

Thermo Scientific Pierce Cytokine ELISA Technology

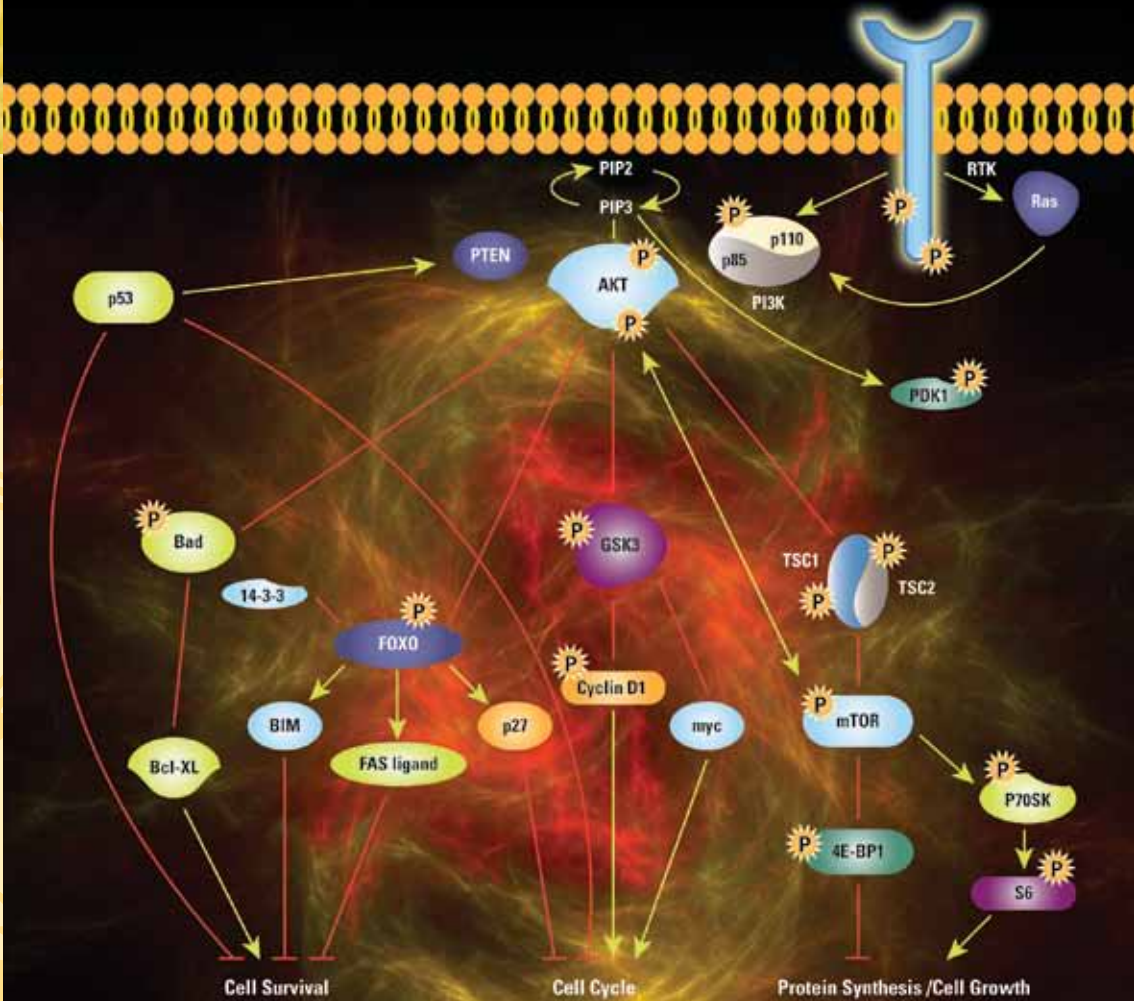
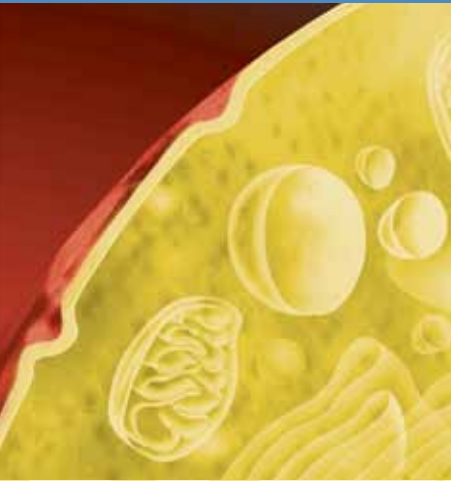
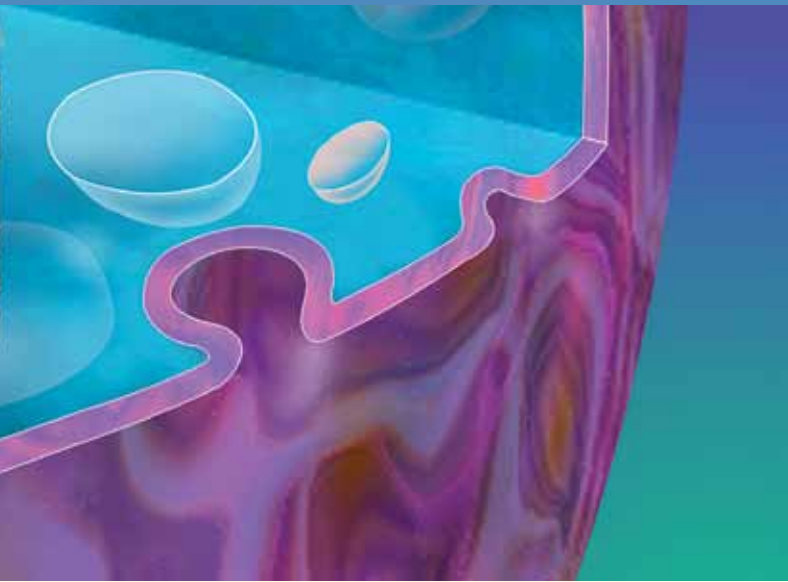


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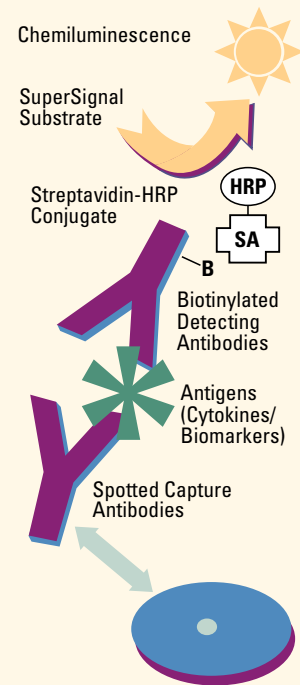
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Introduction: Cell Signaling



Are signals sent through intracellular networks? Signaling proteins typically affect intracellular networks, but occasionally they can also act on neighboring cells. Paracrine signal transduction occurs when a chemical message from one cell is released and detected by neighboring cells' plasma membrane receptors. Detection of signaling molecules in serum can also reveal molecular events occurring inside the cell, such as an inflammation response or hormonal response. The concentration of signaling molecules detected in the extracellular space can also indicate the degree of response. Enzyme Linked Immunosorbant Assays (ELISA) allow for quantitation of specific proteins in a sample such as cell culture supernatant, plasma or serum. Thermo Scientific ELISA Kits contain all of the necessary reagents to assess samples in a 96-well plate format.



ELISA scheme using Thermo Scientific SuperSignal Chemiluminescent detection.

Colorimetric ELISA Kits

High-performance, colorimetric sandwich ELISA kits for cytokines, chemokines and other markers.



Thermo Scientific ELISA Kits are standard 96-well microplate assays for quantitative measurement of individual cytokine, chemokine and other markers using the enzyme-linked immunosorbent assay (ELISA) technique. The complete, colorimetric kits for human, mouse, porcine and rat samples use an antibody-sandwich format. Most contain 96-well strip plates that are pre-coated with capture antibody, biotinylated detecting antibody, streptavidin-HRP conjugate, TMB substrate solution, lyophilized standard, wash and dilution buffers, stop solution and plate sealing tape. The kits are optimized to provide the best possible performance for the

testing range most often needed for each analyte while requiring a minimal volume of sample (usually 50µl). Every lot of each kit is functionally tested to ensure performance for the specified range and sensitivity.

Highlights:

- Fast, easy-to-follow protocols – most assays take only 3 hours to complete
- Convenient formats – 1- and 2-plate kits use 8 x 12-well strip plates and include two vials of lyophilized standard for trouble-free partial-plate experiments; 5-plate kits include one vial of standard for maximum uniformity across all plates
- Sensitive and robust – most kit matrices optimized for best dynamic range using only 50µl of sample
- Sample compatibility – kits are validated for several common types of samples and protocol provides specific guidelines for each
- Reliable – lot-specific quality-testing ensures consistent performance of entire kit matrix

Ordering Information

HUMAN

Analyte	Sample Type	Range	Sensitivity	Sample Size	Length	Pkg. Size	Product #
GM-CSF	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum; Urine	15.4 - 600pg/ml	<2pg/ml	50µl/well	4 hrs	1 plate	EHGMCSF
						5 plate	EHGMCSF5
sICAM (CD54)	Cell Culture Supernatant; EDTA or Heparin Plasma; Serum	0.5 - 10ng/ml	<0.3ng/ml	25µl/well	2.5 hrs	1 plate	EH5400
IFN α	Cell Culture Supernatant	10 - 500pg/ml (high sensitivity) or 40 - 5,000pg/ml (extended range)		100µl/well	3 hrs	1 plate	411001
						5 plate	411002
IFN α (Multisubtypes)	Cell Culture Supernatant	10 - 500pg/ml (high sensitivity) or 40 - 5,000pg/ml (extended range)		100µl/well	3 hrs	1 plate	411051
						5 plate	411052
IFN α	Cell Culture Supernatant; Serum	10 - 500pg/ml (high sensitivity) or 40 - 5,000pg/ml (extended range)		100µl/well	3 hrs	1 plate	411101
						5 plate	411102
IFN β	Cell Culture Supernatant	25 - 2,000pg/ml	NA	100µl/well	3 hrs	1 plate	414101
						5 plate	414102
IFN γ	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum; Urine	25.6 - 1,000pg/ml	<3pg/ml	50µl/well	3 hrs	1 plate	EHIFNG
						2 plate	EHIFNG2
						5 plate	EHIFNG5
IFN ω	Serum; Plasma; Cell Culture Supernatant	5 - 300pg/ml	NA	25µl/well	2.5 hrs	1 plate	413951
IL-1 α	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	10.2 - 400pg/ml	<2pg/ml	50µl/well	3 hrs	1 plate	EH2IL1A
						5 plate	EH2IL1A5
IL-1 β	Serum; Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	10.2 - 400pg/ml	<1pg/ml	50µl/well	4 hrs	1 plate	EH2IL1B
						2 plate	EH2IL1B2
						5 plate	EH2IL1B5
IL-2	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	38 - 1,500pg/ml	<6pg/ml	50µl/well	4 hrs	1 plate	EH2IL2
						5 plate	EH2IL25
IL-2 R	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant	24 - 6,400 units/ml	<24 units/ml	50µl/well	2.5 hrs	1 plate	EH2IL2R



