGFR	96 assays	EHNGFR
Nidogen-1 (NID1)	96 assays	EHNID1
NOTCH-1	96 assays	EHNOTCH1
NOV	96 assays	EHNOV
NPPB (BNP)	96 assays	EHNPPB
NrCAM	96 assays	EHNRCAM
NRG1-b 1 (NRG1)	96 assays	EHNRG1
NT-3 (NTF3)	96 assays	EHNTF3
NT-4 (NTF4)	96 assays	EHNTF4
Oncostatin M (OSM)	96 assays	EHOSM
Osteoactivin (GPNMB)	96 assays	EHGPNMB
Osteocalcin	96 assays	KAQ1381
p38	96 assays	EMSP38P
PAI-1	96 assays	KHC3071
PAPP-A	96 assays	EHPAPPA
PARC (CCL18)	96 assays	EHCCL18
PARN (DAN)	96 assays	EHPARN
P-Cadherin (CDH3)	96 assays	EHCDH3
PD-1 (PDCD1)	96 assays	EHPDCD1
PDGF-AA	96 assays	EHPDGFA
PDGF-AB	96 assays	EHPDGFAB

* Kit configuration differs from description on page 4. Please consult the specific assay protocol for additional details on kit configuration, antibody conjugation, and more.

ELISA kits *continued*

Target	Quantity	Cat. No.
PDGF-BB	96 assays	EHPDGFB
PDGF-BB (CSRP2)	96 assays	EHCSRP2
PDGFR alpha	96 assays	EHPDGFRA
PDGFR beta	96 assays	EHPDGFRB
PECAM-1	96 assays	EHPECAM1
Pepsinogen I (PGI)	96 assays	EHPGI
Pepsinogen II (PGC)	96 assays	EHPGC
Periostin	96 assays	EHPOSTN
PF-4	96 assays	EHPF4
PGRPs (PGLYRP1)	96 assays	EHPGLYRP1
PLGF (PGF)	96 assays	EHPGF
proBNP (NPPB)	96 assays	EHPRONPPB
Procalcitonin	96 assays	EHPCT
Prostaglandin	96 assays	EHPGE2
Prostaglandin	96 assays	KHL1701
Prostasin (PRSS8)	96 assays	EHPRSS8
PSA (free) (KLK3)	96 assays	EHKLK3F
PSA (total) (KLK3)	96 assays	EHKLK3T
p-Selectin (soluble)	96 assays	KHS2021
RAGE (MOK)	96 assays	EHMOK
RANK (TNFRSF11A)	96 assays	EHTNFRSF11A
RANTES (CCL5)	192 assays	EHRNTS2
RANTES (CCL5)	480 assays	EHRNTS5
RANTES (CCL5)	96 assays	EHRNTS
RARRES2 (TIG2)	96 assays	EHRARRES2
RBP4	96 assays	KHP0081
RBP-4	96 assays	EHRBP4
Resistin	96 assays	KHP0051
S100A8	96 assays	EHS100A8
SAA	96 assays	EHSAA1
SAA (Serum Amyloid A)	96 assays	KHA0011
SAA (Serum Amyloid A)	480 assays	KHA0011C
SAA (Serum Amyloid A)	192 assays	KHA0012
SCF (KITLG)	96 assays	EHKITLG
Sclerostin (SOST)	96 assays	EHSOST
SDF-1a (CXCL12A)	96 assays	EHCXCL12A
SDF-1b (CXCL12B)	96 assays	EHCXCL12B
Serpin A1	96 assays	EHSERPINA1
Serpin A4	96 assays	EHSERPINA4
sgp130 (IL6ST)	96 assays	EHIL6ST
ShhN (SHH)	96 assays	EHSHH
sICAM-1 (CD45)	96 assays	EHICAM1
Siglec-5	96 assays	EHSIGLEC5
Siglec-9	96 assays	EHSIGLEC9
SLAM (SLAMF1)	96 assays	EHSLAMF1
SMAC (DIABLO)	96 assays	EHDIABLO
SPINT1 (HAI-1)	96 assays	EHSPINT1
SPINT2 (HAI-2)	96 assays	EHSPINT2
SSP1 (Osteopontin)	96 assays	EHSPP1
Syndecan 1 (SDC1)	96 assays	EHSDC1
TACE (ADAM17)	96 assays	EHADAM17
TACI (TNFRSF13B)	96 assays	EHTNFRSF13B
TECK (CCL25)	96 assays	EHCCL25

Target	Quantity	Cat. No.
TFF-3	96 assays	EHTFF3
TFPI	96 assays	EHTFPI
TGFa	96 assays	EHTGFA
TGFb RII (TGFBR2)	96 assays	EHTGFBR2
TGFB2	96 assays	EHTGFB2
TGFBI (BIGH3)	96 assays	EHTGFBI
TGF-β1 (activated/treated)	96 assays	KAC1688
Thrombospondin 1	96 assays	EHTHBS1
Thyroglobulin (TG)	96 assays	EHTG
Thyroid Peroxidase	96 assays	EHTPO
Tie-1	96 assays	EHTIE1
Tie-2 (TEK)	96 assays	EHTEK
TIM-1 (HAVCR1)	96 assays	EHHAVCR1
TIMP-1	96 assays	KHC1491
TIMP-2	96 assays	EHTIMP2
TIMP-4	96 assays	EHTIMP4
TNF-RI	96 assays	KAC1761
TNF-RII	96 assays	KAC1771
TNFRSF10B (DR5)	96 assays	EHTNFRSF10B
TNFRSF11B (OPG)	96 assays	EHTNFRSF11B
TNFRSF14 (HVEM)	96 assays	EHTNFRSF14
TNFRSF18 (GITR)	96 assays	EHTNFRSF18
TNFRSF18 (lysateS)	96 assays	EHTNFRSF18CL
TNFRSF6B (DcR3)	96 assays	EHTNFRSF6B
TNFRSF9	96 assays	EHTNFRSF9
TNFSF18 (GITRL)	96 assays	EHTNFSF18
TNF-α	96 assays	KAC1751
TNF-α	96 assays	EH3TNFA
TNF-α	192 assays	EH3TNFA2
TNF-α	480 assays	EH3TNFA5
TNF-α	96 assays	KHC3011
TNF-α	480 assays	KHC3011C
TNF-α	192 assays	KHC3012
TNF-α	192 assays	KHC3013
TNF-α	96 assays	KHC3014
TNF-α	480 assays	KHC3014C
TP53 (p53)	96 assays	EHTP53
TPO (THPO)	96 assays	EHTHPO
TRAIL R3 TNFRSF10C	96 assays	EHTNFRSF10C
TRAIL R4 TNFRSF10D	96 assays	EHTNFRSF10D
Transferrin	96 assays	EHTF
Trappin-2 (PI3)	96 assays	EHPI3
TREM-1	96 assays	EHTREM1
TROP1 (EPCAM)	96 assays	EHEPCAM
Troponin I (TNNI3)	96 assays	EHTNNI3
Troponin T (TNNT1)	96 assays	EHTNNT1
TROY (TNFRSF19)	96 assays	EHTNFRSF19
TSH (CGA)	96 assays	EHTSH
TSLP	96 assays	EHTSLP
TWEAK (TNFSF12)	96 assays	EHTNFSF12
Ubiquitin 1 RPS27A	96 assays	EHRPS27A
uPA (PRAP1)	96 assays	EHPRAP1
uPAR (PLAUR)	96 assays	EHPLAUR

* Kit configuration differs from description on page 4. Please consult the specific assay protocol for additional details on kit configuration, antibody conjugation, and more.

Target	Quantity	Cat. No.
Uromodulin (UMOD)	96 assays	EHUMOD
VCAM-1 (soluble)	96 assays	KHT0601
VEGF	96 assays	KHG0111
VEGF	192 assays	KHG0112
VEGF R2 (KDR)	96 assays	EHKDR
VEGF R3 (FLT4)	96 assays	EHFLT4
VEGF-A	96 assays	EH2VEGF
VEGF-A	192 assays	EH2VEGF2
VEGF-A	480 assays	EH2VEGF5
VEGF-A	96 assays	EHVEGFA
VEGF-A (lysates)	96 assays	EHVEGFACL
VEGF-C	96 assays	EHVEGFC
VEGF-D (FIGF)	96 assays	EHFIGF
Vitronectin (VTN)	96 assays	EHVTN
vWF	96 assays	EHVWF
WISP-1	96 assays	EHWISP1
XIAP	96 assays	EHXIAP
Swine, bovine, canine, feline, equine		
SAA (Serum Amyloid A)	96 assays	KAA0021
Monkey		
EGF	96 assays	EPEGF
Flt-3 ligand	96 assays	EPFLT3LG
IL-10	96 assays	KPC0101
IL-12	96 assays	KPC0121
IL-12 (p70)	96 assays	KPC9121
IL-2	96 assays	KPC0021
IL-2	192 assays	KPC0022
IL-4	96 assays	KPC0041
IL-6	96 assays	KPC0061
IL-8	96 assays	KPC0081
PAI-1 (Serpin E1)	96 assays	EPSERPINE1
TNF-α	96 assays	KPC3011
TNF-α	192 assays	KPC3012
Mouse		
4-1BB (TNFRSF9)	96 assays	EMTNFRSF9
6-Ckine (CCL21A)	96 assays	EMCCL21A
ACE	96 assays	EMACE
Adiponectin	96 assays	KMP0041
ANGPTL3	96 assays	EMANGPTL3
AREG	96 assays	EMAREG
Axl	96 assays	EMAXL
BAFF R (TNFRSF13C)	96 assays	EMTNFRSF13C
BIGH3 (TGFBI)	96 assays	EMTGFBI
BLC (CXCL13)	96 assays	EMCXCL13
BMP-7	96 assays	EMBMP7
BSSP 4 (PRSS22)	96 assays	EMPRSS22
C5a (HC)	96 assays	EMHC
CCL11 (Eotaxin-1)	96 assays	EMCCL11
CCL3 (MIP-1a)	96 assays	EMCCL3
CCL6	96 assays	EMCCL6
CD30 (TNFRSF8)	96 assays	EMTNFRSF8
CD30L (TNFSF8)	96 assays	EMTNFSF8
CD36	96 assays	EMCD36
CD40	96 assays	EMCD40