HUMAN, continued

Analyte	Sample Type	Range	Sensitivity	Sample Size	Length	Pkg. Size	Product #
IL-4	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	10.2 - 400pg/ml	<2pg/ml	50µl/well	3 hrs	1 plate	EH2IL4
						5 plate	EH2IL45
IL-5	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	10.2 - 400pg/ml	<2pg/ml	50µl/well	3 hrs	1 plate	EHIL5
IL-6	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	10.2 - 400pg/ml	<1pg/ml	50µl/well	3 hrs	1 plate	EH2IL6
						2 plate	EH2IL62
						5 plate	EH2IL65
IL-8	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	25.6 - 1,000pg/ml	<2pg/ml	50µl/well	3 hrs	1 plate	EH2IL8
						2 plate	EH2IL82
						5 plate	EH2IL85
IL-10	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	15.4 - 600pg/ml	<3pg/ml	50µl/well	3 hrs	1 plate	EHIL10
						5 plate	EHIL105
IL-12 p70	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	15.4 - 600pg/ml	<3pg/ml	50µl/well	4 hrs	1 plate	EHIL12
						5 plate	EHIL125
IL-12 total	Serum; EDTA Plasma; Cell Culture Supernatant	25.6 - 1,000pg/ml	<5pg/ml	50µl/well	3 hrs	1 plate	EH2IL12T
IL-13	Serum; EDTA, Heparin, and Sodium Citrate Plasma; Cell Culture Supernatant; Urine	25.6 - 1,000pg/ml	<7pg/ml	50µl/well	3 hrs	1 plate	EHIL13
IL-16	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	51.2 - 2,000pg/ml	<8pg/ml	50µl/well	3 hrs	1 plate	EHIL16
MCP-1	Serum; EDTA and Heparin Plasma; Cell Culture Supernatant	25.6 - 1,000pg/ml	<10pg/ml	50µl/well	3 hrs	1 plate	EH2MCP1
						2 plate	EH2MCP12
MIP-1α	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum; Urine	25.6 - 1,000pg/ml	<5pg/ml	100µl/well	3 hrs	1 plate	EH2MIP1A
RANTES	Cell Culture Supernatant; Heparin or Sodium Citrate Plasma; Serum; Urine	51.2 - 2,000pg/ml	<2pg/ml	50µl/well	3 hrs	1 plate	EHRNTS
						5 plate	EHRNTS5
TNFα	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	15.6 - 1,000pg/ml	<2pg/ml	50µl/well	3 hrs	1 plate	EH3TNFA
						2 plate	EH3TNFA2
						5 plate	EH3TNFA5
VEGF	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	15.6 - 1,000pg/ml	<5pg/ml	50µl/well	4 hrs	1 plate	EHVEGF
						2 plate	EHVEGF2
						5 plate	EHVEGF5
PORCINE							
IFNγ	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	8 - 500pg/ml	<2pg/ml	50µl/well	3 hrs	1 plate	EPIFNG
TNFα	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	31.3 - 2,000pg/ml	<5pg/ml	50µl/well	4 hrs	1 plate	EP2TNFA
RAT							
IL-1α	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	51.2 - 2,000pg/ml	<15pg/ml	100µl/well	4 hrs	2 plate	ERIL1A2
IL-1β	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	25.6 - 2,500pg/ml	<12pg/ml	50µl/well	3.5 hrs	1 plate	ER2IL1B
						2 plate	ER2IL1B2
						5 plate	ER2IL1B5
IL-6	Cell Culture Supernatant; EDTA, Heparin, or Sodium	31 - 2,000pg/ml	<16pg/ml	50µl/well	4 hrs	1 plate	ER2IL6
						2 plate	ER2IL62
						5 plate	ER2IL65
IFNγ	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	8 - 500pg/ml	<2pg/ml	50µl/well	2.5 hrs	1 plate	ERIFNG
						2 plate	ERIFNG2

RAT, continued

Analyte	Sample Type	Range	Sensitivity	Sample Size	Length	Pkg. Size	Product #
IL-10	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	16 - 500pg/ml	<3pg/ml	100µl/well (Serum and Plasma Prediluted 1:2)	3 hrs	1 plate	ERIL10
						2 plate	ERIL102
MCP-1	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	38 - 1,500pg/ml	<5pg/ml	50µl/well	3 hrs	1 plate	ERMCP1
						2 plate	ERMCP12
TNFα	Cell Culture Supernatant; EDTA Plasma; Serum	31 - 2,500pg/ml	<10pg/ml	50µl/well	4 hrs	1 plate	ER3TNFA
						2 plate	ER3TNFA2
						5 plate	ER3TNFA5

MOUSE

GM-CSF	Cell Culture Supernatant; Serum	10 - 250pg/ml	<5pg/ml	50µl/well	3.5 hrs	1 plate	EMGMCSF
						2 plate	EMGMCSF2
sICAM (CD54)	Cell Culture Supernatant; EDTA Plasma; Serum	25.6 - 1,000ng/ml	<5ng/ml	50µl/well	3.5 hrs	1 plate	EMICAM1
						2 plate	EMICAM12
IFNα	Cell Culture Supernatant; Serum	12.5 - 500pg/ml	NA	100µl/well	Overnight	1 plate	421001
IFNγ	Cell Culture Supernatant; Heparin Plasma; Serum	37 - 3,000pg/ml	<10pg/ml	50µl/well	4 hrs	1 plate	EM1001
						2 plate	EM10012
						5 plate	EM10015
IFN	Cell Culture Supernatant	15-500pg/ml	N/A	100µl/well	Overnight	1 plate	421201
IL-1α	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	15.6 - 1,000pg/ml	<6pg/ml	50µl/well	3 hrs	1 plate	EMIL1A
						2 plate	EMIL1A2
IL-1β	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	15.6 - 1,000pg/ml	<3pg/ml	50µl/well	3 hrs	1 plate	EMIL1B
						2 plate	EMIL1B2
						5 plate	EMIL1B5
IL-2	Cell Culture Supernatant; Serum	34 - 850pg/ml	<3pg/ml	50µl/well	3.5 hrs	1 plate	EMIL2
						2 plate	EMIL22
						5 plate	EMIL25
IL-4	Cell Culture Supernatant; Serum	15 - 375pg/ml	<5pg/ml	50µl/well	3.5 hrs	1 plate	EMIL4
						2 plate	EMIL42
						5 plate	EMIL45
IL-5	Cell Culture Supernatant; Serum	20 - 320pg/ml	<5pg/ml	50µl/well	3.5 hrs	1 plate	EMIL5
						2 plate	EMIL52
IL-6	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	51 - 2,000pg/ml	<7pg/ml	50µl/well	4 hrs	1 plate	EM2IL6
						2 plate	EM2IL62
						5 plate	EM2IL65
IL-10	Cell Culture Supernatant; Serum	37 - 3,000pg/ml	<12pg/ml	50µl/well	5 hrs	1 plate	EM2IL10
						2 plate	EM2IL102
						5 plate	EM2IL105
IL-12 p40	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	12.5 - 800pg/ml	<2pg/ml	50µl/well	3 hrs	1 plate	EMIL12P40
						2 plate	EMIL12P402
IL-12 p70	Cell Culture Supernatant; Serum	12.3 - 1,000pg/ml	<5pg/ml	50µl/well	4 hrs	1 plate	EMIL12
						2 plate	EMIL122
						5 plate	EMIL125
IL-12 total	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	47 - 3,000pg/ml	<12pg/ml	50µl/well	3 hrs	1 plate	EMIL12TOT
						2 plate	EMIL12TOT2
MCP-1	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Serum	16 - 1,000pg/ml	<4pg/ml	50µl/well	3 hrs	1 plate	EMMCP1
						2 plate	EMMCP12
TNFα	Cell Culture Supernatant; Serum	50 - 2,450pg/ml	<10pg/ml	50µl/well	3 hrs	1 plate	EMTNFA
						2 plate	EMTNFA2
						5 plate	EMTNFA5

Chemiluminescent ELISA Kits

Sandwich ELISA kits for detection with a luminometer or CCD camera.

Thermo Scientific 96-well Microplate Kits quantitatively measure individual markers using a chemiluminescent HRP-based ELISA. The complete kits use an antibody-sandwich format and contain pre-coated antibody plates, detection antibody, streptavidin-HRP, buffers, standard

and Thermo Scientific SuperSignal Chemiluminescent Substrate for HRP. The kits are optimized to provide the best possible performance while requiring a small sample volume (usually 50µl). Every kit lot is functionally tested to ensure performance for the specified range and sensitivity.

Ordering Information

HUMAN

Analyte	Sample Type	Range	Sensitivity	Sample Size	Length	Pkg. Size	Product #
IFN_γ	Cell Culture Supernatant; EDTA or Heparin Plasma; Serum	1 - 10,000pg/ml	0.5pg/ml	50µl/well	2 hrs	1 plate	84775
IL-2	Cell Culture Supernatant; EDTA or Heparin Plasma; Serum	1 - 10,000pg/ml	0.5pg/ml	50µl/well	2 hrs	1 plate	84772
IL-8	Cell Culture Supernatant; EDTA or Heparin Plasma; Serum	0.5 - 5,000pg/ml	0.5pg/ml	50µl/well	2 hrs	1 plate	84774
TNF_α	Cell Culture Supernatant; EDTA or Heparin Plasma; Serum	2 - 20,000pg/ml	1pg/ml	50µl/well	2 hrs	1 plate	84776

Colorimetric Competitive ELISA Kits

Ordering Information

Analyte	Sample Type	Range	Sensitivity	Sample Size	Length	Pkg. Size	Product #
Cyclic AMP							
Non-Acetylated	Cell Culture Supernatant; Lysates	0.78 - 200 pmol/ml	<0.39 pmol/ml	100µl/well	3 hrs	1 plate	EMSCAMPL
Acetylated	Lysates	0.078 - 20 pmol/ml	<0.39 pmol/ml	100µl/well	2 hrs		
Cyclic GMP							
Non-Acetylated	Lysates	0.8 - 500 pmol/ml	<0.6 pmol/ml	100µl/well	3 hrs	1 plate	EMSCGMPL
Acetylated	Lysates	0.08 - 50 pmol/ml	<0.059 pmol/ml	100µl/well	3 hrs		
Leukotriene B4 (LTB4)	EDTA Plasma; Cell Culture Supernatant; Saliva; Urine	47 - 12,000pg/ml	<19.4pg/ml	100µl/well	3 hrs	1 plate	EHLTB4
Prostaglandin E2 (PGE2)	Cell Culture Supernatant; Saliva; Serum; Urine; Whole Blood	39 - 5,000pg/ml	<15.9pg/ml	100µl/well	3 hrs	1 plate	EHPGE2

Assay Kits

Ordering Information

Analyte	Sample Type	Range	Sensitivity	Sample Size	Length	Pkg. Size	Product #
Nitric Oxide							
NO₂	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Saliva; Serum; Urine	3.1-200 µmol/L	<0.22 µmol/L	50µl/well	10 min.	2 plate	EMSNO
NO₃		3.1-100 µmol/L	<0.54 µmol/L	50µl/well	40 min.	(96 determinations)	
Total Nitric Oxide	Cell Culture Supernatant; EDTA, Heparin, or Sodium Citrate Plasma; Saliva; Serum; Urine	3.1-100 µmol/L	<1.3 µmol/L	50µl/well	40 min.	2 plate (192 determinations)	EMSNOTOT

Kinase ELISA Kits

Ordering Information

Colorimetric ELISA Kit	Sample Type	Range	Sensitivity	Sample Size	Length	Pkg. Size	Product #
Phospho ERK 1/2	Cell Lysate	62 - 2,000pg/ml	<38.3pg/ml	100µl/well	3 hrs	1 plate	EMSERKP
Phospho GSK-3β	Cell Lysate	62 - 2,000pg/ml	<40.5pg/ml	100µl/well	3 hrs	1 plate	EMSGSK3P
Total GSK-3β	Cell Lysate	312 - 5,000pg/ml	<30pg/ml	100µl/well	3 hrs	1 plate	EMSGSK3T
Phospho JNK 1/2	Cell Lysate	62 - 4,000pg/ml	<46.9pg/ml	100µl/well	3 hrs	1 plate	EMSJNKP
Phospho MEK 1/2	Cell Lysate	187 - 6,000pg/ml	<85.2pg/ml	100µl/well	3 hrs	1 plate	EMSMEKP
Total MEK 1/2	Cell Lysate	312 - 1,000pg/ml	<181.4pg/ml	100µl/well	3 hrs	1 plate	EMS2MEKT
Phospho p38	Cell Lysate	156 - 5,000pg/ml	<52.1pg/ml	100µl/well	3 hrs	1 plate	EMSP38P

ELISA Screening Sets

Matched sets of reagents sufficient for five microplate ELISAs.

Thermo Scientific ELISA Screening Sets contain the basic components and protocol required to develop five colorimetric sandwich ELISAs for the quantitation of a specific protein in 100µl/well of cell culture supernatant. Each standard is mass-calibrated for immunoassay and all components undergo quality control testing to reduce lot-to-lot variability.