Target	Quantity	Cat. No.
CRG-2 (CXCL10)	96 assays	EMCXCL10
CSF2 (GM-CSF)	96 assays	EMCSF2
CSF3 (G-CSF)	96 assays	EMCSF3
CT-1 (CTF1)	96 assays	EMCTF1
CTACK (CCL27A)	96 assays	EMCCL27A
CTLA-4	96 assays	EMCTLA4
CXCL1 (KC)	96 assays	EMCXCL1
CXCL15	96 assays	EMCXCL15
CXCL16	96 assays	EMCXCL16
CXCL9 (MIG)	96 assays	EMCXCL9
Cystatin C (CST3)	96 assays	EMCST3
DAN (PARN)	96 assays	EMPARN
Decorin (DCN)	96 assays	EMDCN
Dkk-1	96 assays	EMDKK1
DPPIV (DPP4)	96 assays	EMDPP4
E-Cadherin (CDH1)	96 assays	EMCDH1
EGF	96 assays	EMEGF
Endocan (ESM1)	96 assays	EMESM1
Eotaxin-2 (CCL24)	96 assays	EMCCL24
Epiregulin (EREG)	96 assays	EMEREG
E-Selectin (SELE)	96 assays	EMSELE
Fc gamma R2B	96 assays	EMFCGR2B
FGF2 (bFGF)	96 assays	EMFGF2
Flt-3L	96 assays	EMFLT3L
Fractalkine CX3CL1	96 assays	EMCX3CL1
Galectin-1 LGALS1	96 assays	EMLGALS1
Galectin-3 LGALS3	96 assays	EMLGALS3
Galectin-7 LGALS7	96 assays	EMLGALS7
GAS6	96 assays	EMGAS6
GITR L (TNFSF18)	96 assays	EMTNFSF18
GM-CSF	96 assays	EMGMCSF
GM-CSF	192 assays	EMGMCSF2
GM-CSF	480 assays	EMGMCSF5
gp130 (IL6ST)	96 assays	EMIL6ST
Granzyme B (GZMB)	96 assays	EMGZMB
HGF	96 assays	EMHGF
HGF (lysates)	96 assays	EMHGFCL
ICAM-1	96 assays	EMICAM1ALPHA
ICAM-1 (soluble)	96 assays	EMICAM1
ICAM-1 (soluble)	192 assays	EMICAM12
ICAM-1 (soluble)	480 assays	EMICAM15
IFN-α	96 assays	KMC4011
IFN-β	96 assays	KMC4041
IFN-γ	96 assays	KMC4021
IFN-γ	480 assays	KMC4021C
IFN-γ	192 assays	KMC4022
IFN-γ	96 assays	EM1001
IFN-γ	192 assays	EM10012
IFN-γ	480 assays	EM10015
Ig	480 assays	37503
IgA	96 assays	EMIGA
IgE	96 assays	EMIGHE
IGF-1	96 assays	EMIGF1
IGF-2	96 assays	EMIGF2
IGFBP-2	96 assays	EMIGFBP2
IGFBP-3	96 assays	EMIGFBP3

ELISA kits *continued*

Target	Quantity	Cat. No.
IGFBP-5	96 assays	EMIGFBP5
IGFBP-6	96 assays	EMIGFBP6
IgG2A	96 assays	EMIGG2A
IL-1 alpha	96 assays	EMIL1A
IL-1 alpha	192 assays	EMIL1A2
IL-1 alpha	480 assays	EMIL1A5
IL-1 RA (IL1RN)	96 assays	EMIL1RN
IL-10	96 assays	EM2IL10
IL-10	192 assays	EM2IL102
IL-10	480 assays	EM2IL105
IL-10	96 assays	KMC0101
IL-10	192 assays	KMC0102
IL-11	96 assays	EMIL11
IL-12	96 assays	KMC0121
IL-12	480 assays	KMC0121C
IL-12	192 assays	KMC0122
IL-12	96 assays	EMIL12TOT
IL-12	192 assays	EMIL12TOT2
IL-12	480 assays	EMIL12TOT5
IL-12 (p40)	96 assays	EMIL12P40
IL-12 (p40)	192 assays	EMIL12P402
IL-12 (p40)	480 assays	EMIL12P405
IL-12 (p70)	96 assays	KMC9121
IL-12 (p70)	96 assays	EMIL12
IL-12 (p70)	192 assays	EMIL122
IL-12 (p70)	480 assays	EMIL125
IL-12 p40/70 IL12B	96 assays	EMIL12B
IL-13	96 assays	KMC2221
IL-15	96 assays	EMIL15
IL-17	96 assays	KMC3021
IL-17A	96 assays	EMIL17A
IL-17B	96 assays	EMIL17B
IL-17E (IL-25)	96 assays	EMIL25ALPHA
IL-18	96 assays	KMC0181
IL-1a	96 assays	EMIL1ALPHA
IL-1β	96 assays	KMC0011
IL-1β	480 assays	KMC0011C
IL-1β	192 assays	KMC0012
IL-1β	96 assays	EM2IL1B
IL-1β	192 assays	EM2IL1B2
IL-1β	480 assays	EM2IL1B5
IL-2	96 assays	KMC0021
IL-2	480 assays	KMC0021C
IL-2	192 assays	KMC0022
IL-2	96 assays	EMIL2
IL-2	192 assays	EMIL22
IL-2	480 assays	EMIL25
IL-20	96 assays	EMIL20
IL-21	96 assays	EMIL21
IL-28 (IFNL2)	96 assays	EMIFNL2
IL-3	96 assays	EMIL3
IL-33	96 assays	EMIL33
IL-4	96 assays	EMIL4
IL-4	192 assays	EMIL42
IL-4	480 assays	EMIL45

Target	Quantity	Cat. No.
IL-5	96 assays	KMC0051
IL-5	96 assays	EMIL5
IL-5	192 assays	EMIL52
IL-5	480 assays	EMIL55
IL-5	96 assays	EMIL5ALPHA
IL-6	96 assays	KMC0061
IL-6	480 assays	KMC0061C
IL-6	192 assays	KMC0062
IL-6	96 assays	EM2IL6
IL-6	192 assays	EM2IL62
IL-6	480 assays	EM2IL65
IL-6R (IL6RA)	96 assays	EMIL6RA
IL-7	96 assays	EMIL7
IL-9	96 assays	EMIL9
Insulin	96 assays	EMINS
I-TAC (CXCL11)	96 assays	EMCXCL11
Leptin	96 assays	KMC2281
Lipocalin-2 (LCN2)	96 assays	EMLCN2
LIX (CXCL5)	96 assays	EMCXCL5
L-Selectin (SELL)	96 assays	EMSELL
Lymphotactin XCL1	96 assays	EMXCL1
MCP-1 (CCL2)	96 assays	KMC1011
MCP-1 (CCL2)	192 assays	KMC1012
MCP-1 (CCL2)	96 assays	EMMCP1
MCP-1 (CCL2)	192 assays	EMMCP12
MCP-1 (CCL2)	480 assays	EMMCP15
MCP-5 (CCL12)	96 assays	EMCCL12
M-CSF (CSF1)	96 assays	EMCSF1
MDC (CCL22)	96 assays	EMCCL22
MFG-E8	96 assays	EMMFGE8
MIP-1 gamma (CCL9)	96 assays	EMCCL9
MIP-2 (CXCL2)	96 assays	EMCXCL2
MIP-3a (CCL20)	96 assays	EMCCL20
MIP-3b (CCL19)	96 assays	EMCCL19
MMP-2	96 assays	EMMMP2
MMP-3	96 assays	EMMMP3
Myeloperoxidase	96 assays	EMMPO
OPG (TNFRSF11B)	96 assays	EMTNFRSF11B
OPN (SPP1)	96 assays	EMSPP1
PAI-1 (Serpin E1)	96 assays	EMSERPINE1
Periostin (Postn)	96 assays	EMPOSTN
PF-4 (CXCL14)	96 assays	EMCXCL14
PLGF-2 (PGF)	96 assays	EMPGF
PRAS40	96 assays	KMO0421
PRDC (GREM2)	96 assays	EMGREM2
Progranulin (GRN)	96 assays	EMGRN
Prolactin (PRL)	96 assays	EMPRL
pro-MMP-9	96 assays	EMMMP9
p-Selectin	96 assays	EMSELP
RAGE (STK30)	96 assays	EMSTK30
RANTES (CCL5)	96 assays	KMC1031
Renin 1 (REN1)	96 assays	EMREN1
Resistin (RETN)	96 assays	EMRETN
SAA (Serum Amyloid A)	96 assays	KMA0021
SCF (KITL)	96 assays	EMKITL

Target	Quantity	Cat. No.
SDF-1 alpha CXCL12	96 assays	EMCXCL12
ShhN (lysates)	96 assays	EMSHHCL
ShhN (SHH)	96 assays	EMSHH
sTNFRI (TNFRSF1A)	96 assays	EMTNFRSF1A
TARC (CCL17)	96 assays	EMCCL17
TCA-3 (CCL1)	96 assays	EMCCL1
TCK-1 (PPBP)	96 assays	EMPPBP
TECK (CCL25)	96 assays	EMCCL25
TIM-1 (HAVCR1)	96 assays	EMHAVCR1
TIMP-1	96 assays	EMTIMP1
TIMP-1 (lysates)	96 assays	EMTIMP1CL
TIMP-2	96 assays	EMTIMP2
TNFSF4	96 assays	EMTNFSF4
TNF-α	96 assays	EMTNFA
TNF-α	192 assays	EMTNFA2
TNF-α	480 assays	EMTNFA5
TNF-α	96 assays	KMC3011
TNF-α	480 assays	KMC3011C
TNF-α	192 assays	KMC3012
TPO (THPO)	96 assays	EMTHPO
TRAIL (TNFSF10)	96 assays	EMTNFSF10
TRANCE (TNFSF11)	96 assays	EMTNFSF11
TREM-1	96 assays	EMTREM1
TSLP	96 assays	EMTSLP
TWEAK (TNFSF12)	96 assays	EMTNFSF12
TWEAK R TNFRSF12A	96 assays	EMTNFRSF12A
VCAM-1	96 assays	EMVCAM1
VEGF	96 assays	KMG0111
VEGF	192 assays	KMG0112
VEGF R1 (FLT1)	96 assays	EMFLT1
VEGF R2 (VEGFA)	96 assays	EMVEGFR2
VEGF-A	96 assays	EMVEGFA
VEGF-A (lysates)	96 assays	EMVEGFACL
VEGF-B	96 assays	EMVEGFB
Rat		
Activin-A (INHBA)	96 assays	ERINHBA
Adiponectin	96 assays	KRP0041
BCL-W (BCL2L2)	96 assays	ERBCL2L2
BDNF	96 assays	ERBDNF
beta-NGF	96 assays	ERNGF
beta-NGF (lysates)	96 assays	ERNGFCL
CINC-1 (CXCL1)	96 assays	ERCXCL1
CINC-3 (CXCL2)	96 assays	ERCXCL2
Clusterin (CLU)	96 assays	ERCLU
CNTF	96 assays	ERCNTF
C-reactive protein	96 assays	ERCRP
CSF2 (GM-CSF)	96 assays	ERCSF2
Cystatin C (CST3)	96 assays	ERCST3
EGF	96 assays	EREGF
FasL	96 assays	ERFASLG
Fractalkine (CX3CL1)	96 assays	ERCX3CL1
Fractalkine (CX3CL1)	96 assays	ERCXCL1CL
Galectin-3 (LGALS3)	96 assays	ERLGALS3
Growth Hormone	96 assays	KRC5311
ICAM-1	96 assays	ERICAM1

Target	Quantity	Cat. No.
IFN-γ	96 assays	ERIFNGALPHA
IFN-γ	96 assays	ERIFNG
IFN-γ	192 assays	ERIFNG2
IFN-γ	480 assays	ERIFNG5
IGF-1	96 assays	ERIGF1
IGFBP-5	96 assays	ERIGFBP5
IL-10	96 assays	ERIL10
IL-10	192 assays	ERIL102
IL-10	480 assays	ERIL105
IL-10	96 assays	KRC0101
IL-10	192 assays	KRC0102
IL-12	96 assays	KRC0121
IL-12	192 assays	KRC0122
IL-12 (p70)	96 assays	KRC2371
IL-13 (lysates)	96 assays	ERIL13
IL-18	96 assays	KRC2341
IL-1a	96 assays	ERIL1A
IL-1β	96 assays	ER2IL1B
IL-1β	192 assays	ER2IL1B2
IL-1β	480 assays	ER2IL1B5
IL-2	96 assays	KRC0021
IL-2	192 assays	KRC0022
IL-4	96 assays	KRC0041
IL-6	96 assays	KRC0061
IL-6	480 assays	KRC0061C
IL-6	192 assays	KRC0062
IL-6	96 assays	ER3IL6
IL-6	192 assays	ER3IL62
IL-6	480 assays	ER3IL65
Insulin	96 assays	ERINS
Leptin	96 assays	KRC2281
Lipocalin-2 (LCN2)	96 assays	ERLCN2
LIX (CXCL5)	96 assays	ERCXCL5
LIX lysates (CXCL5)	96 assays	ERCXCL5CL
L-Selectin (SELL)	96 assays	ERSELL
MCP-1 (CCL2)	96 assays	KRC1011
MCP-1 (CCL2)	192 assays	KRC1012
MCP-1 (CCL2)	96 assays	ERMCP1
MCP-1 (CCL2)	192 assays	ERMCP12
MCP-1 (CCL2)	480 assays	ERMCP15
MIP-2	96 assays	KRC1021
MIP-2	192 assays	KRC1022
MMP-8	96 assays	ERMMP8
PDGF-AA	96 assays	ERPDGFA
Prolactin R	96 assays	ERPRLR
RAGE (AGER)	96 assays	ERAGER
RANTES (CCL5)	96 assays	KRC1031
TCK-1 (PPBP)	96 assays	ERPPBP
TIM-1 (HAVCR1)	96 assays	ERHAVCR1
TIMP-1	96 assays	ERTIMP1
TIMP-1 (lysates)	96 assays	ERTIMP1CL
TNF-α	96 assays	ER3TNFA
TNF-α	192 assays	ER3TNFA2
TNF-α	480 assays	ER3TNFA5
TNF-α	96 assays	KRC3011

ELISA kits *continued*

Target	Quantity	Cat. No.
TNF-α	480 assays	KRC3011C
TNF-α	192 assays	KRC3012
VEGF-A	96 assays	ERVEGFA
VEGF-A (lysates)	96 assays	ERVEGFACL
Swine		
IFN-γ	96 assays	EPIFNG
IFN-γ	192 assays	EPIFNG2
IFN-γ	480 assays	EPIFNG5
IFN-γ	96 assays	KSC4021
IFN-γ	192 assays	KSC4022
IL-10	96 assays	KSC0101
IL-10	192 assays	KSC0102
IL-18	96 assays	KSC0181
IL-4	96 assays	KSC0041
IL-4	192 assays	KSC0042
IL-8	96 assays	KSC0081
IL-8	192 assays	KSC0082
Swine CSF2 (GM-CSF)	96 assays	ESCSF2
Swine IL-1β	96 assays	ESIL1B
Swine IL-6	96 assays	ESIL6
TNF-α	96 assays	KSC3011
TNF-α	192 assays	KSC3012
TNF-α	96 assays	EP2TNFA
TNF-α	192 assays	EP2TNFA2
TNF-α	480 assays	EP2TNFA5
Other		
cAMP	96 assays	EMSCAMPL
cGMP	96 assays	EMSCGMPL
AKT	96 assays	62220
Cleaved Caspase-3	96 assays	62223
Cleaved PARP	96 assays	62224
ERK1/2	96 assays	62206
GSK3 αβ	96 assays	62217
GSK3 αβ	96 assays	62222
JAK2	96 assays	KHO5521
S6	96 assays	62207
S6	96 assays	62212
STAT3	96 assays	62214
STAT6	96 assays	62208
STAT6	96 assays	62213
Bovine IL-2	96 assays	EBIL2
Bovine TNF-a (TNF)	96 assays	EBTNF
IFN-γ	96 assays	KBC1231
IFN-γ	96 assays	ECIFNG
IL-10	96 assays	ECIL10
IL-6	96 assays	ECIL6
IL-8 (CXCL8)	96 assays	ECCXCL8
PDGF-BB	96 assays	ECPDGFB
TNF-α (TNF)	96 assays	ECTNF
IL-10	96 assays	EEIL10
IL-1RA (IL1RN)	96 assays	EEIL1RN
IL-2	96 assays	EEIL2
IL-8 (CXCL8)	96 assays	EFCXCL8
RANTES (CCL5)	96 assays	EFCCL5

Neurobiology ELISA kits

We offer Invitrogen neurobiology ELISA kits for accurate and sensitive quantitation of Aβ (β-amyloid) (Table 3), tau (Figures 5 and 6), and α-synuclein to assist researchers studying Alzheimer's disease, Parkinson's disease, and other neurodegenerative conditions. The kits offer these advantages to neuroscientists:

- Easy-to-run sandwich ELISA format
- Precoated, 8-well strip–based format
- Consistent, accurate, and sensitive measurements

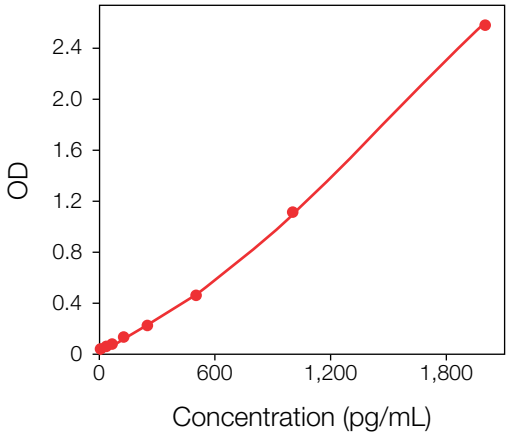


Figure 5. Typical 7-point standard curve for the Human Tau (Total) ELISA Kit (Cat. No. KHB0041). The dynamic range is 31–2,000 pg/mL, with an analytical sensitivity of <12 pg/mL.

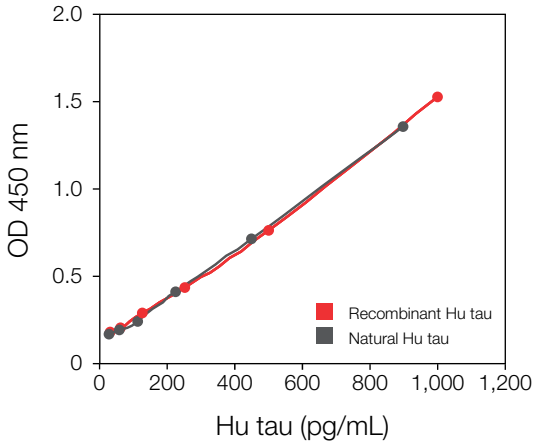


Figure 6. Recombinant Hu tau protein standard. Natural human (Hu) tau was serially diluted in Standard Diluent Buffer. The optical density of each dilution was plotted against the standard curve. Parallelism between the natural and recombinant protein indicates that the standard accurately reflects natural Hu tau content in samples.

Table 3. Linearity. Human cerebrospinal fluid containing β-amyloid 1-42 was serially diluted in Standard Diluent Buffer over the range of the assay. RPMI containing 10% fetal bovine serum was spiked with natural β-amyloid 1-42 from APP-transfected cells and serially diluted in Standard Diluent Buffer over the range of the assay. Linear regression analysis of sample measurements versus the expected concentration yielded a correlation coefficient of 0.99. (Occasional measurements >100% of expected are within the range of experimental values.)