Each Screening Set includes:

- Five Lyophilized, Calibrated Standards
- Pre-titered Coating Antibody
- Pre-titered Detection Antibody
- Pre-titered Streptavidin-HRP Conjugate
- TMB Substrate and Stop Solution
- Detailed Instructions

Ordering Information

Analyte	Sample Type	Range	Sample Size	Length	Pkg. Size	Product #
Bovine IFN γ	Cell Culture Supernatant	31 - 2,000pg/ml	100µl/well	3 hrs	5 plate	ESS0026B
Bovine IL-1β	Cell Culture Supernatant	31 - 2,000pg/ml	100µl/well	3 hrs	5 plate	ESS0027
Bovine IL-4	Cell Culture Supernatant	15.6 - 1,000pg/ml	100µl/well	3 hrs	5 plate	ESS0031
Bovine IL-6	Cell Culture Supernatant	78 - 5000pg/ml	100µl/well	3 hrs	5 plate	ESS0029
Equine TNF α	Cell Culture Supernatant	16 - 1,000pg/ml	100µl/well	3 hrs	5 plate	ESS0017
Human IFN γ	Cell Culture Supernatant	15 - 1,000pg/ml	100µl/well	3 hrs	5 plate	ESS0002
Human IL-1β	Cell Culture Supernatant	7.8 - 500pg/ml	100µl/well	3 hrs	5 plate	ESS0008
Human IL-2	Cell Culture Supernatant	23 - 1,500pg/ml	100µl/well	3 hrs	5 plate	ESS0010
Human IL-4	Cell Culture Supernatant	6 - 400pg/ml	100µl/well	3 hrs	5 plate	ESS0012
Human IL-6	Cell Culture Supernatant	7.8 - 500pg/ml	100µl/well	3 hrs	5 plate	ESS0005
Human IL-8	Cell Culture Supernatant	7.8 - 500pg/ml	100µl/well	3 hrs	5 plate	ESS0013
Human IL-17	Cell Culture Supernatant	20 - 2,000pg/ml	100µl/well	3 hrs	5 plate	ESS0030
Human TNF α	Cell Culture Supernatant	15 - 1,000pg/ml	100µl/well	3 hrs	5 plate	ESS0001
Mouse IFN γ	Cell Culture Supernatant	47 - 3,000pg/ml	100µl/well	3 hrs	5 plate	ESS0020
Mouse MCP-1	Cell Culture Supernatant	15 - 1,000pg/ml	100µl/well	3 hrs	5 plate	ESS0004
Porcine TNF α	Cell Culture Supernatant	31 - 2,000pg/ml	100µl/well	3 hrs	5 plate	ESS0003
Primate IL-1β	Cell Culture Supernatant	7.8 - 500pg/ml	100µl/well	3 hrs	5 plate	ESS0009

ELISA MiniKits

Matched antibody pairs and calibrated standards for easy ELISA development.

Thermo Scientific ELISA MiniKits are a flexible, cost-effective solution for assaying large numbers of cell culture supernatant samples. Each kit contains pretitered coating and detection antibodies, a mass calibrated

standard, and detailed instruction booklet for the development of a colorimetric sandwich ELISA. Because MiniKits require setup and optimization before samples can be assayed, users should possess knowledge of ELISA techniques and experience with ELISA development in order to obtain optimal results.

Ordering Information

Analyte	Sample Type	Range	Sensitivity	Sample Size	Length	Pkg. Size	Product #
Human IFNγ MiniKit	Cell Culture Supernatant	15 - 1,000pg/ml	Variable	Variable	Variable	40 plate	KHIFNG
Human IL-1β MiniKit	Cell Culture Supernatant	7.8 - 500pg/ml	Variable	Variable	Variable	40 plate	KHIL1B
Human IL-2 MiniKit	Cell Culture Supernatant	23 - 1,500pg/ml	Variable	Variable	Variable	40 plate	KHIL2
Human IL-4 MiniKit	Cell Culture Supernatant	6 - 400pg/ml	Variable	Variable	Variable	40 plate	KHIL4
Human IL-6 MiniKit	Cell Culture Supernatant	7.8 - 500pg/ml	Variable	Variable	Variable	40 plate	KHIL6
Human IL-8 MiniKit	Cell Culture Supernatant	7.8 - 500pg/ml	Variable	Variable	Variable	40 plate	KHIL8
Human TNFα MiniKit	Cell Culture Supernatant	15 - 1,000pg/ml	Variable	Variable	Variable	40 plate	KHTNFA
Mouse IFNγ MiniKit	Cell Culture Supernatant	375 - 12,000pg/ml	Variable	Variable	Variable	40 plate	KMIFNG
Mouse IL-2 MiniKit	Cell Culture Supernatant	31 - 2,000pg/ml	Variable	Variable	Variable	40 plate	KMIL2
Mouse IL-4 MiniKit	Cell Culture Supernatant	20 - 650pg/ml	Variable	Variable	Variable	40 plate	KMIL4
Mouse IL-5 MiniKit	Cell Culture Supernatant	31 - 1,000pg/ml	Variable	Variable	Variable	40 plate	KMIL5
Mouse IL-6 MiniKit	Cell Culture Supernatant	62 - 2,000pg/ml	Variable	Variable	Variable	40 plate	KMIL6
Mouse TNFα MiniKit	Cell Culture Supernatant	200 - 6,500pg/ml	Variable	Variable	Variable	40 plate	KMTNFA

ELISPOT Kits

Detect cytokines at the single cell level.

ELISPOTs are enzyme-linked immunospot assays for the analysis of specific cytokine production at the single cell level. Thermo Scientific ELISPOT Kits offer maximum reliability, reproducibility and ease of cell counting. Choose individual antibody sets or kits for IFN γ , IL-2 or TNF α , or try Thermo Scientific TriSpot Kit for dual detection of both IFN γ and IL-2. In either case, proceed with confidence knowing that you are using high-quality plates and optimized reagents.

Originally, the ELISPOT technique was used to enumerate B cells that were secreting antibodies. The ELISPOT is now commonly used to measure the number of individual T cells that are secreting a specific cytokine after stimulation with a specific antigen or peptide.

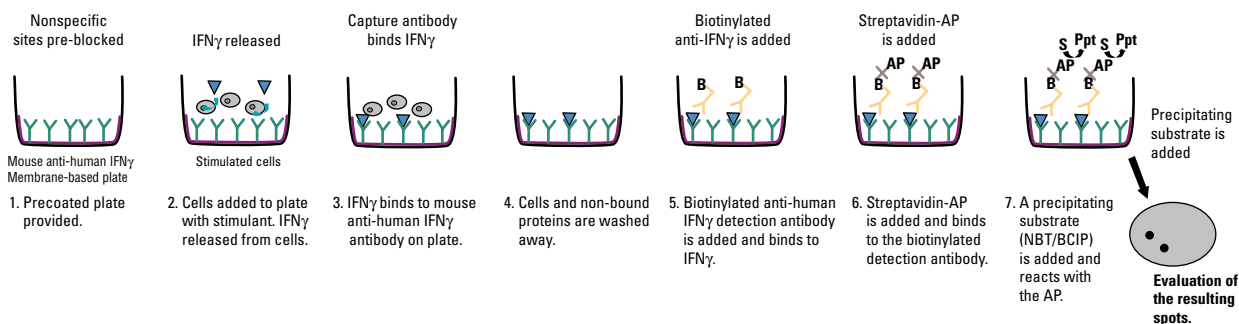
Ordering Information

Description	Format	Pkg. Size	Product #
Bovine IFNγ ELISPOT Kit	Complete Kit	Two 96-well plates	ELBOIFNG
Human IFNγ ELISPOT Kit	Complete Kit	Two 96-well plates	ELHIFNG
Human TNFα ELISPOT Set	Antibody Set	Ten 96-well assays	ELS001
Human IFNα ELISPOT Set	Antibody Set	Ten 96-well assays	ELS002
TriSpot Human IFNγ / IL-2 ELISPOT Kit	Complete Kit	Two 96-well plates	EL2H001
Human IL-2 ELISPOT Kit	Complete Kit	Two 96-well plates	ELHIL2

Supporting Reagents for ELISA and ELISPOT

Ordering Information

Description	Pkg. Size	Product #
ELISA Blocker Blocking Buffer	1L	N502
ELISA Wash Buffer, 30X	50ml	N503
HRP-Conjugated Streptavidin	0.25ml	N100
Immunohistochemical Detection Kit	–	36000
Poly-HRP Dilution Buffer	100ml	N500
Poly-HRP Dilution Buffer	1L	N501
Poly-HRP Streptavidin	0.25ml	N200
Stop Solution	55ml	N600
TMB Substrate Solution	100ml	N301
Ultra Streptavidin-HRP	1.5ml	N504



Procedure summary for ELISPOT assays.

Primary Antibodies



We offer a broad range of monoclonal, polyclonal and labeled antibodies for specific targets in several species of organisms. Thermo Scientific Pierce Antibodies include those specific for many extracellular and cell-surface markers such as cytokines, chemokines, T cell receptors and CD markers. These primary antibodies are fully validated and quality-tested to ensure accurate,

reproducible results in applications such as ELISA, ELISPOT, flow cytometry, immunohistochemistry, immunoprecipitation, neutralization and Western blot. Tested or literature-cited applications are listed for each antibody. Matched pairs that have been validated for sandwich ELISA are indicated both in the following alphabetical listing for each species and in a special listing on page 18.

The following comprehensive list of all Pierce® Primary Antibodies is organized at the highest level by predominant target location (Extracellular, Cell Surface, and Intracellular), then by species and then alphabetical by target name (protein name abbreviation).



Thermo Scientific Pierce Antibody Handbook

With the addition of ABR Affinity BioReagents to the Thermo Scientific family of products, you now have access to more than 30,000 antibodies in 42 research areas. This book contains a sampling of these antibodies. For a full list, visit www.thermoscientific.com/Ab

Key to Abbreviations.

Analyte and Antibody Type	
† =	Indicates multi-species cross-reactivity (see page 18 for details)
MAb =	Monoclonal antibody
PAb =	Polyclonal antibody
MP: Coat =	Matched pair member for coating step
MP: Detect =	Matched pair member for detection step

Format	
F =	Frozen liquid
L =	Lyophilized
P =	With preservative
PF =	Preservative-free
C =	With carrier protein
CF =	Carrier-free

Applications	
AP =	Affinity Purification
ELISA =	ELISA
EP =	ELISPOT
FC =	Flow Cytometry
IF =	Immunofluorescence
IH =	Immunohistochemistry
IP =	Immunoprecipitation
NEUT =	Neutralization
TCA =	T Cell Activation
WB =	Western blotting

Extracellular Target Primary Antibodies

Cytokine, chemokine and extracellular marker antibodies.

Ordering Information

BOVINE

Analyte	Antibody Type	Isotype	Clone #	Format	Applications	Pkg. Size	Product #
IFN γ [MP: Detect]	Biotin PAb	rabbit IgG	–	L, PF and CF	ELISA	250 μ g	PBOIFNGBI
IFN γ [MP: Coat]	PAb	rabbit IgG	–	L, PF and CF	ELISA, NEUT	1mg	PBOIFNGI
† IFN γ [MP: Coat]	MAb	mouse IgG1	CC302	L, PF and CF	ELISA, FC	500 μ g	MBOIFNGI
IL-1 β [MP: Detect]	Biotin PAb	rabbit IgG	–	L, PF and CF	ELISA	250 μ g	PBOIL1BBI
IL-1 β [MP: Coat]	PAb	rabbit IgG	–	L, PF and CF	ELISA	1mg	PBOIL1BI
IL-4 [MP: Detect]	Biotin PAb	rabbit IgG	–	L, PF and CF	ELISA, WB	250 μ g	PBOIL4BI
IL-4	PAb	rabbit IgG	–	L, PF and CF	ELISA, WB	1mg	PBOIL4I
† MAP-2	MAb	mouse IgG1	HSM-5	F, PF and CF	IH, WB	100 μ g	MN1070
† TNF α [MP: Detect]	Biotin PAb	rabbit IgG	–	L, PF and CF	ELISA, WB	250 μ g	PBOTNFABI
† TNF α [MP: Coat]	PAb	rabbit IgG	–	L, PF and CF	ELISA, NEUT, WB	1mg	PBOTNFBI
TNF α	MAb	mouse IgG1	E10011	L, PF and CF	ELISA, WB	500 μ g	MBOTNFBI

EQUINE

TNF α [MP: Detect]	Biotin PAb	goat IgG	–	L, PF and CF	ELISA, WB	250 μ g	PGETNFABI
TNF α [MP: Coat]	PAb	goat IgG	–	L, PF and CF	ELISA, WB	1mg	PGETNFBI
TNF α [MP: Detect]	Biotin PAb	rabbit IgG	–	L, PF and CF	ELISA, WB	250 μ g	PETNFABI
TNF α [MP: Coat]	PAb	rabbit IgG	–	L, PF and CF	ELISA, NEUT, WB	1mg	PETNFBI