Cerebrospinal fluid			
Dilution	Measured (pg/mL)	Expected (pg/mL)	Measured (%)
1/4	341.0	341.0	–
1/8	185.4	170.5	108
1/16	94.6	85.3	107
1/32	41.2	42.6	97
Cell culture supernatant			
Dilution	Measured (pg/mL)	Expected (pg/mL)	Measured (%)
1/2	152.1	152.1	–
1/4	76.4	76.0	101
1/8	38.4	38.0	101
1/16	15.2	19.0	80

Target	Quantity	Cat. No.
Human		
Aβ40	96 assays 192 assays	KHB3481 KHB3482
Aβ42	96 assays 192 assays	KHB3441 KHB3442
Aβ42 (ultrasensitive)	96 assays	KHB3544
Aggregated Aβ	96 assays	KHB3491
APP	96 assays	KHB0051
α-Synuclein	96 assays	KHB0061
Tau (total)	96 assays 192 assays	KHB0041 KHB0042
Tau [pS199]	96 assays	KHB7041
Tau [pS396]	96 assays	KHB7031
Tau [pT181]	96 assays	KHO0631
Tau [pT231]	96 assays	KHB8051
Mouse		
Aβ40	96 assays	KMB3481
Aβ42	96 assays	KMB3441
Tau (total)	96 assays	KMB7011
Tau [pS199]	96 assays	KMB7041

Learn more about our ELISA kits for neurobiology at **thermofisher.com/neuroelisas**

Phosphospecific ELISA kits

For studies of intracellular proteins involved in signaling, we offer Invitrogen™ phosphospecific ELISA kits for measurement of total and phosphorylated, modified, or cleavage site–specific proteins. Advantages and benefits of these kits include:

- Specificity—two antibodies directed against the analyte provide better specificity than western blotting
- Sensitivity—more sensitive than western blotting
- Quantitation—get quantitative data in contrast to western blots (Figure 7)
- Medium throughput—96-well format, results in 4 hours, no densitometry analysis needed

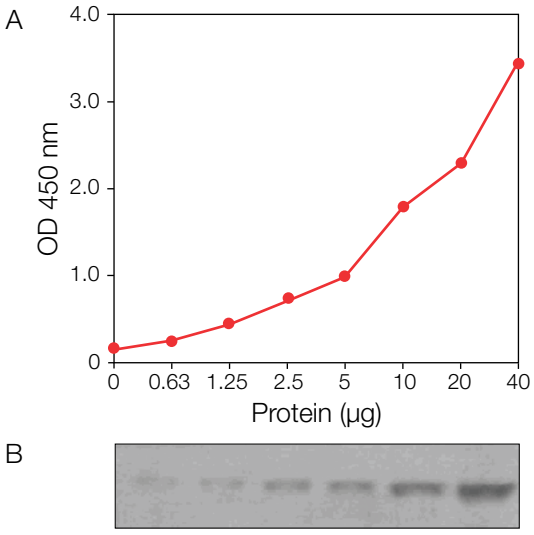


Figure 7. Confirmation of western blotting data with quantitative results by phosphospecific ELISA assay. (A) Quantitative data obtained using the STAT5a [pY694] Human ELISA Kit (Cat. No. KHO0761). **(B)** Western blotting results using a NuPAGE™ gel (Cat. No. NP0321). Assays were performed in parallel.

Target	Species reactivity	Quantity	Cat. No.
4E-BP1 (total)	Human, mouse, rat	96 assays	KHO0681
4E-BP1 [pT46]	Human, mouse, rat	96 assays	KHO0691
ACC1 (total)	Human	96 assays	KHO1071
ACC1 [pS79]	Human	96 assays	KHO1061
Akt (total)	Human, mouse, rat	96 assays	KHO0101
Akt [pS473]	Human, mouse, rat	96 assays	KHO0111
Akt1 (total)	Human	96 assays	KHO0531
Akt1 [pS473] (ultrasensitive)	Human	96 assays	KHO0541
Akt [pT308]	Human	96 assays	KHO0201
AMPKα [pT172]	Human, mouse, rat	96 assays	KHO0651
β-Catenin (total)	Human	96 assays	KHO1211
Caspase-3 (active)	Human	96 assays	KHO1091
c-Met (total)	Human	96 assays	KHO0251
c-Met [pYpYpY1230/1234/1235]	Human	96 assays	KHO0281
c-Myc (total)	Human	96 assays	KHO2041
CREB (total)	Human, mouse	96 assays	KHO0231
CREB [pS133]	Human, mouse	96 assays	KHO0241
Cytochrome c	Human	96 assays	KHO1051
EGFR (full-length)	Human	96 assays	KHR9061
EGFR [pY1068]	Human	96 assays	KHR9081
EGFR [pY1173]	Human	96 assays	KHR9071
ERK1/2 (total)	Human, mouse, rat	96 assays	KHO0081
ERK1/2 [pTpY185/187]	Human, mouse, rat	96 assays	KHO0091
FAK (total)	Human, mouse, rat	96 assays	KHO0431
FAK [pY397]	Human, mouse	96 assays	KHO0441
GSK-3β (total)	Human, mouse, rat	96 assays	KHO0451
GSK-3β [pS9]	Human, mouse, rat	96 assays	KHO0461
HER2 (total)	Human	96 assays	KHO0701
Histone H3 (total)	Human	96 assays	KHO0661
Histone H3 [pS10]	Human, mouse, rat	96 assays	KHO0671
HSP27 (total)	Human	96 assays	KHO0331
HSP27 [pS82]	Human	96 assays	KHO0341
IGF-1R [pYpY1135/1136]	Human, mouse, rat	96 assays	KHO0501
IκBα (total)	Human	96 assays	KHO0211
IκBα [pS32]	Human	96 assays	KHO0221
IR (β-subunit)	Human, mouse, rat	96 assays	KHR9111

Learn more about our phosphospecific ELISA kits at
thermofisher.com/phosphoelisas

Target	Species reactivity	Quantity	Cat. No.
IR [pY1158]	Human, mouse, rat	96 assays	KHR9121
IR [pY1334]	Human, mouse, rat	96 assays	KHR9161
IR [pYpY1162/1163]	Human, mouse, rat	96 assays	KHR9131
IRS-1 (total)	Human, mouse, rat	96 assays	KHO0511
IRS-1 [pS312]	Human, mouse, rat	96 assays	KHO0521
JAK2 (total)	Human, mouse	96 assays	KHO5521
JAK2 [pYpY1007/1008]	Human, mouse	96 assays	KHO5621
JNK 1/2 (total)	Human, mouse	96 assays	KHO0121
JNK 1/2 [pTpY183/185]	Human	96 assays	KHO0131
NF-κB p65 [total]	Human	96 assays	KHO0371
p21 Waf1/Cip1 (total)	Human	96 assays	KHO5421
p27 Kip1	Human, mouse, rat	96 assays	KHO5321
p38 MAPK (total)	Human, monkey, mouse	96 assays	KHO0061
p38 MAPK [pTpY180/182]	Human, monkey, mouse	96 assays	KHO0071
p70-S6K (total)	Human, mouse, rat	96 assays	KHO0571
p70-S6K [pT389]	Human	96 assays	KHO0581
PARP (cleaved) [214/215]	Human	96 assays	KHO0741
PRAS40 (total)	Human	96 assays	KHO0411
PRAS40 [pT246]	Human	96 assays	KHO0421
PRAS40 (total), mouse	Human, mouse, rat	96 assays	KMO0411
PRAS40 [pT246], mouse	Human, mouse, rat	96 assays	KMO0421
Rb (total)	Human	96 assays	KHO0011
Rb [pT821]	Human	96 assays	KHO0021
SMAD2 (total)	Human	96 assays	KHO2021
SMAD2 [pSpS465/467]	Human	96 assays	KHO2011
STAT3 [pY705]	Human, mouse, rat	96 assays	KHO0481
STAT5a (total)	Human, mouse, rat	96 assays	KHO0751
STAT5a [pY694]	Human	96 assays	KHO0761
STAT5b [pY699]	Human, mouse	96 assays	KHO5721
Tau (total)	Human Human	96 assays 192 assays	KHB0041 KHB0042
Tau [pS199]	Human	96 assays	KHB7041
Tau [pS396]	Human	96 assays	KHB7031
Tau [pT181]	Human	96 assays	KHO0631
Tau [pT231]	Human	96 assays	KHB8051
Tau (total)	Mouse	96 assays	KMB7011
Tau [pS199]	Mouse	96 assays	KMB7041

Cell/tissue extraction buffers**	Quantity	Cat. No.
Cell Extraction Buffer	100 mL	FNN0011
NP40 Lysis Buffer	100 mL	FNN0021
Tissue Extraction Reagent I	100 mL	FNN0071
Denaturing Cell Extraction Buffer	100 mL	FNN0091

** Cell/tissue extraction buffers are not included in any assay kits.

Antibody pair kits

Invitrogen and Thermo Scientific antibody pair kits contain matched, pretitered, and fully optimized capture (coating) and detection antibodies. These kits enable you to build your own ELISA or any other assay platform that utilizes a matched antibody pair. For convenience, we also offer the Buffer Kit for Antibody Pairs that contains premade, easy-to-use buffers and solutions that are optimized for use with antibody pair kits.

- Convenient format for maximum flexibility
- Potential cost savings over ready-to-use ELISA kits
- Easy to use with optimized reagents and protocol

Our Buffer Kit for Antibody Pairs (Cat. No. CNB0011) supplies sufficient reagents for 10 ELISA plates and includes:

- Assay buffer (5X)
- Coating buffer A
- Coating buffer B
- Wash buffer (25X)
- Stabilized chromogen (substrate)
- Stop solution

Each kit typically includes:

- Capture antibody
- Detector antibody
- Standard
- Streptavidin-HRP

Buffer Kit sold separately.