Extracellular Target Primary Antibodies, continued

HUMAN							
Analyte	Antibody Type	Isotype	Clone #	Format	Applications	Pkg. Size	Product #
β Amyloid	Biotin MAb	mouse IgG2a	10H3	F, PF and CF	ELISA, IH, WB	50 μ g	MN1150B
β Amyloid	MAb	mouse IgG2a	10H3	F, PF and CF	ELISA, IH, WB	100 μ g	MN1150
† γ - γ Enolase	MAb	mouse IgG1	MID-N3 (H14)	F, P and C	IH	250 μ g	MN1160
G-CSF	PAb	rabbit IgG	–	F, PF and CF	WB	1mg	P3000
† GFAP (Glial Fibrillary Acidic Protein)	MAb	mouse IgG1	MIG-G2 (G1)	F, CF with P	IH	500 μ l	MN1180
GM-CSF [MP: Detect]	Biotin MAb	mouse IgG1	1089	F, P and C	ELISA, NEUT, IP, WB	250 μ g	M501B
GM-CSF	MAb	mouse IgG1	1089	F, PF and CF	–	500 μ g	M501
GM-CSF [MP: Coat]	MAb	mouse IgG1	3092	F, PF and CF	ELISA, NEUT, IP, WB	500 μ g	M500A
H-CAM	(see CD44)						
IFN α	MAb	mouse IgG1	MMHA-2	F, PF with C	ELISA, IH, IP, NEUT, WB	50 μ g	211001
IFN α	MAb	mouse IgG1	MMHA-2	F, PF with C	ELISA, IH, IP, NEUT, WB	500 μ g	211002
IFN α	MAb	mouse IgG1	MMHA-3	F, PF with C	IH, IP, WB	50 μ g	211011
IFN α	MAb	mouse IgG1	7N41	F, PF and CF	ELISA	500 μ g	M710
IFN α	Biotin MAb	mouse IgG1	7N41	F, P and C	ELISA	250 μ g	M710B
IFN α	PAb	sheep IgG	–	F, PF and CF	ELISA, IH, IP, NEUT, WB	1 x 10 ⁶ units	311001
IFN α	PAb	rabbit IgG	–	F, PF and CF	ELISA, IH, IP, NEUT, WB	1 x 10 ⁶ units	311011
IFN α	PAb	rabbit IgG	–	F, PF and CF	ELISA, IH, IP, NEUT, WB	2 x 10 ⁴ units	311301
IFN β	MAb	mouse IgG2a	MMHB-1	F, PF with C	ELISA, IH, IP, NEUT, WB	50 μ g	214051
IFN β	MAb	mouse IgG1	MMHB-3	F, PF with C	ELISA, IH, IP, NEUT, WB	50 μ g	214001
IFN β	PAb	sheep IgG	–	F, PF and CF	ELISA, IH, IP, NEUT, WB	2 x 10 ⁴ units	314001
IFN β	PAb	rabbit IgG	–	F, PF and CF	IH, IP, NEUT, WB	2 x 10 ⁴ units	314101
IFN γ [MP: Detect]	Biotin MAb	mouse IgG1	B133.5	F, P and C	ELISA, WB	250 μ g	M701B
IFN γ	MAb	mouse IgG1	B133.5	F, PF and CF	ELISA, WB	500 μ g	M701
IFN γ [MP: Coat]	MAb	mouse IgG1	2G1	F, PF and CF	ELISA, WB	500 μ g	M700A
IFN γ	PAb	rabbit IgG	–	F, PF and CF	ELISA, NEUT, WB	1mg	P700
IL-1 α [MP: Detect]	Biotin MAb	mouse IgG1	ILA8-H12	F, P and C	ELISA, WB	250 μ g	M420AB
IL-1 α	MAb	mouse IgG1	ILA8-H12	F, PF and CF	ELISA, WB	500 μ g	M420A
IL-1 α [MP: Coat]	MAb	mouse IgG1	ILA9-H18	F, PF and CF	ELISA, WB	500 μ g	M421A
† IL-1 α	PAb	rabbit IgG	–	F, PF and CF	ELISA, IH, NEUT, WB	1mg	P420A
IL-1 β [MP: Detect]	Biotin MAb	mouse IgG2b	ILB1-H6	F, P and C	ELISA, WB	250 μ g	M420BB
IL-1 β [MP: Coat]	MAb	mouse IgG2b	ILB1-H67	F, PF and CF	ELISA	500 μ g	M421B
† IL-1 β	PAb	rabbit IgG	–	F, PF and CF	ELISA, IH, NEUT, WB	1mg	P420B
IL-2 [MP: Detect]	Biotin MAb	mouse IgG1	BG5	F, P and C	ELISA	250 μ g	M600B
† IL-2 [MP: Coat]	PAb	rabbit IgG	–	F, PF and CF	ELISA, WB	1mg	P600
IL-4	Biotin MAb	rat IgG1	25D2	F with P and C	ELISA, NEUT, WB	250 μ g	M450B
IL-4	MAb	rat IgG1	25D2	F, PF and CF	ELISA, NEUT, WB	500 μ g	M450
IL-4 [MP: Detect]	Biotin MAb	mouse IgG1	E10022	L, PF and CF	ELISA	100 μ g	M21L4BI
IL-4 [MP: Coat]	MAb	mouse IgG1	E10021	L, PF and CF	ELISA	500 μ g	M1L4I
IL-4 [MP: Detect]	MAb	mouse IgG1	E10022	L, PF and CF	ELISA	500 μ g	M21L4I
IL-4 [MP: Coat]	MAb	mouse IgG2a	E10023	L, PF and CF	ELISA	500 μ g	M31L4I
IL-5 [MP: Detect]	Biotin MAb	rat IgG2a	39D10	F, P and C	ELISA, NEUT	250 μ g	M550B
IL-5 [MP: Coat]	MAb	rat IgG2a	5A10	F, PF and CF	ELISA, NEUT	500 μ g	M551
IL-6 [MP: Detect]	Biotin MAb	mouse IgG1	7IL6	F, P and C	ELISA	250 μ g	M621B

See page 9 for a key to abbreviations.

Extracellular Target Primary Antibodies, continued

HUMAN, continued

Analyte	Antibody Type	Isotype	Clone #	Format	Applications	Pkg. Size	Product #
IL-6 [MP: Coat]	MAB	mouse IgG1	5IL6	F, PF and CF	ELISA	500µg	M620
IL-6	PAb	rabbit IgG	–	F, PF and CF	ELISA, NEUT, WB	1mg	P620
IL-8 [MP: Detect]	Biotin MAB	mouse IgG2b	C-IL8-1 (I8S2)	F, P and C	ELISA, IH, WB	250µg	M802B
IL-8 [MP: Coat]	MAB	mouse IgG1	3IL8-H10	F, PF and CF	ELISA, WB	500µg	M801
† IL-10 [MP: Detect]	Biotin MAB	rat IgG2a	12G8	F, P and C	ELISA, NEUT	250µg	M011B
† IL-10 [MP: Coat]	MAB	rat IgG1	9D7	F, PF and CF	ELISA, NEUT	500µg	M010
IL-12 [MP: Detect]	Biotin MAB	mouse IgG1	C8.6	F, P and C	ELISA, NEUT, WB	250µg	M121B
IL-12	MAB	mouse IgG1	C8.6	F, PF and CF	ELISA, NEUT, WB	500µg	M121
IL-12 p70 [MP: Coat]	MAB	mouse IgG1	20C2	F, PF and CF	ELISA, WB	500µg	M122
IL-13 [MP: Detect]	Biotin MAB	rat IgG	5A2	F, P and C	ELISA, WB	250µg	M130B
IL-13	MAB	rat IgG	5A2	F, P and C	ELISA, WB	500µg	M130
IL-13 [MP: Coat]	PAb	rabbit IgG	–	F, PF and CF	ELISA, WB	1mg	P130E
IL-15	PAb	rabbit IgG	–	F, PF and CF	ELISA, WB	500µg	P151
IL-16 [MP: Detect]	Biotin MAB	mouse IgG2a	14.1	F, P and C	ELISA, WB	250µg	M161B
IL-16 [MP: Coat]	MAB	mouse IgG1	17.1	F, P and C	ELISA, WB	500µg	M160E
LFA-1 α chain	(see CD11a)						
LFA-2	(see CD2)						
MCP-1 [MP: Detect]	Biotin MAB	mouse IgG1	E10052	F, PF and CF	ELISA	0.1mg	M2MCP1BI
MCP-1	MAB	mouse IgG1	E10052	F, PF and CF	ELISA	0.5mg	M2MCP1I
MCP-1 [MP: Coat]	MAB	mouse IgG1	E10051	F, PF and CF	ELISA	0.5mg	M1MCP1I
MMP-1	MAB	mouse IgG1	X2A	F, PF and CF	AP (pro-form), WB	200µg	MS801PABX
MMP-1	PAb	rabbit IgG	–	F, PF and CF	IH	1mg	RB1635PABX
MMP-2	MAB	mouse IgG1	VB3	F, PF and CF	IF, IH, IP, WB	200µg	MS804PABX
MMP-3	MAB	mouse IgG2b	SL-1 IID4	F, PF and CF	AP, IF, IH, WB	200µg	MS810PABX
† MMP-9	MAB	mouse IgG1	IIA5	F, PF and CF	IP, WB	200µg	MS817PABX
† MMP-9	PAb - <i>Epitope Specific</i>	rabbit IgG	–	F, P and C	IH, WB	200µg	RB9234P
PECAM-1	(see CD31)						
RANTES [MP: Detect]	Biotin MAB	mouse IgG2b	VL-1	F, P and C	ELISA	250µg	M230B
RANTES [MP: Coat]	PAb	rabbit IgG	–	F, P and C	ELISA, WB	500µg	P230E
Synuclein	MAB	mouse IgG1	9B6	F, PF and CF	ELISA, IH, WB	100µg	MN1290
† TGF-β2	PAb - <i>Epitope Specific</i>	rabbit IgG	–	F, P and C	IH	200µg	RB9246P
† TGF-β3	PAb - <i>Epitope Specific</i>	rabbit IgG	–	F, P and C	IH, IP, WB	200µg	RB9262P
TIMP-1	MAB	mouse IgG1	102D1	F, PF and CF	IH, WB	200µg	MS608PABX
† TIMP-2	MAB	mouse IgG2a	3A4	F, PF and CF	IH, WB	200µg	MS1485PABX
TNFα [MP: Detect]	Biotin MAB	mouse IgG1	2TNF-H33	F, P and C	ELISA, WB	250µg	M302B
TNFα [MP: Coat]	MAB	mouse IgG1	2TNF-H34A	F, PF and CF	ELISA, WB	500µg	M303
TNFα [MP: Coat]	MAB	mouse IgG1	E10042	L, PF and CF	ELISA	0.5mg	M2TNFAI
TNFα [MP: Detect]	Biotin MAB	mouse IgG1	E10041	L, PF and CF	ELISA	0.1mg	M3TNFABI
TNFα [MP: Coat]	MAB	mouse IgG1	E10041	L, PF and CF	ELISA	0.5mg	M3TNFAI
TNFα [MP: Detect]	Biotin MAB	mouse IgG1	E10043	L, PF and CF	ELISA	0.1mg	MTNFABI
TNFα [MP: Coat]	MAB	mouse IgG1	E10043	L, PF and CF	ELISA	0.5mg	MTNFAI
VEGF	MAB	mouse IgG1	VG189 (VG76e)	F, PF and CF	NEUT, IP, WB	200µg	MS999PABX
VEGF	PAb	rabbit IgG	–	F, PF and CF	ELISA, WB	500µg	P931

See page 9 for a key to abbreviations.

Primary Antibodies (cont.)

Extracellular Target Primary Antibodies, continued

MOUSE

Analyte	Antibody Type	Isotype	Clone #	Format	Applications	Pkg. Size	Product #
GM-CSF [MP: Detect]	Biotin MAb	rat IgG1	31G6	F, P and C	ELISA, IP, NEUT, WB	250µg	MM500DB
GM-CSF [MP: Coat]	MAb	rat IgG2a	22E9	F, PF and CF	ELISA, IP, NEUT, WB	500µg	MM500C
IFNα	MAb	rat IgG1	RMMA-1	F, PF and CF	ELISA, IP, NEUT	250µg	221001
IFNα	PAb	rabbit IgG	–	F, PF and CF	ELISA, IH, IP, NEUT, WB	2 x 10 ⁴ units	321001
IFNα	PAb	rabbit IgG	–	F, PF and CF	ELISA, IH, IP, NEUT, WB	2 x 10 ⁴ units	324001
IFNγ [MP: Detect]	Biotin MAb	rat IgG1	XMG 1.2	F	ELISA, IH, NEUT, WB	250µg	MM700B
IFNγ [MP: Coat]	MAb	rat IgG1	XMG 1.2	F, PF and CF	ELISA, EP, IH, NEUT, WB	500µg	M700
AIFNγ	MAb	rat IgG1	R4-6A2	F, PF and CF	ELISA, EP, NEU	500µg	MM701
IL-1β	Biotin MAb	mouse IgG1	1400.24.17	F, P and C	ELISA, NEUT, WB	250µg	MM425BB
IL-1β	MAb	mouse IgG1	1400.24.17	F, PF and CF	ELISA, NEUT, WB	500µg	MM425B
IL-2 [MP: Detect]	Biotin MAb	rat IgG2a	1A12	F, P and C	ELISA, IP, NEUT, WB	250µg	MM102B
IL-2	MAb	rat IgG2a	S4B6	F, PF and CF	—	500µg	MM100
IL-2 [MP: Coat]	MAb	rat IgG2b	5H4	F, PF and CF	ELISA, EP, IP, NEUT, WB	500µg	MM101
IL-4 [MP: Detect]	Biotin MAb	rat IgG1	24G2	F, P and C	ELISA, IH, WB	250µg	MM450DB
IL-4	MAb	rat IgG1	24G2	F, PF and CF	ELISA, EP, IH, WB	500µg	MM450D
IL-4 [MP: Coat]	MAb	rat IgG2b	1D11	F, PF and CF	ELISA, IH, NEUT, WB	500µg	MM450C
IL-5 [MP: Detect]	Biotin MAb	rat IgG1	TRFK5	F, P and C	ELISA, NEUT, WB	250µg	MM550CB
IL-5	MAb	rat IgG1	TRFK5	F, P and C	ELISA, NEUT, WB	500µg	MM550C
IL-5 [MP: Coat]	MAb	rat IgG2a	TRFK4	F, PF and CF	ELISA, EP, NEUT, WB	500µg	MM550D
IL-6 [MP: Detect]	Biotin MAb	rat IgG1	20F3	F, P and C	ELISA, NEUT, WB	250µg	MM600CB
IL-6	MAb	rat IgG1	20F3	F, PF and CF	ELISA, IH, IP, NEUT, WB	500µg	MM600C
IL-6 [MP: Coat]	MAb	rat IgG2a	32C11	F, PF and CF	ELISA, NEUT, WB	500µg	MM600D
IL-6	PAb	rabbit IgG	–	F, PF and CF	ELISA, WB	500µg	PM626
IL-10	MAb	rat IgG1	2A5	F, PF and CF	ELISA, NEUT, WB	500µg	MM010
IL-10	MAb	rat IgG2b	16E3	F, PF and CF	ELISA	500µg	MM011
IL-12 [MP: Detect]	Biotin MAb	rat IgG2a	C17-8	F, P and C	ELISA, NEUT, WB	250µg	MM121B
IL-12	MAb	rat IgG2a	C17-8	F, PF and CF	ELISA, NEUT, WB	500µg	MM121
IL-12 p70 [MP: Coat]	MAb	rat IgG2b	9A5	F, PF and CF	ELISA, WB	500µg	MM120
TNFα [MP: Detect]	Biotin MAb	rat IgG1	XT22	F, P and C	ELISA, NEUT, WB	250µg	MM350DB
TNFα	MAb	rat IgG1	XT22	F, PF and CF	ELISA, NEUT, WB	500µg	MM350D
TNFα [MP: Coat]	MAb	rat IgG1	XT3	F, PF and CF	ELISA, NEUT, WB	500µg	MM350C
TNFα [MP: Detect]	Biotin PAb	rabbit IgG	–	L, PF and CF	ELISA, WB	250µg	PMTNFABI
TNFα [MP: Coat]	PAb	rabbit IgG	–	L, PF and CF	ELISA, WB	1mg	PMTNFBI

PORCINE

IFNα	MAb	mouse IgG1	K9	F, PF and CF	ELISA, IH, IP, NEUT, WB	500µg	271001
IFNα	MAb	mouse IgG1	F17	F, PF and CF	ELISA, IH, IP, NEUT, WB	500µg	271051
IFNγ [MP: Coat]	MAb	mouse IgG1	P2F6	F, PF and CF	WB	500µg	MP700
IFNγ [MP: Detect]	Biotin MAb	mouse IgG2a	P2C11	F	ELISA	100µg	MP701B
IFNγ	MAb	mouse IgG2a	P2C11	F	ELISA	500µg	MP701
IFNγ	PAb	rabbit IgG	–	F, PF and CF	WB	1mg	PP700
IL-1β	MAb	mouse IgG1	DF8	F, PF and CF	WB	500µg	MP425
IL-1β	PAb	rabbit IgG	–	F, PF and CF	WB	1mg	PP425
IL-6	MAb	mouse IgG1	24D12	F, PF and CF	WB	500µg	MP600
IL-6	PAb	rabbit IgG	–	F, PF and CF	WB	1mg	PP690
IL-8	MAb	mouse IgG1	NB8	F, PF and CF	WB	500µg	MP800
IL-8	PAb	rabbit IgG	–	F, PF and CF	WB	1mg	PP800
IL-12	MAb	mouse IgG2a	G9.2	F, PF and CF	WB	500µg	MP121
IL-12 p40	MAb	mouse IgG1	B4	F, PF and CF	WB	500µg	MP124
TNFα [MP: Coat]	MAb	mouse IgG1	4F4	F, PF and CF	ELISA, NEUT, WB	500µg	MP390
TNFα [MP: Coat]	MAb	mouse IgG1	6E10	F, PF and CF	ELISA, NEUT, WB	500µg	MP391
† TNFα [MP: Coat]	PAb	rabbit IgG	–	L, PF and CF	ELISA, WB	1mg	PRTNFBI

RAT

IL-6	PAb	rabbit IgG	–	F, PF and CF	WB	1mg	PR627
† TNFα [MP: Detect]	Biotin PAb	rabbit IgG	–	L, PF and CF	ELISA, WB	250µg	PRTNFBI

See page 9 for a key to abbreviations.

Cell Surface Target Primary Antibodies

Adhesion, T cell receptor and other cell surface marker antibodies.

Ordering Information

HUMAN

Analyte	Antibody Type	Isotype	Clone #	Format	Applications	Pkg. Size	Product #
β_1 Integrin	(See CD29)						
β_2 Integrin	(See CD18)						
CD2 (LFA-2)	MAB	mouse IgG1	TS2/18	F, PF and CF	FC, IP, NEUT, WB	200 μ g	MA0200
CD3	MAB	mouse IgG3	RIV9	F, PF and CF	FC, IH, IF, TCA	200 μ g	MS532PABX
CD11a (LFA-1 α chain)	MAB	mouse IgG1	TS1/22	F, PF and CF	FC, IF, NEUT	200 μ g	MA11A10
CD18 (β_2 Integrin)	MAB	mouse IgG1	TS1/18	F, PF and CF	FC, IP, WB	200 μ g	MA1810
CD25 (IL-2R α , p55)	MAB	mouse IgG1	2R12	F, P and C	FC, IH, IP, WB	100 tests	M10AR
CD29 (β_1 Integrin)	MAB	mouse IgG1	TS2/16	F, PF and CF	FC	200 μ g	MA2910
CD31 (PECAM-1)	MAB	mouse IgG2a	HEC-7	F, PF and CF	FC, IH, IP	200 μ g	MA3100
CD38	MAB	mouse IgG1	AT1	F, PF and CF	FC, IF, IH	200 μ g	MS438PABX
† CD44 (H-CAM)	MAB	rat IgG2a	Hermes-1	F, PF and CF	FC, IH, IP, NEUT, WB	200 μ g	MA4400
CD49a	MAB	mouse IgG1	TS2/7	F	FC, IH, IP, WB	100 tests	MA49A0
CD50 (ICAM-3)	MAB	mouse IgG2a	101-1D2	F, PF and CF	FC, IF, IH	200 μ g	MS623PABX
CD54 (ICAM-1)	MAB	mouse IgG2b	W-CAM-1	F, PF and CF	FC, IF, IH, NEUT	200 μ g	MS305PABX
CD105	MAB	mouse IgG1	SN6h	F, PF and CF	FC, IH, WB	200 μ g	MS1290PABX
† CD106 (VCAM-1)	MAB	mouse IgG1	1G11.B1	F, PF and CF	FC, IH	200 μ g	MS122PABX
CD115	MAB	rat IgG1	2-4A5-4	F, PF and CF	IF, IH, NEUT	200 μ g	RT601PABX
CD118	(See IFN α / β Receptor Chain 2)						
† EGFR	MAB	mouse IgG1	225	F, PF and CF	IP, NEUT	200 μ g	MS269PABX
IFNα/β Receptor Chain 2	MAB	mouse IgG2a	MMHAR-2	F, PF with C	FC, IH, IP, NEUT	50 μ g	213851
IFNα/β Receptor Chain 2	PAb	rabbit IgG	–	F, PF and CF	FC, IH, IP, WB	50 μ g	313851
IL-2Rα, p55	(See CD25)						
IL-6 Rα	MAB	mouse IgG1	16R1/9.G11	F, PF and CF	IP, WB	500 μ g	M4000
Perforin	MAB	mouse IgG2b	dG9	F, P and C	IH, IP	300 μ g	MA191079
L-Selectin	(see CD62L)						
Pan TCR γ/δ	MAB	mouse IgG1	5A6.E91 (TCRd1)	F, P and C	FC, IH, IP, TCA	200 μ g	TCR1061
Pan TCR γ/δ	FITC MAb	mouse IgG1	5A6.E91 (TCRd1)	F, P and C	FC, IH, IP	200 tests	TCR2061
TCR αF1	MAB	mouse IgG2a	3A8	F, P and C	IH, IP, WB	200 μ g	TCR1145
TCR βF1	MAB	mouse IgG1	8A3	F, P and C	IH, IP, WB	200 μ g	TCR1151
TCR γM1	MAB	mouse IgG1	γ 3.20	F, P and C	IH, IP	200 μ g	TCR1153
TCR δTCS1	FITC MAb	mouse IgG1	TS-1	F, P and C	FC, IH, IP	200 tests	TCR2055
TCR δTCS1	MAB	mouse IgG1	TS-1	F, P and C	FC, IH, IP, TCA	200 μ g	TCR1055
TCR Vα2	MAB	mouse IgG2a	F1	F, P and C	FC, IH, IP	200 μ g	TCR1663
TCR Vα2	FITC MAb	mouse IgG2a	F1	F, P and C	FC, IH, IP	200 tests	TCR2663
TCR Vα12.1	MAB	mouse IgG1	6D6.6	F, P and C	FC, IH, IP, TCA	200 μ g	TCR1764
TCR Vα12.1	FITC MAb	mouse IgG1	6D6.6	F, P and C	FC, IH, IP, TCA	200 tests	TCR2764
TCR Vβ3.1	FITC MAb	mouse IgG1	8F10	F, P and C	FC, IH, TCA	200 tests	TCR2740
TCR Vβ5(a)	MAB	mouse IgG1	1C1	F, P and C	FC, IH, TCA	200 μ g	TCR1642
TCR Vβ5(a)	FITC MAb	mouse IgG1	1C1	F, P and C	FC, IH, TCA	200 tests	TCR2642
TCR Vβ5(b)	MAB	mouse IgG1	W112	F, P and C	FC, IH, IP, TCA, WB	200 μ g	TCR1645
TCR Vβ5(b)	FITC MAb	mouse IgG1	W112	F, P and C	FC, IH, IP, TCA, WB	150 tests	TCR2645

See page 9 for a key to abbreviations.