Target	Quantity	Cat. No.
Human		
Akt	5 plates	CHO0115
c-Met (total)	5 plates	CHO0285
c-Met (soluble)	5 plates	CHO0315
ERK 1/2	5 plates	CHO0095
HIF-1 α	5 plates	ESSHIF1A
IFN-γ	5 plates	ESS0002
IFN-γ	10 plates	CHC1233
IL-10	10 plates	CHC1323
IL-12 (p40/p70)	10 plates	CHC1563
IL-1ra	10 plates	CHC1183
IL-1β	10 plates	CHC1213
IL-1β	5 plates	ESS0008
IL-2	5 plates	ESS0010
IL-2	10 plates	CHC1243
IL-23	10 plates	CHC2493
IL-4	10 plates	CHC1283
IL-6	5 plates	ESS0005

Learn more at
thermofisher.com/buildyourownimmunoassay

Target	Quantity	Cat. No.
IL-6	10 plates	CHC1263
IL-8	5 plates	ESS0013*
IL-8	10 plates	CHC1303
IP-10	10 plates	CHC2363
MCP-1/CCL2	10 plates	CHC1013
MIP-1β/CCL4	10 plates	CHC2293
MMP-3	10 plates	CHC1543
SAA (Serum Amyloid A)	10 plates	CHA2513
TNF-α	10 plates	CHC1753
TNF-α	5 plates	ESS0001*
VEGF	10 plates	CHG0113
VEGF-A	5 plates	ESSHVEGF*
Mouse		
IFN-γ	10 plates	CMC4033
IFN-γ	5 plates	ESS0020*
IL-4	10 plates	CMC0043
IL-5	10 plates	CMC0053
IL-6	10 plates	CMC0063
IL-10	10 plates	CMC0103
IL-12	10 plates	CMC0123
IL-13	10 plates	CMC2223
IL-1β	10 plates	CMC0813
IL-23	10 plates	CMC2493
TNF-α	10 plates	CMC3013
Rat		
IL-2	10 plates	CRC0023
IL-6	10 plates	CRC0063
IL-13	10 plates	CRC0133
Swine		
IFN-γ	10 plates	CSC4033
IL-2	10 plates	CSC1243
IL-4	10 plates	CSC1283
IL-10	10 plates	CSC0103
TNF-α	10 plates	CSC1753
Chicken		
IFN-γ	10 plates	CAC1233
Bovine		
IFN-γ	5 plates	ESS0026B*
IL-4	5 plates	ESS0031*
IL-6	5 plates	ESS0029*
IL-1β	5 plates	ESS0027*
Equine		
TNF-α	5 plates	ESS0017*
Multiple species		
TGF-β1 (activated/treated)	10 plates	CHC1683

Buffer kit	Quantity	Cat. No.
Buffer Kit for Antibody Pairs		
The Antibody Pair Buffer Kit includes the following components (sufficient reagents for 10 plates):		
Assay Buffer (5X)	200 mL x 1 bottle	CNB0011
Coating Buffer A	100 mL x 1 bottle	
Coating Buffer B	100 mL x 1 bottle	
Wash Buffer (25X)	100 mL x 3 bottles	
Stabilized Chromogen	25 mL x 4 bottles	
Stop Solution	100 mL x 1 bottle	
Kit components sold individually:		
Assay Buffer (5X)	200 mL x 1 bottle	DS98200
Stabilized Chromogen	25 mL x 1 bottle	SB01
Stabilized Chromogen, Bulk Pack	1 L bottle	SB02
Stop Solution, Bulk Pack	1 L bottle	SS04

*This kit is optimized for other buffers. See manual for more information.

Using antibody pairs to make an ELISA

Watch our online video and learn how to use antibody pairs to set up an ELISA, and find out what prematched antibody pairs we offer to help make ELISA analysis easier and more successful. Visit **thermofisher.com/protein** to learn more.

Multiplex assays for the Luminex platform

Measure proteins simultaneously

Invitrogen™ multiplex assays enable fast and efficient profiling of multiple proteins in a single well using the Luminex™ xMAP™ (multi-analyte profiling) technology. Multiplexing assays provide more data from each sample of plasma, serum, or tissue culture supernatant than do ELISAs, a critical feature when sample size is limited. Most importantly, you are able to achieve a more comprehensive study of protein signaling in your precious samples when multiplexing (Figure 8).

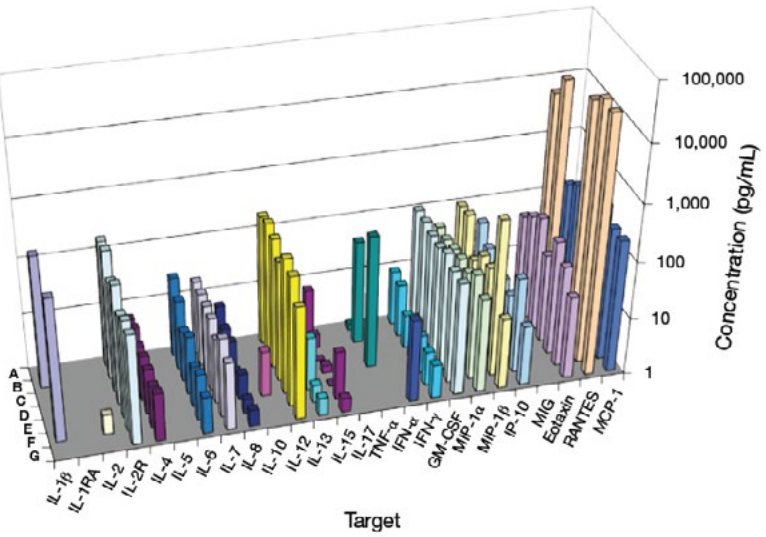


Figure 8. Seven serum samples are analyzed in a single experiment using the Invitrogen™ Cytokine Human Magnetic 25-Plex Panel. Serum samples from seven different individuals were assayed with the Cytokine Human Magnetic 25-Plex Panel (Cat. No. LHC0009M) to determine the levels of 25 different cytokines and chemokines simultaneously. Measurements were performed using the Luminex 200 system.

How Luminex technology works

The Luminex xMAP technology is based on internally color-coded microspheres (beads) containing fluorescent dyes. With varying concentrations of these dyes, as many as 500 distinct color bead sets can be created, each of which can be coupled to a target-specific molecule such as an antibody. Multiple antibody-conjugated beads can then be combined in a single well of a 96-well plate to measure multiple targets simultaneously. Once the antigen is bound, a reporter molecule labeled with a different fluorescent dye is introduced. Then, the 96-well plate is placed into the Luminex instrument, where the bead set is identified and the fluorescence of the reporter molecule is used to quantify the amount of target molecule (Figure 9).

Antigen-specific capture antibodies are bound to microspheres

Antigen from the test sample is bound to the microspheres

Signal is generated by labeled secondary antibody attachment

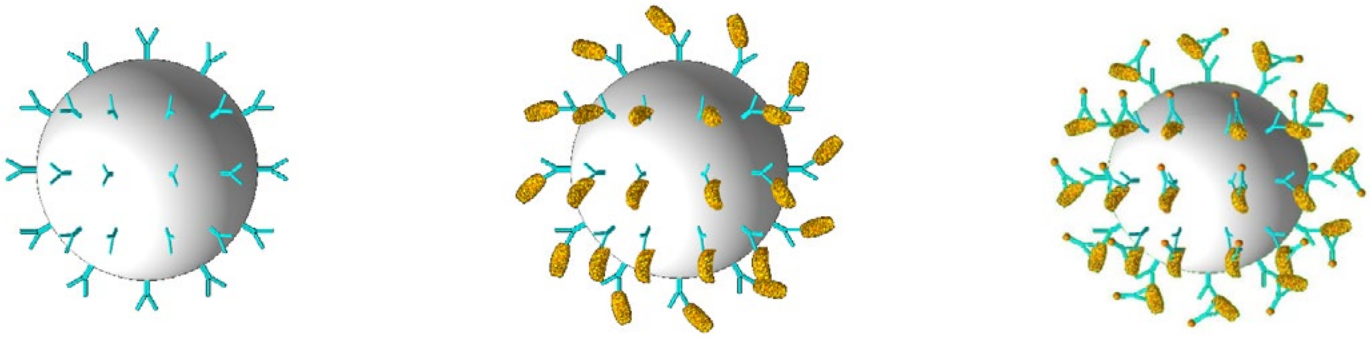


Figure 9. Protocol used with Luminex bead-based assays.

Magnetic vs. nonmagnetic polystyrene beads

We offer two types of bead kits: magnetic and nonmagnetic. Magnetic beads enable easier wash steps.

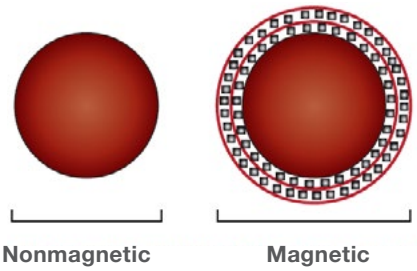


Figure 10. Schematic representation of nonmagnetic and magnetic beads. The encapsulated magnetite layers around the polystyrene core account for the larger size of the magnetic bead.

Advantages of the handheld Invitrogen Magnetic 96-Well Separator (Cat. No. A14179)

- Visual verification that beads are not lost after wash steps (Figure 11)
- Strong magnetic field allows for better washes (Figure 12)

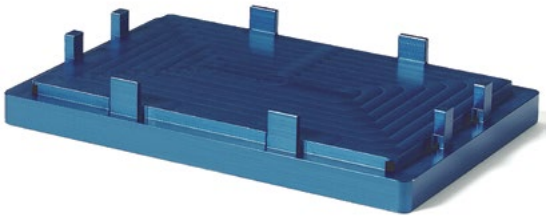


Figure 11. Magnetic bead aggregation comparison. Drawing of one well of a 96-well plate from the top view. Red bar and circles depict where the magnets are located when placing the 96-well plate on the handheld magnet.