Cell Surface Target Primary Antibodies, continued

HUMAN, continued

Analyte	Antibody Type	Isotype	Clone #	Format	Applications	Pkg. Size	Product #
TCR Vβ6.7	FITC MAb	mouse IgG1	OT145	F, P and C	FC, IH, NEUT, TCA	200 tests	TCR2657
TCR Vβ8(a)	MAb	mouse IgG2b	I6G8	F, P and C	FC, IH, IP, TCA, WB	200 μ g	TCR1648
TCR Vβ8(a)	FITC MAb	mouse IgG2b	I6G8	F, P and C	FC, IH, IP, TCA, WB	200 tests	TCR2648
TCR Vβ8(b)	MAb	mouse IgG2a	MX-6	F, P and C	FC, IH, IP, TCA	200 μ g	TCR1750
TCR Vβ8(b)	FITC MAb	mouse IgG2a	MX-6	F, P and C	FC, IH, IP, TCA	200 tests	TCR2750
TCR Vβ12	MAb	mouse IgG1	S511	F, P and C	FC, IH, TCA	200 μ g	TCR1642
TCR Vβ12	FITC MAb	mouse IgG2b	S511	F, P and C	FC, IH, TCA	200 tests	TCR2642
TCR Vδ1	MAb	mouse IgG2b	TS8.2	F, P and C	FC, IH, IP, TCA	200 μ g	TCR1654
TCR Vδ1	FITC MAb	mouse IgG1	TS8.2	F, P and C	FC, IH, IP, TCA	200 tests	TCR2654
TCR Vδ2	FITC MAb	mouse IgG1	15D	F, P and C	FC, IH, IP, TCA	200 tests	TCR2732
TCR Vδ2	MAb	mouse IgG1	15D	F, P and C	FC, IH, IP, TCA	200 μ g	TCR1732
TCR Vγ9	FITC MAb	mouse IgG1	7A5	F, P and C	FC, IH, IP, TCA	200 tests	TCR2720
TCR Vγ9	MAb	mouse IgG1	7A5	F, P and C	FC, IH, IP, TCA	200 μ g	TCR1720

MOUSE

CD11α (LFA-1 α chain)	MAb	rat IgG2a	I21/7	F, PF and CF	FC, IP, NEUT	500 μ g	MA11A5
CD11c (p150,95 chain)	MAb	Arm. hamster IgG	N418	F, PF and CF	FC, IH, IP	500 μ g	MA11C5
CD18 (β_2 Integrin)	MAb	Arm. hamster IgG	2E6	F, PF and CF	FC, IP, NEUT	500 μ g	MA1805
CD31 (PECAM-1)	MAb	Arm. hamster IgG	2H8	F, PF and CF	FC, NEUT	500 μ g	MA3105
CD44 (H-CAM)	MAb	rat IgG2b	1M7.8.1	F, PF and CF	FC, IP, IF, NEUT, WB	500 μ g	MA4405
CD54 (ICAM-1)	MAb	Arm. hamster IgG	3E2B	F, PF and CF	ELISA, FC	500 μ g	MA5405

RAT

CD18 (β_2 Integrin)	MAb	mouse IgG2a	TA-4	F, PF and CF	FC, IP	500 μ g	MA1807
CD18 (β_2 Integrin)	MAb	mouse IgG1	WT.3	F, PF and CF	FC, IP, WB	500 μ g	MA1817
CD26 (DPP4)	MAb	mouse IgG2b	236.3	F, PF and CF	FC, IH, IP	500 μ g	MA2607
CD49d (VLA-4 α)	MAb	mouse IgG1	TA-2	F, PF and CF	FC, IH	500 μ g	MA49D7
CD54 (ICAM-1)	MAb	mouse IgG1	1A29	F, PF and CF	FC, IH, NEUT	500 μ g	MA5407
NK Receptor Protein-1	MAb	mouse IgG1	3.2.3	F, PF and CF	FC, IH	500 μ g	MANK07

See page 9 for a key to abbreviations.

Thermo Scientific family of products includes a complete line of highly validated primary and secondary antibodies to complement our protein research reagents and tools. We offer more than 30,000 polyclonal and monoclonal antibodies in 42 research areas.

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Intracellular Target Primary Antibodies

Cell signaling, transcription factor, cell cycle and other intracellular marker antibodies.

Except for four exceptions, which are noted after the protein name, all antibodies in this group have human as the primary target species. The four exceptions have bovine as the primary target but cross-react with human. As indicated with the dagger symbol in the first column, most of these intracellular antibodies also have cross-reactivity to mouse, rat and other species. Please contact us to obtain complete cross-reactivity information about specific items.

Control Antibodies

Control antibodies for expression and Western blot analysis.

Ordering Information

Description	Pkg. Size	Product #
Anti-GAPD Protein Antibody (mouse MAb against glyceraldehyde-3-phosphate dehydrogenase)	100µg	PA1988
Anti-Cyclophilin B Protein Antibody (rabbit PAb against cyclophilin B)	100µg	PA1027A
Anti-Actin Protein Antibody (rabbit PAb against actin)	120µl	82353

Ordering Information

HUMAN

Analyte	Protein Name	Antibody Type	Isotype	Format	Applications	Pkg. Size	Product #
† ABCD3	Peroxisomal membrane protein 70 (Peroxisome)	PAb	rabbit IgG	F, P, C	WB (1µg/ml)	100µg	PA1650
† AKT1	v-akt-1, Protein kinase B	MAb	mouse IgG	F, P, C	WB (1:1000)	100µl	82310
† AKT2	v-akt-2	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82311
AR	Androgen receptor	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82312
ARF6	ADP ribosylation factor 6	MAb	mouse IgG	F, P, C	WB (1:200)	100µg	MA121439
† ATM	Ataxia telangiectasia mutated	MAb	mouse IgG	F, P, C	WB (1:1000)	100µl	82314
ATR	Ataxia telangiectasia and Rad3 related	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µg	PA1450
† AURKB	Aurora B kinase	MAb	mouse IgG	F, P, C	WB (1:200)	525µl	82316
† BAD	Bcl-2-antagonist of death	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82317
† BAX	Bcl-2-associated X protein	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82318
BCL2	B-cell lymphoma protein 2	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82319
BCL2L1	BCL2-like protein 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82320
BID	BH3 interacting domain death agonist	MAb	mouse IgG	F, P, C	WB (1:1000)	100µl	823 21
† BIRC4	Baculoviral IAP repeat-containing protein 4	MAb	mouse IgG	F, P, C	WB (1:1000)	120 µl	82322
BIRC5	Baculoviral IAP repeat-containing protein 5	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82323
BRCA1	Breast cancer 1 early onset	MAb	mouse IgG	F, P, C	WB (1:1000)	100µl	82324
BUB1B	BUB1 homolog beta	MAb	mouse IgG	F, P, C	WB (1:200)	525µl	82325
† CASP3	Caspase-3	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82326
CASP8	Caspase-8	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82327
† CASP9	Caspase-9	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82328
† CAV1	Caveolin 1	MAb	mouse IgG	F, P, C	WB (1:200)	525µl	82329
† CCNB1	Cyclin B1	MAb	mouse IgG	F, P, C	WB (1:200)	525µl	82330
† CCND1	Cyclin D1	PAb	rabbit IgG	F, P, C	WB (1:200)	525µl	82331
CCNE1	Cyclin E1	MAb	mouse IgG	F, P, C	WB (1:200)	525µl	82332
† CDC2	Cell division cycle 2	PAb	rabbit IgG	F, P, C	WB (1:200)	525µl	82333
CDC25C	Cell division cycle 25 homolog C	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	MA116618
† CDH1	Cadherin 1	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82335
† CDK2	Cyclin-dependent kinase 2	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82336
† CDK4	Cyclin-dependent kinase 4	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82337
† CDK5	Cyclin-dependent kinase 5	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82338
† CDK6	Cyclin-dependent kinase 6	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82339
† CDK9	Cyclin-dependent kinase 9	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82340
† CDKN1A	Cyclin-dependent kinase inhibitor 1A, p21	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82341
† CDKN1B	Cyclin-dependent kinase inhibitor 1B, p27	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82342
CDKN2A (p14ARF)	Cyclin-dependent kinase inhibitor 2A	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82343
CHEK1	Checkpoint homolog 1	MAb	mouse IgG	F, P, C	WB (1:1000)	100µg	MA191087
† CHEK2	Checkpoint homolog 2	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82346
† CHUK	Conservative helix-loop-helix ubiquitous kinase	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82347
† COPB2	Coatomer-protein I beta prime (Golgi)	PAb	rabbit IgG	F, P, C	WB (1µg/ml)	100µg	PA1068

See page 9 for a key to abbreviations.

Primary Antibodies (cont.)

Intracellular Target Primary Antibodies, continued

HUMAN, continued

Analyte	Protein Name	Antibody Type	Isotype	Format	Applications	Pkg. Size	Product#
† CSNK2A1	Casein kinase 2 alpha 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82348
† CTNNB1	Catenin beta 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82349
CTSD	Cathepsin D (Lysosome)	MAB	mouse IgG2a	F, P, C	WB (1:1000)	25µg (0.25mg/ml)	89915
† CYCS	Cytochrome C (Mitochondria)	MAB	mouse IgG2b (Clone 7H8.2C12)	F, P, C	WB (1:500)	100µg (0.5mg/ml)	89918
† E2F1	E2F transcription factor 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82354
EGFR	Epidermal growth factor receptor	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	PA11110
† EP300	E1A binding protein p300	MAB	mouse IgG	F, P, C	WB (1:1000)	200µl	MA116608
† ERBB2	v-erb-b2	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82357
† FOXO1A	Forkhead box O1	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82358
† FRAP1	FK506BP 12-rapamycin associated protein 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82359
† GAP43	Growth Associated Protein B-50 (anti-Bovine)	MAB	mouse IgG1 (Clone NM4)	F, PF, CF	IH, WB	100µg	MN1080
† GAP43	Growth Associated Protein B-50 (anti-Bovine)	MAB	mouse IgG1 (Clone NM2)	F, PF, CF	NEUT	100µg	MN1090
† GRB2	Growth factor receptor-bound protein 2	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82360
† GSK3A	Glycogen synthase kinase 3 alpha	MAB	rabbit IgG	F, P, C	WB (1:1000)	100µl	82361
† GSK3B	Glycogen synthase kinase 3 beta	MAB	rabbit IgG	F, P, C	WB (1:1000)	100µl	82362
† HDAC	Histone deacetylase 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µg	PA1860
† HDAC2	Histone deacetylase 2	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82364
† HDAC3	Histone deacetylase 3	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82365
† HIF-1A	Hypoxia-inducible factor 1 alpha	MAB	mouse IgG	F, P, C	WB (1:1000)	100µl	82366
HRAS	v-Ha-ras	MAB	rabbit IgG	F, P, C	WB (1:1000)	100µl	82367
HSPA1A	Heat shock 70kDa protein 1A	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82368
† HSPB1	Heat shock 27kDa protein 1	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82369
† IKKBK	Inhibitor of kappa ... B-cells, kinase beta	MAB	rabbit IgG	F, P, C	WB (1:1000)	100µl	82370
ILK	Integrin-linked kinase	PAb	rabbit IgG	F, P, C	WB (1:200)	525µl	82371
† IRS1	Insulin receptor substrate 1	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82372
† ITGB1	Integrin beta 1	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82373
† JUN	c-Jun	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82374
KIF11	Kinase family member 11	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82375
† LAMP1	Lamp-1 (Lysosome)	MAB	mouse IgG2b	F, P, C	WB (1:500), IP	50µg (0.25mg/ml)	89917
† LYN	v-yes-1	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82376
† MAP2K1	Mitogen-activated protein kinase kinase 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82377
† MAP2K3	Mitogen-activated protein kinase kinase 3	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82378
† MAP3K7	Mitogen-activated protein kinase kinase kinase 7	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82379
† MAPK1/ MAPK3	Mitogen-activated protein kinase 1 and 3	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82380
† MAPK8	Mitogen-activated protein kinase 8	PAb	rabbit IgG	F, P, C	WB (1:200)	525µl	82381
† MAPK14	Mitogen-activated protein kinase 14	MAB	mouse IgG	F, P, C	WB (1:1000)	100µl	82382
MDM2	Mdm2, p53 binding protein	MAB	mouse IgG	F, P, C	WB (1:1000)	120µl	82383
† MET	Hepatocyte growth factor receptor	MAB	mouse IgG	F, P, C	WB (1:1000)	100µl	82384
† MYC	c-Myc	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82385
† NCK1	NCK adaptor protein 1	MAB	mouse IgG	F, P, C	WB (1:200)	525µl	82386
NEFM	Neurofilament (Ser)	MAB	mouse IgG1 (Clone MIG-N18)	F, PF, CF	IH, WB	0.5ml	MN1190
† NFkB1	NFkB 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82387
† NUP62	Nucleoporin p62 (Nucleus)	MAB	mouse IgG2b	F, P, C	WB, IF, IP	25µg (0.25mg/ml)	89916
† PDPK1	3-phosphoinositide dependent protein kinase 1	MAB	mouse IgG	F, P, C	WB (1:200)	525µl	82388
† PLCG1	Phospholipase C gamma 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82390
† PLK1	Polo-like kinase 1	MAB	mouse IgG	F, P, C	WB (1:200)	525µl	82391
† PMP70	Peroxisomal membrane protein 70 (Peroxisome)	PAb	rabbit IgG	F, P, C	WB (1µg/ml)	100µg	PA1650

See page 9 for a key to abbreviations.

Intracellular Target Primary Antibodies, continued

HUMAN, continued

Analyte	Protein Name	Antibody Type	Isotype	Format	Applications	Pkg. Size	Product#
† PPP2CA	Protein phosphatase 2 catalytic subunit alpha	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82392
† PRKACA	Protein kinase cAMP-dependent catalytic alpha	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82393
† PRKCA	Protein kinase C alpha	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82394
PRKDC	Protein kinase DNA-activated, catalytic	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82395
PRKR	Eukary. transl. initiation factor 2-alpha kinase 2	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82389
† PTK2	Protein tyrosine kinase 2	PAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82396
Rab3a	Ras associated protein 3 alpha	MAb	mouse IgG2a (Clone 2B10)	F, PF, CF	ELISA, IH, WB	100µg	MN1250
† RAF1	v-raf-1	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82397
† RB1	Retinoblastoma 1	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82398
† RELA	v-rel-A, NFκB p65	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82399
† RHOA	Ras homolog A (RhoA)	MAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82400
RIPK1	Receptor (TNFRSF)-interacting Ser-Thr kinase 1	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82401
† SMAD2	SMAD 2	MAb	mouse IgG	F, P, C	WB (1:1000)	100µl	82402
SMAD2/SMAD3	SMAD 2 and 3	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82403
SMAD4	SMAD 4	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82404
SNAP25	Synaptosomal associated protein 25	MAb	mouse IgG1 (Clone 11D2)	F, PF, CF	ELISA, IH, WB	100µg	MN1280
† SOS1	Sons of sevenless homolog 1	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82405
† SP1	Sp1 transcription factor	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82406
† SRC	v-src (Schmidt-Ruppin A-2)	MAb	rabbit IgG	F, P, C	WB (1:1000)	100µl	82407
STAT1	Signal transducer and activator of transcription 1	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82408
† STAT3	Signal transducer and activator of transcription 3	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82409
† STAT6	Signal transducer and activator of transcription 6	PAb	rabbit IgG	F, P, C	WB (1:1000)	120µl	82410
† SYN	Synapsin	MAb	mouse IgG2b (Clone 5C8)	F, PF, CF	ELISA, IH, WB	100µg	MN1260
† SYN	Synapsin	MAb	mouse IgG1 (Clone 15C2)	F, PF, CF	ELISA, IH, WB	100µg	MN1270
† TAU (MAPT) Tau	Tau	MAb	mouse IgG1 (Clone HT7)	F, PF, CF	ELISA, IH, WB	100µg	MN1000
† TAU (MAPT) Tau	Tau	Biotin MAb	mouse IgG1 (Clone HT7)	F, PF, CF	ELISA, IH, WB	50µg	MN1000B
† TAU (MAPT) Tau (anti-Bovine)	Tau (anti-Bovine)	MAb	mouse IgG1 (Clone BT2)	F, PF, CF	ELISA, WB	100µg	MN1010
† TAU (MAPT) Tau (anti-Bovine)	Tau (anti-Bovine)	Biotin MAb	mouse IgG1 (Clone BT2)	F, PF, CF	ELISA, WB	50µg	MN1010B
TAU (MAPT) PHF-Tau (Ser202)	PHF-Tau (Ser202)	MAb	mouse IgG1 (Clone AT8)	F, PF, CF	ELISA, IH, WB	100µg	MN1020
TAU (MAPT) PHF-Tau (Ser202)	PHF-Tau (Ser202)	Biotin MAb	mouse IgG1 (Clone AT8)	F, PF, CF	ELISA, IH, WB	50µg	MN1020B
TAU (MAPT) PHF-Tau (Thr231)	PHF-Tau (Thr231)	MAb	mouse IgG1 (Clone AT180)	F, PF, CF	ELISA, IH, WB	100µg	MN1040
TAU (MAPT) PHF-Tau (Thr231)	PHF-Tau (Thr231)	Biotin MAb	mouse IgG1 (Clone AT180)	F, PF, CF	ELISA, IH, WB	50µg	MN1040B
TAU (MAPT) PHF-Tau (Thr181)	PHF-Tau (Thr181)	MAb	mouse IgG1 (Clone AT270)	F, PF, CF	ELISA, IH, WB	100µg	MN1050
TAU (MAPT) PHF-Tau (Ser212/Thr214)	PHF-Tau (Ser212/Thr214)	MAb	mouse IgG1 (Clone AT100)	F, PF, CF	ELISA, IH, WB	100µg	MN1060
TAU (MAPT) Tangles	Tangles	MAb	mouse IgM (Clone MIG-T4)	F, PF, CF	IH, WB	1.5ml	MN1170
† TAU (MAPT) Tau	Tau	PAb	sheep IgG	F, PF, CF	IH, WB	500µg	PN1000
TP53	Tumor protein p53	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82411
TTK	TTK protein kinase	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82412
† VDAC	Voltage-dependent anion channel (Mitochondria)	PAb	rabbit IgG	F, P, C	WB (1µg/ml)	100µg	PA1954A
† VIL2	Villin 2	MAb	mouse IgG	F, P, C	WB (1:1000)	120µl	82413

See page 9 for a key to abbreviations.

Matched Antibody Pairs for ELISA

Analyte	Matched Pair	
	Coating Antibody Product #	Detection Antibody Product #
Bovine IFN γ	MBOIFNG, PBOIFNGI	PBOIFNGBI
Bovine IL-1 β	PBOIL1BI	PBOIL1BBI
Bovine IL-4	MBOIL4, PBOIL4I	PBOIL4BI
Bovine TNF α	MBOTNFAI, PBOTNFAI	PBOTNFABI
Equine TNF α	PETNFAI	PETNFABI
Equine TNF α	PGETNFAI	PGETNFABI
Human GM-CSF	M500A	M501B
Human IFN γ	M700A	M701B
Human IL-1 α	M421A	M420AB
Human IL-1 β	M421B	M420BB
Human IL-2	P600	M600B
Human IL-4	M3IL4I	M2IL4BI
Human IL-4	MIL4I	M2IL4I*
Human IL-5	M551	M550B
Human IL-6	M620	M621B
Human IL-8	M801	M802B
Human IL-10	M010	M011B
Human IL-12p70	M122	M121B
Human IL-13	P130E	M130B
Human IL-16	M160E	M161B
Human MCP-1	MMCP1I	M2MCP1BI
Human RANTES	P230E	M230B
Human TNF α	M303	M302B
Human TNF α	MTNFAI, M2TNFAI	M3TNFABI
Human TNF α	M3TNFAI	MTNFABI
Mouse GM-CSF	MM500C	MM500DB
Mouse IFN γ	MM700	MM700B
Mouse IL-2	MM101	MM102B
Mouse IL-4	MM450C	MM450DB
Mouse IL-5	MM550D	MM550CB
Mouse IL-6	MM600D	MM600CB
Mouse IL-12p70	MM120	MM121B
Mouse TNF α	MM350C	MM350DB
Mouse TNF α	PMTNFAI	PMTNFABI
Porcine IFN γ	MP700	MP701B
Porcine TNF α	MP390, MP391	M302B
Rat TNF α	PRTNFAI	PRTNFABI

Note: For Calibrated Single-Assay ELISA Standards, see page 24.

*Requires biotinylation or enzyme-labeling before use.

Species Cross-Reactivities of Extracellular and Cell Surface Antibodies

Listed here are cross-reactivities of extracellular and cell surface antibodies that are denoted in the preceding ordering information tables as having multispecies cross-reactivity. Items are listed alphabetically by analyte, and the primary target species is listed first. For information about cross-reactivity of intracellular antibodies, see the beginning of that product group on page 15.

Analyte	Species Recognition	Product #
CD44	Human, Bovine, Goat, Ovine, Rabbit	MA4400
CD106	Human, Porcine	MS122PABX
γ - γ -Enolase	Human, Guinea pig	MN1160
EGFR	Human, Chimpanzee, Monkey	MS269PABX
GFAP	Human, Guinea pig, Rat	MN1180
IFN γ (Bovine)	Bovine, Human, Porcine, Ovine	MBOIFNG
IL-1 α	Human, Porcine	P420A
IL-1 β	Human, Mouse, Primate	P420B
IL-2	Human, Primate	P600
IL-10	Human, Viral	M011B
IL-10	Human, Viral	M010
MAP-2	Bovine, Human	MN1070
MMP-9	Human, Rat	MS817PABX
MMP-9	Human, Guinea pig	RB9234P
TGF- β 2	Human, Mouse, Rat	RB9246P
TIMP-2	Human, Bovine, Guinea pig, Rabbit	MS1485PABX
TNFR2 (mouse)	Human, Rat	PA121148
TNF α	Bovine, Porcine	PBOTNFAI
TNF α	Bovine, Porcine	PBOTNFABI
TNF α	Rat, Mouse	PRTNFABI
TNF α	Rat, Mouse	PRTNFAI

Secondary Antibodies

Secondary Antibodies

Ordering Information

Specificity	Host	Product # / Pkg. Size				
		Unconj.	Biotin-LC	Peroxidase	Alk. Phos.	Fluor Labeled
Anti-Chicken						
Chicken IgY (H+L)	Rabbit	31104: 2mg	31720: 1.5ml	31401: 1.5ml		31501: Fluorescein, 1.5mg
Anti-Goat						
Goat IgG (H+L) (min x HnMsRb Sr Prot)*	Mouse	31107: 1.5mg	31730: 1ml	31400: 1ml		31512: Fluorescein, 1mg 31620: Rhodamine, 1mg 31940: Texas Red®, 1mg
Goat IgG (H+L)	Rabbit	31105: 2mg	31732: 1.5mg	31402: 1.5ml	31300: 1ml	31509: Fluorescein, 1.5mg 31650: Rhodamine, 1.5mg 31492: Texas Red, 1.5mg
Goat IgG [F(ab') ₂]	Rabbit	31153: 2mg	31753: 1.5ml	31403: 1.5ml	31405: 1ml	31553: Fluorescein, 1.5mg
Goat IgG (Fc)	Rabbit	31133: 2mg	31733: 1.5ml	31433: 1.5ml	31337: 1ml	31533: Fluorescein, 1.5mg
Anti-Goat F(ab')₂ Fragment of Host Antibody						
Goat IgG (H+L) (min x Hn Sr Prot)*	Rabbit	31109: 0.5mg			31302: 0.5ml	
Goat IgG (H+L) (MsRbRt Sr Prot)*	Donkey					31860: R-Phycoerythrin, 1ml 31980: Allophycocyanin, 0.5ml
Anti-Hamster						
Hamster IgG (H+L)	Goat	31115: 1.5mg	31750: 1.5mg			
Hamster IgG (H+L)	Rabbit	31120: 2mg				31587: Fluorescein, 1.5mg 31652: Rhodamine, 1.5mg
Anti-Horse						
Horse IgG (H+L)	Goat	31116: 2mg	31760: 1.5mg			
Anti-Human						
Human IgG (H+L)	Goat	31130: 2mg	31770: 1.5mg	31410: 2ml	31310: 1ml	31529: Fluorescein, 2mg 31656: Rhodamine, 2mg 31943: Texas Red, 2mg
Human IgG Gamma Chain Specific	Goat	31118: 0.5mg				
Human IgG (H+L) (min x BvHsMs Sr Prot)*	Goat	31119: 1.5mg	31774: 1.5ml	31412: 1.5ml		31531: Fluorescein, 1.5mg 31683: Rhodamine, 1.5mg 31944: Texas Red, 1.5mg
Human IgG [F(ab') ₂]	Goat	31122: 2mg		31482: 2ml	31312: 1ml	31628: Fluorescein, 2mg 31684: Rhodamine, 2mg 31945: Texas Red, 2mg
Human IgG [F(ab') ₂] (min x BvHsMs Sr Prot)*	Goat	31132: 1.5mg		31414: 1.5ml		
Human IgM (Fc5μ)	Goat	31136: 2mg		31415: 2ml		31575: Fluorescein, 2mg
Human IgM (μ)	Goat	31124: 0.5mg	31778: 0.5mg			
Human IgA (α)	Goat	31140: 2mg		31417: 2ml	31314: 1ml	31577: Fluorescein, 2mg
Human IgA + IgG + IgM (H+L)	Goat	31128: 2mg	31782: 2ml	31418: 2ml	31316: 1ml	
Human Kappa Chain	Goat	31129: 0.5mg	31780: 0.5mg			
Human Lambda Chain	Goat	31131: 0.5mg				
Human IgG (Fc) (min x BVHsMs SR Prot)*	Goat	31125: 1mg		31413: 1ml		
Human IgG (H+L) (min x Ms Sr Prot)*	Mouse	31135: 2mg		31420: 1.5ml		
Human IgG (H+L) (min x BvHsMs Sr Prot)*	Mouse	31137: 1.5mg	31784: 1ml			
Human IgG (H+L)	Rabbit	31143: 2mg	31786: 1.5ml			
Human IgG (Fc)	Rabbit	31142: 2mg	31789: 1.5ml	31423: 1.5ml	31318: 1ml	31535: Fluorescein, 1.5mg

* Key to abbreviations for individual species.