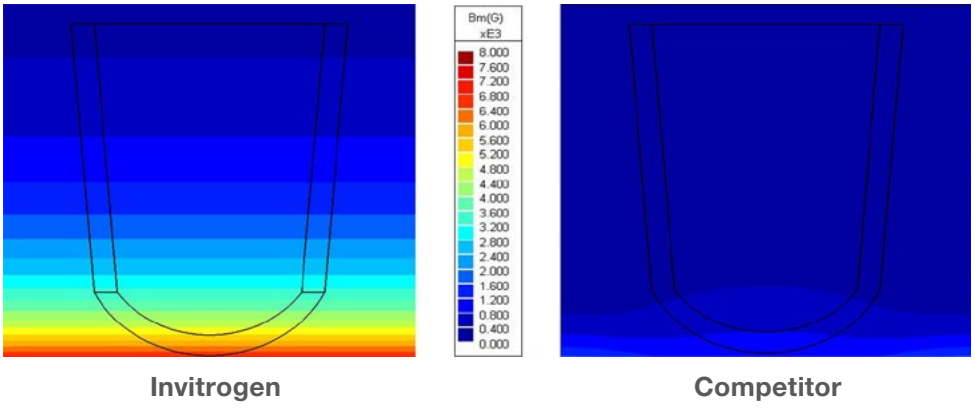


Figure 12. The Invitrogen handheld magnet is 6x stronger than that of the competitor, allowing for better washing and assay performance. The magnetic flux density was measured at the bottom of a well of a 96-well plate placed on top of a magnet. Courtesy image and analysis from Dexter Magnetic Technologies, Inc.

Watch how to use the handheld magnet for magnetic assays.
Go to **thermofisher.com/platewashing** to learn more.

Rigorous assay validation helps ensure consistent, reliable results

Our multiplex kits undergo rigorous quality testing (Table 4) and are correlated to our ELISA kits if available (Figure 13) to offer confidence that switching between protein analysis platforms will provide comparable analytical results.

Table 4. Specifications for kit development.

Specifications	Description
Benchmarking to ELISA	Correlates with ELISA data
Recovery	Tested on serum and plasma
Sensitivity*	Physiologically relevant levels, <10 pg/mL (based on detectable signal >2 SD above background)
Precision	Inter-assay CV: (between assays) Intra-assay CV: (within assays)
Specificity	Cross-reactivity tests are performed with other analytes and antibodies
Linearity of dilution	High coefficient of correlation between sample dilutions and expected concentration over the range of the assay
Parallelism to natural samples	Recombinant standards are compared to natural samples to ensure equivalency

*Every kit has its own specifications. Please consult the protocol insert in your specific Invitrogen multiplex kit.

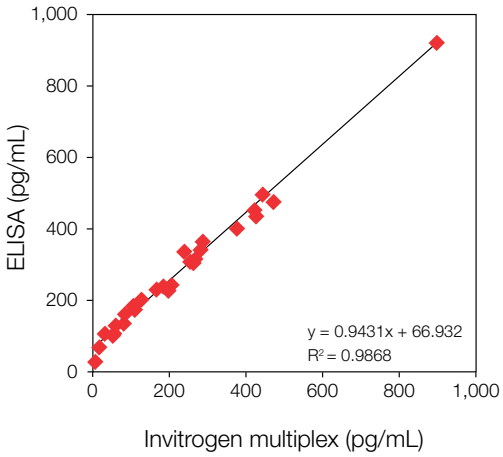


Figure 13. Strong correlation of ELISA and Invitrogen multiplex assay results. Mouse GMCSF in tissue culture supernatant was tested. Correlation of values over 3 orders of magnitude of sample dilution was 0.9868.

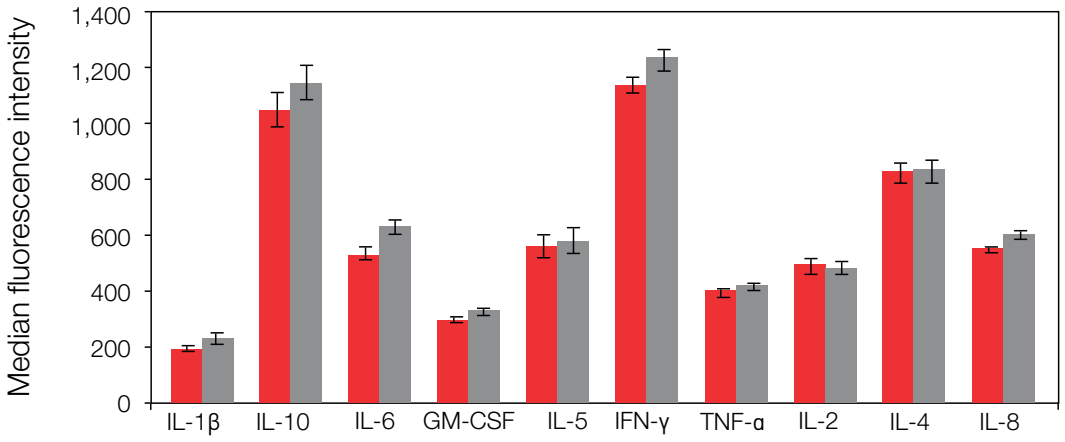


Figure 14. Assay precision. Red and gray bars each represent 24 replicates measured on separate days. CVs in all cases were <10%. Data were generated using a Invitrogen™ Human Cytokine Magnetic 10-Plex Panel (Cat. No. LHC0001M).

Recovery test comparison

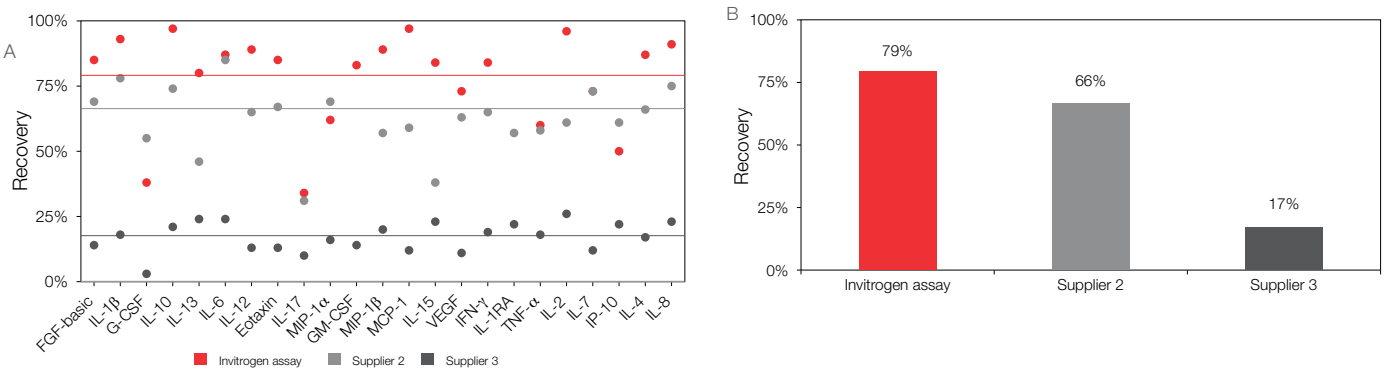


Figure 15. Recovery. To evaluate multiplex assays, samples of 23 human protein markers were spiked into a sample of human serum, and the sample was processed using the manufacturer's instructions. The multiplex sample was quantified on the MAGPIX™ system, and percent recovery calculated for **(A)** the individual markers and **(B)** as an average for the entire group.

Luminex instruments for xMAP technology

With over 10,000 instruments placed globally, the Luminex platform is well recognized as the preferred multiplexing platform. All of our multiplex assay kits can be run on any of these Luminex systems—MAGPIX™, Luminex 100/200™, Bio-Plex™, or FLEXMAP 3D™.

Over 1,000 references—visit our kit product pages or contact our tech support team at **techsupport@lifetech.com** for informative and valuable citations.

Multiplex assay kits for the Luminex platform

Multiplex assays are performed in much the same way as ELISAs with the exception that antibody-specific capture beads are added to wells of a 96-well plate, instead of capturing antibodies attached to the wells (Figure 16). Samples are then placed into the microplate wells. Novex multiplex assay kits are provided with post-lyophilized calibrated protein standards for quantitation and are calibrated to NIBSC, if available.

After incubation, the beads are washed either through filtration (for polystyrene beads) or a handheld magnet/plate washer (for magnetic beads). The beads are resuspended in the secondary detection antibody solution. Another incubation and washing step is performed followed by the addition of streptavidin-RPE. The beads are then washed again and are ready to be analyzed on a Luminex instrument.

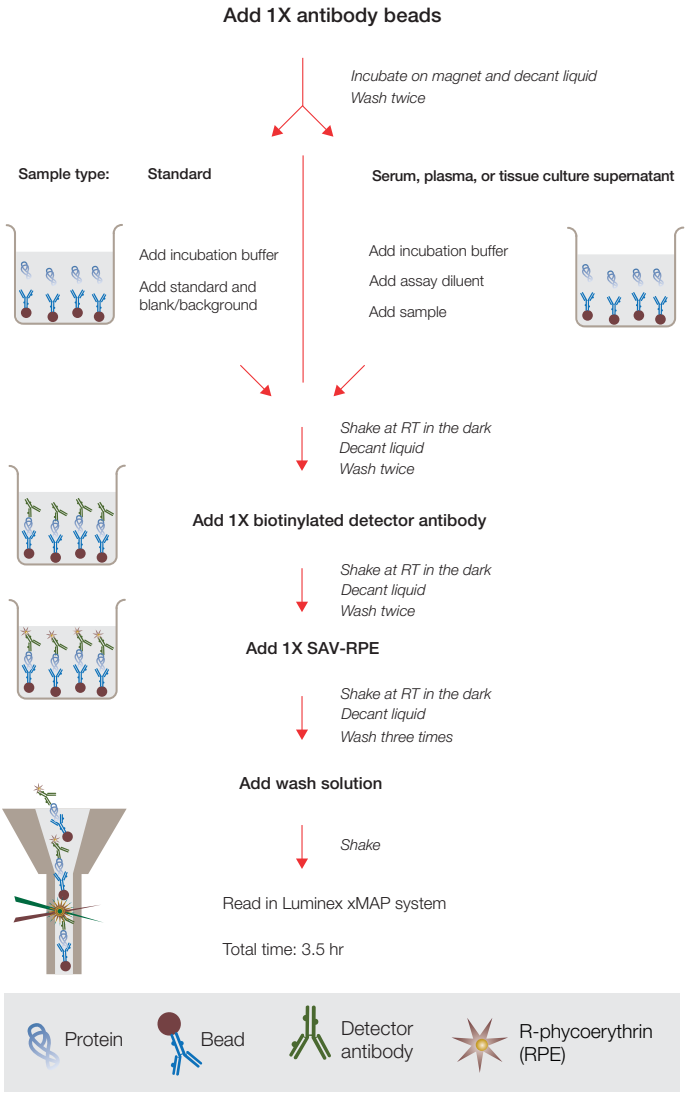


Figure 16. Invitrogen multiplex magnetic assay protocol.

Watch video tips and tricks on using assays for the Luminex platform
Go to **thermofisher.com/customluminex** to learn more.

NEW **For your ordering convenience we will soon offer more magnetic singleplexes as catalog items.**

Magnetic singleplex kits

Marker	Species	Cat. No.
Ultrasensitive magnetic		
GM-CSF	Human	LHC2013M
IFN-γ	Human	LHC4033M
IL-10	Human	LHC0103M
IL-1β	Human	LHC0013M
IL-2	Human	LHC0023M
IL-4	Human	LHC0043M
IL-5	Human	LHC0053M
IL-6	Human	LHC0063M
IL-8	Human	LHC0083M
TNF-α	Human	LHC3013M
Ultrasensitive Buffer Kit*	Human	LHB0003M
*Need to purchase 1 buffer kit to mix and match any ultrasensitive markers.		
Magnetic		
EGF	Human	LHG0061M
Eotaxin	Human	LHC2231M
Fibrinogen**	Human	LHP0091M
GCS-F	Human	LHC2031M
GM-CSF	Human	LHC2011M
HGF	Human	LHG0071M
IFN	Human	LHC4011M
IFN	Human	LHC4031M
IL	Human	LHC0811M
IL-1RA	Human	LHC0711M
IL-1β	Human	LHC0011M
IL-2	Human	LHC0021M
IL-3	Human	LHC0031M
IL-4	Human	LHC0041M
IL-5	Human	LHC0051M
IL-6R (IL6RA)	Human	LHC0061M
IL-7	Human	LHC0071M
IL-8	Human	LHC0081M
IL-9	Human	LHC0091M
IL-10	Human	LHC0101M
IL-12 p40	Human	LHC0121M
IL-12 p70	Human	LHC9121M
IL-13	Human	LHC0131M
IL-15	Human	LHC0151M
IL-16	Human	LHC0161M
IL-17	Human	LHC0171M
IP-10	Human	LHC1081M

Each singleplex kit typically includes:

- Antibody-coated capture beads
- Detector antibody
- Standard

Buffer Kit sold separately.

Marker	Species	Cat. No.
Magnetic		
IP-10	Monkey	LPC1171M
MCP-1	Human	LHC1011M
MIP	Human	LHC1021M
MIP-1β	Human	LHC1051M
PDGF-BB	Human	LHG0041M
RANTES (CCL5)	Human	LHC1031M
sCD30	Human	LHS6031M
TGF-β1**	Multispecies	LHG0121M
TNF	Human	LHC3011M
TNF-RI	Human	LHC3021M
TNF-RII	Human	LHC3031M

Buffer kit

Description	Species	Cat. No.
Buffer Kit	Human/monkey	LHB0001M

**Not recommended to be multiplexed with other targets due to buffer treatment incompatibilities.
Kit includes its own buffer kit.

Nonmagnetic (polystyrene) singleplex bead kits

Marker	Cat. No.
Human	
Adiponectin	LHP0041
Aggregated Aβ**	LHB3491
Aggregated α-Synuclein**	LHB0071
Aβ40	LHB3481
Aβ42	LHB3441
BDNF	LHC7071
CD30 (soluble)	LHS6031
CRP	LHP0031
DR5	LHR0051
EGF	LHG0061
EGFR (total)	LHR9061
EGFR [pY1068]	LHR9081
Eotaxin (CCL11)	LHC2231
FGF-basic	LHG0021
G-CSF	LHC2031
GDNF	LHC7041
GM-CSF	LHC2011
GRO-α	LHC1061
HGF	LHG0071
IFN-α	LHC4011
IFN-γ	LHC4031
IGF-1R [pYpY1135/36]	LHO0501
IL-1α	LHC0811
IL-1RA	LHC0711
IL-1β	LHC0011
IL-1β (ultrasensitive)	LHC0013
IL-2	LHC0021
IL-2R	LHR0021
IL-3	LHC0031
IL-4	LHC0041
IL-5	LHC0051
IL-6	LHC0061
IL-6 (ultrasensitive)	LHC0063
IL-6R (soluble)	LHR0061
IL-7	LHC0071
IL-8	LHC0081
IL-8 (ultrasensitive)	LHC0083
IL-10	LHC0101
IL-12 (p40/p70)	LHC0121
IL-12 (p70)	LHC9121
IL-13	LHC0131
IL-15	LHC0151
IL-16	LHC0161
IL-17	LHC0171
Insulin	LHP0021
IP-10	LHC1081
IRS-1 (total)	LHO0511
Leptin	LHP0011
MCP-1 (CCL2)	LHC1011
MCP-2 (CCL8)	LHC1111
MCP-3 (CCL7)	LHC1571
MIG (CXCL9)	LHC1091
MIP-1α (CCL3)	LHC1021
MIP-1β (CCL4)	LHC1051
PDGF-BB	LHG0041
RANTES (CCL5)	LHC1031
SAA (Serum Amyloid A)	LHP0061
Tau (total)	LHB0041
Tau [pT181]	LHB7051
TGF-β1 (activated)**	LHG0121
TNF-RI (soluble)	LHC3021
TNF-RII (soluble)	LHC3031
TNF-α	LHC3011
TNF-α (ultrasensitive)	LHC3013
VEGF	LHG0111
Human, mouse	
Akt (total)	LHO0091
Akt [pS473]	LHO0101
GSK-3β (total)	LHO0451
GSK-3β [pS9]	LHO0461
IGF-1R (total)	LHO0491
IGF-1R [pYpY1135/136]	LHR9111
IR [pYpY1162/1163]	LHR9131
p70S6K (total)	LHO0181
p70S6K [pTpS421/424]	LHO0191
PRAS40 (total)	LHO0411
PRAS40 [pT246]	LHO0421
Monkey	
G-CSF	LPC2031
IFN-γ	LPC4031
IL-2	LPC0021
IL-4	LPC0041
IL-6	LPC0061
IL-8	LPC0081
IL-10	LPC0101
IL-12	LPC0121
IL-17	LPC0171
IP-10 (magnetic)	LPC1171M
MCP-1 (CCL2)	LPC1011
MIP-1α (CCL3)	LPC1021
MIP-1β (CCL4)	LPC1051
RANTES (CCL5)	LPC1031
TNF-α	LPC3011

**Not recommended to be multiplexed with other targets due to buffer treatment incompatibilities. Kit includes its own buffer kit.

Marker	Cat. No.
Mouse	
FGF-basic	LMG0021
G-CSF	LMC2031
GM-CSF	LMC2011
IFN-ɣ	LMC4031
IL-2	LMC0021
IL-4	LMC0041
IL-5	LMC0051
IL-6	LMC0061
IL-10	LMC0101
IL-12 (p40/p70)	LMC0121
IL-12 (p70)	LMC9121
IL-13	LMC0131
IL-17	LMC0171
IL-1α	LMC0811
IL-1β	LMC0011
IP-10	LMC1081
KC	LMC1061
MCP-1 (CCL2)	LMC1011
MIG (CXCL9)	LMC1091
MIP-1α (CCL3)	LMC1021
MIP-1β (CCL4)	LMC1051
RANTES (CCL5)	LMC1031
TNF-α	LMC3011
VEGF	LMG0111
Rat	
GM-CSF	LRC2011
IFN-γ	LRC4031
IL-1α	LRC0811
IL-1β	LRC0011
IL-2	LRC0021
IL-4	LRC0041
IL-6	LRC0061
IL-10	LRC0101
IL-12 (p40/p70)	LRC0121
TNF-α	LRC3011

Buffer kits

Description	Species	Cat. No.
Human Extracellular Protein Buffer Reagent Kit	Human, monkey	LHB0001
Intracellular Protein Buffer Reagent Kit	Human, mouse, rat	LHB0002
Human Ultrasensitive Cytokine Buffer Reagent Kit	Human	LHB0003
Mouse or Rat Extracellular Protein Buffer Reagent Kit	Mouse, rat	LMB0001
Multispecies Growth Factor Buffer Reagent Kit	Human, monkey, mouse, rat	LMB0002
Neuroscience Buffer Reagent Kit	Human	LNB0001

"I had an excellent service experience with the field application specialist. I found him very personable and knowledgeable. I thought the excellent service and resolution of my issues in this instance warranted special recognition."

Thomas Chu, MD
Clinical Fellow, University of British Columbia

Have technical questions? Need help getting started?
Email **LuminexFAS@lifetech.com** to get a one-on-one technical consultation.

Each premixed panel kit typically includes:

- Premixed antibody-coated capture beads
- Premixed detector antibody
- Standard
- SAV-RPE, concentrate
- Diluent buffers
- Wash buffer
- Plate
- Reagents sufficient for 96 tests

Premixed multiplex panels

Description	Marker (Buffer kit included in each panel)	Cat. No.	
		Nonmagnetic	Magnetic
Human			
Human Cytokine 30-Plex Panel	EGF, eotaxin, FGF-basic, G-CSF, GM-CSF, HGF, IFN-α, IFN-γ, IL-1α, IL-1RA, IL-2, IL-2R, IL-4, IL-5, IL-6, IL-7, IL-8, IL-10, IL-12 (p40/p70), IL-13, IL-15, IL-17, IP-10, MCP-1, MIG, MIP-1α, MIP-1β, RANTES, TNF-α, VEGF	LHC6003	LHC6003M
Human Cytokine 25-Plex Panel	Eotaxin, GM-CSF, IFN-α, IFN-γ, IL-1β, IL-1RA, IL-2, IL-2R, IL-4, IL-5, IL-6, IL-7, IL-8, IL-10, IL-12 (p40/p70), IL-13, IL-15, IL-17, IP-10, MCP-1, MIG, MIP-1α, MIP-1β, RANTES, TNF-α	LHC0009	LHC0009M
Human Cytokine 10-Plex Panel	GM-CSF, IFN-γ, IL-1β, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, TNF-α	LHC0001	LHC0001M
Human Ultrasensitive Cytokine 10-Plex Panel	GM-CSF, IFN-γ, IL-1β, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, TNF-α	LHC6004	LHC6004M
New Human Adipokine 14-Plex Panel	IL-1β, IL-6, IL-8, IL-10, MCP-1, leptin, SAA, HGF, insulin, lipocalin-2, TNF-α, BAFF, resistin, PAI-1		LHC0017M
New Human Apolipoprotein 5-Plex Panel	ApoA1, ApoB, ApoE, adiponectin, CRP		LHP0001M
New Human Adhesion 6-Plex Magnetic Panel	ICAM-1, VCAM-1, E-selectin, P-selectin, PECAM-1, PAI-1		LHC0016M
New Human Aβ/Tau Neurodegenerative 3-Plex Panel	Aβ 40, Aβ 42, tau (total)		LHN0001M
Human Apoptosis 3-Plex Panel	Cytochrome c, caspase-3 [175/176], PARP [214/215]	LHC0007	
Human Chemokine 5-Plex Panel	Eotaxin, MCP-1, MIP-1α, MIP-1β, RANTES	LHC0005	
Human Chemokine 10-Plex Panel	Eotaxin, GRO-α, IP-10, MCP-1, MCP-2, MCP-3, MIG, MIP-1α, MIP-1β, RANTES	LHC6001	
Human Chemokine II 5-Plex Panel	ENA-78 (CXCL5), I-309 (CCL1), MDC (CCL22), MIP-3α (CCL20), TARC (CCL17)	LHC0012	
Human Cytokine II 5-Plex Panel	IFN-α, IL-12 (p40/p70), IL-13, IL-15, IL-17	LHC0007	
Human Death Receptor 3-Plex Panel	TNF-RI, TNF-RII, DR5	LHC0006	
Human Growth Factor 4-Plex Panel	EGF, FGF-basic, G-CSF, VEGF	LHC0004	
Human Inflammatory Cytokine 5-Plex Panel	GM-CSF, IL-1β, IL-6, IL-8, TNF-α	LHC0003	LHC0003M
Human Th1/Th2 Cytokine 5-Plex Panel	IFN-γ, IL-2, IL-4, IL-5, IL-10	LHC0002	
Human Th1/Th2/Th17 8-Plex Panel	IFN-γ, IL-2, IL-4, IL-5, IL-9, IL-10, IL-13, IL-17		LHC0015M
Human Acute Phase 4-Plex Panel	β2 microglobulin, haptoglobin, CRP, Gc globulin	LHC6006	

Description	Marker (Buffer kit included in each panel)	Cat. No.	
		Nonmagnetic	Magnetic
Human, mouse, rat			
Akt Phospho 7-Plex Panel	Akt [pS473], GSK-3α [pS9], IRS-1 [pS312], IGF-1R [pYpY1135/1136], IR [pYpY1162/1163], p70S6K [pTpS421/424], PRAS40 [pT246]	LHO0001	LHO0001M
Akt Total 7-Plex Panel	Akt, GSK-3α, IGF-1R, IR, IRS-1, p70S6K, PRAS40	LHO0002	LHO0002M
Monkey			
Monkey Cytokine 29-Plex Panel	EGF, eotaxin, FGF-basic, G-CSF, GM-CSF, HGF, IFN-γ, IL-1β, IL-1RA, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12, IL-15, IL-17, IP-10, I-TAC, MCP-1, MDC, MIF, MIG, MIP-1α, MIP-1β, RANTES, TNF-α, VEGF		LPC0005M
Monkey Chemokine 5-Plex Panel	IL-8, MCP-1, MIP-1α, MIP-1β, RANTES	LPC0002	
Monkey Cytokine 5-Plex Panel	IFN-γ, IL-2, IL-4, IL-10, TNF-α	LPC0001	
Mouse			
Mouse Cytokine 20-Plex Panel	FGF-basic, GM-CSF, IFN-γ, IL-1α, IL-1β, IL-2, IL-4, IL-5, IL-6, IL-10, IL-13, IL-12 (p40/p70), IL-17, IP-10, KC, MCP-1, MIG, MIP-1α, TNF-α, VEGF	LMC0006	LMC0006M
Mouse Cytokine 10-Plex Panel	GM-CSF, IFN-γ, IL-1β, IL-2, IL-4, IL-5, IL-6, IL-10, IL-12 (p40/p70), TNF-α	LMC0001	LMC0001M
Mouse Chemokine 5-Plex Panel	IP-10, KC, MCP-1, MIG, MIP-1α	LMC0005	
Mouse Inflammatory Cytokine 4-Plex Panel	GM-CSF, IL-1β, IL-6, TNF-α	LMC0003	LMC0003M
Mouse Th1/Th2 6-Plex Panel	IFN-γ, IL-2, IL-4, IL-5, IL-10, IL-12 (p40/p70)	LMC0002	
Rat			
Rat Cytokine 10-Plex Panel	GM-CSF, IFN-γ, IL-1α, IL-1β, IL-2, IL-4, IL-6, IL-10, IL-12 (p40/p70), TNF-α	LRC0002	LRC0002M
Swine			
Swine Cytokine Magnetic 7-Plex Panel	IL-1β γ, IL-4, IL-8, IL-10, IFN-α, IFN-γ, TNF-α		LSC0001M

Accessories

Description	Cat. No.
Magnetic 96-Well Separator	A14179
96-Well Filter Plate	LCP0000
96-Well Flat Bottom Plate	LCP0001
Wash Buffer (20X), 15 mL	WB04

Accessories for Luminex instruments

Description	Cat. No.
xMAP Sheath Fluid (1X), 20 L	4050000
xMAP Sheath Fluid (20X),1 L	A13724
xMAP Classification Calibrator Microspheres (CAL1)	L100CAL1
xMAP Reporter Calibrator Microsheres (CAL2)	L100CAL2
xMAP Classification Control Microspheres (CON1)	L100CON1
xMAP Reporter Control Microspheres (CON2)	L100CON2
MAGPIX Verification Kit	MPXPVERK25
MAGPIX Calibration Kit	MPXCALK25
MAGPIX Drive Fluid (4 pack)	MPXDF4PK
FM3D Verification Kit	F3DPVERK25
FM3D Calibration Kit	F3DCALK25

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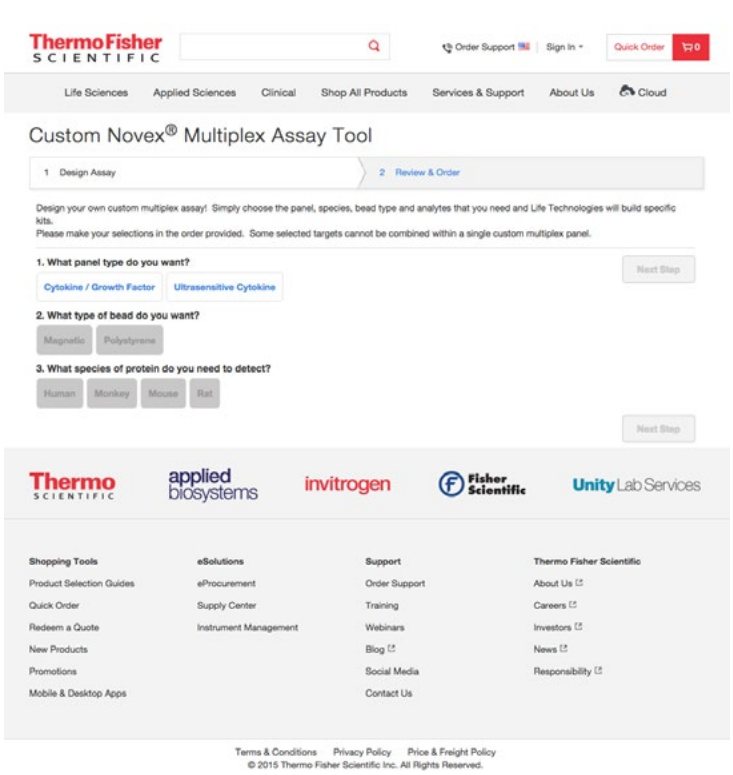
Our custom blend option allows you to select the individual protein targets from our menu. We will mix it for you and optimize to help ensure low background, high signal-to-noise ratios, and linearity of dilution. Your reagents will arrive in a ready-to-use format helping you avoid mixing errors and guessing dilutions when you blend the assay yourself.

Made-to-order multiplex assay system: Design your custom Invitrogen multiplex assay and request a quote using our Web-based design tool.



Each kit typically includes:

- Premixed antibody-coated capture beads
- Premixed detector antibody
- Standard
- SAV-RPE, concentrate
- Diluent buffers
- Wash buffer
- Plate

We now have a made-to-order web-based design tool. To design your own custom assay blend, go to **thermofisher.com/customluminex**

Notes

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