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To order, call 800-874-3723 or 815-968-0747. Outside the United States, contact your local branch office or distributor.

Secondary Antibodies (cont.)

Ordering Information

Specificity	Host	Product # / Pkg. Size					Fluor Labeled
		Unconj.	Biotin-LC	Peroxidase	Alk. Phos.		
Anti-Human F(ab')₂ Fragment of Host Antibody							
Human IgG (Fc)	Goat	31163: 1mg					
Human IgG (H+L)	Goat	31165: 1mg					
Human IgA + IgG + IgM (H+L)	Goat					31539: Fluorescein, 1mg	
Anti-Mouse							
Mouse IgA (α) (min x Hn Sr Prot)	Goat	31169: 1mg					
Mouse IgA + IgG + IgM (H+L)	Goat	31171: 2mg					
Mouse IgG (H+L)	Goat	31160: 2mg	31800: 2ml	31430: 2ml	31320: 1ml	31569: Fluorescein, 2mg 31660: Rhodamine, 2mg 31498: Texas Red, 2mg 35502: DyLight 488, 1mg 35507: DyLight 549, 1mg 35515: DyLight 649, 1mg 35518: DyLight 680, 1mg 35521: DyLight 800, 1mg	
Mouse IgG (H+L) (min x BvHnHs Sr Prot)*	Goat	31164: 1.5mg	31802: 1.5mg	31432: 1.5ml	31322: 1ml	31541: Fluorescein, 1.5mg 31661: Rhodamine, 1.5mg 31500: Texas Red, 1.5mg	
Mouse IgG [F(ab') ₂]	Goat	31166: 2mg	31803: 2ml	31436: 2ml	31324: 1ml	31543: Fluorescein, 2mg	
Mouse IgG (Fc)	Goat	31168: 2mg	31805: 2ml	31437: 2ml	31325: 1ml	31547: Fluorescein, 2mg 31663: Rhodamine, 2mg	
Mouse IgG (Fc) (min x BvHnHs Sr Prot)*	Goat	31170: 1.5mg		31439: 1.5ml	31327: 1ml		
Mouse IgM (μ)	Goat	31172: 2mg	31804: 0.5mg	31440: 2ml	31326: 1ml	31992: Fluorescein, 2mg 31662: Rhodamine, 2mg	
Mouse IgG + IgM (H+L)	Goat	31182: 2mg	31807: 2ml	31444: 2ml	31328: 1ml		
Mouse IgG + IgM (H+L) (min x BvHnHs Sr Prot)*	Goat	31184: 1.5mg		31446: 1.5ml	31330: 1ml	31586: Fluorescein, 1.5mg	
Mouse IgG (Fcγ) (subclasses 1+2a+2b+3) (min x BvHnRb Sr Prot)*	Goat	31232: 1mg				31630: Fluorescein, 1mg 31861: R-Phycoerythrin, 1ml 31981: Allophycocyanin, 0.5ml	
Mouse IgG (Fcγ) subclass 1 specific (min x BvHnRb Sr Prot)*	Goat	31236: 1mg				31632: Fluorescein, 0.5mg 31862: R-Phycoerythrin, 0.5ml 31982: Allophycocyanin, 0.3ml	
Mouse IgG (Fcγ) subclass 2a specific (min x BvHnRb Sr Prot)*	Goat	31237: 1mg				31634: Fluorescein, 0.5mg 31863: R-Phycoerythrin, 0.5ml 31983: Allophycocyanin, 0.3ml	
Mouse IgG (H+L)	Horse	31181: 1.5mg	31806: 1.5mg				
Mouse IgG (H+L)	Rabbit	31188: 2mg	31810: 1.5ml	31450: 1.5ml	31329: 1ml	31561: Fluorescein, 1.5mg 31665: Rhodamine, 1.5mg 31610: Texas Red, 1.5mg	
Mouse IgG (H+L) (min x Hn Sr Prot)*	Rabbit	31190: 1.5mg	31812: 1ml	31452: 1ml	31334: 0.5ml		
Mouse IgG [F(ab') ₂]	Rabbit	31192: 2mg	31811: 1.5ml	31451: 1.5ml	31331: 1ml	31559: Fluorescein, 1.5mg 31666: Rhodamine, 1.5mg	
Mouse IgG (Fc)	Rabbit	31194: 2mg	31813: 1.5ml	31455: 1.5ml	31332: 1ml	31555: Fluorescein, 1.5mg	
Mouse IgM (μ)	Rabbit	31196: 2mg	31814: 1.5ml	31456: 1.5ml	31333: 1ml	31557: Fluorescein, 1.5mg	
Mouse IgG + IgM (H+L)	Rabbit	31198: 2mg	31815: 1.5ml	31457: 1.5ml	31335: 1ml	31558: Fluorescein, 1.5mg	

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Ordering Information

Specificity	Host	Product # / Pkg. Size				
		Unconj.	Biotin-LC	Peroxidase	Alk. Phos.	Fluor Labeled
Anti-Mouse F(ab')₂ Fragment of Host Antibody						
Mouse IgG (H+L) (min x BvHnHs Sr Prot)*	Goat	31185: 1mg		31438: 0.5ml		31565: Fluorescein, 1mg
Mouse IgM (μ)	Goat	31178: 1mg				
Mouse IgM (μ) (min x BvHnHs Sr Prot)*	Goat	31186: 1mg		31442: 0.5ml		
Mouse IgG + IgM (H+L) (min x BvHnHs Sr Prot)*	Goat			31448: 0.5ml		
Anti-Rabbit						
Rabbit IgG (H+L) (min x BvChGtGuHaHn HsMsRtSh Sr Prot)*	Donkey	31238: 1mg	31821: 0.5ml	31458: 0.5ml	31345: 0.5ml	31568: Fluorescein, 0.5mg 31685: Rhodamine, 0.5mg 31504: Texas Red, 0.5mg
Rabbit IgG (H+L)	Goat	31210: 2mg	31820: 1.5mg	31460: 2ml	31340: 1ml	31635: Fluorescein, 2mg 31670: Rhodamine, 2mg 31506: Texas Red, 2mg 35552: DyLight 488, 1mg 35557: DyLight 549, 1mg 35565: DyLight 649, 1mg 35568: DyLight 680, 1mg 35571: DyLight 800, 1mg
Rabbit IgG (H+L) (min x Hn Sr Prot)*	Goat	31212: 1.5mg	31822: 1.5ml	31462: 1.5ml	31342: 1ml	31583: Fluorescein, 1.5mg 31686: Rhodamine, 1.5mg 31507: Texas Red, 1.5mg
Rabbit IgG [F(ab') ₂]	Goat	31234: 2mg	31823: 2ml	31461: 2ml	31343: 1ml	31573: Fluorescein, 2mg
Rabbit IgG (Fc)	Goat	31216: 2mg		31463: 2ml	31341: 1ml	
Rabbit IgG (H+L) (min x GtHnMsSh Sr Prot)*	Mouse	31213: 1.5mg	31824: 1ml	31464: 1ml		31584: Fluorescein, 1mg 31674: Rhodamine, 1mg
Anti-Rabbit F(ab')₂ Fragment of Host Antibody						
Rabbit IgG (H+L)	Goat	31214: 1mg				31579: Fluorescein, 1mg
Rabbit IgG (H+L) (min x HnMsRt Sr Prot)*	Goat	31239: 1mg				31636: Fluorescein, 1mg 31864: R-Phycoerythrin, 1ml 31984: Allophycocyanin, 0.5ml
Anti-Rat						
Rat IgG (H+L)	Goat	31220: 2mg	31830: 2ml	31470: 2ml	31350: 1ml	31629: Fluorescein, 2mg 31680: Rhodamine, 2mg 31508: Texas Red, 2mg
Rat IgG [F(ab') ₂]	Goat			31474: 2ml		
Rat IgG (Fc)	Goat	31226: 2mg	31833: 2ml	31475: 2ml	31353: 1ml	31621: Fluorescein, 2mg
Rat IgM (μ)	Goat	31228: 2mg	31832: 2ml	31476: 2ml	31354: 1ml	31631: Fluorescein, 2mg
Rat IgG (H+L)	Rabbit	31218: 2mg	31834: 1.5mg			
Rat IgG (H+L) (min x Ms Sr Prot)*	Rabbit	31219: 0.5mg	31836: 0.5mg			
Anti-Sheep						
Sheep IgG (H+L)	Rabbit	31240: 2mg	31840: 1.5mg	31480: 1.5ml	31360: 1ml	31627: Fluorescein, 1.5mg

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Recombinant Proteins and Standards

Recombinant Proteins

Cytokines, growth factors and other purified proteins.



We offer a broad range of recombinant cytokines, chemokines and growth factors for bovine, canine, equine, feline, human, mouse, porcine, rat and Rhesus monkey. All Thermo Scientific Pierce Proteins are fully validated and QC-tested (*N*-terminal sequence, bioassay and SDS-PAGE analysis) to ensure high biological activity

and accurate, reproducible results. Many of our newer recombinant protein products are expressed in a yeast system, *Pichia pastoris*, which generates proteins that are secreted, properly folded and glycosylated in a manner similar to mammalian systems. Most proteins are provided carrier-free and low-endotoxin. A lot-specific certificate of analysis is provided with each protein.

Key to format abbreviations.

F = Frozen Liquid	PF = Preservative Free
L = Lyophilized	C = With Carrier Protein
P = With Preservative	CF = Carrier-Free

Ordering Information

BOVINE

Analyte	Format	Protein Source	Biological Activity	Pkg. Size	Product #
IFN γ	F, PF and CF	<i>Pichia pastoris</i>	80% increase in cytotoxicity using 30 ng/ml; potentiation of the cytotoxicity caused by bovine natural killer (NK) cells on human K562 cells	20 μ g	RBOIFNGI
IL-1 β	L, PF and CF	<i>Pichia pastoris</i>	0.07-0.1 ng/ml; proliferation of mouse D10.G4.1 cells	20 μ g	RBOIL1BI
IL-4	L, PF and CF	<i>Pichia pastoris</i>	0.12-0.22 ng/ml; proliferation of human TF-1 cells	20 μ g	RBOIL4I
IL-8	F, PL and CF	<i>Pichia pastoris</i>	50 ng/ml; proliferation of human TF-1 cells	20 μ g	RBOIL8I
TNF α	L, PF and CF	<i>Pichia pastoris</i>	1-10 ng/ml; cytolytic effect on mouse WEHI-13 VAR-164 cells	20 μ g	RBOTNFAI

EQUINE

IL-2	L, PF and CF	<i>Pichia pastoris</i>	2 μ g/ml; proliferation of mouse CTLL-2 cells	20 μ g	REIL2I
IL-4	L, PF and CF	<i>Pichia pastoris</i>	20-50 ng/ml; proliferation of human TF-1 cells	20 μ g	REIL4I
IL-8	L, PF and CF	<i>Pichia pastoris</i>	22 ng/ml; induction of equine neutrophil migration	20 μ g	REIL8I
TNF α	L, PF and CF	<i>Pichia pastoris</i>	\leq 0.05 ng/ml; cytolytic effect on mouse WEHI-13 VAR-164 cells	20 μ g	RETNFAI

HUMAN

FGF basic	L, PF and CF	<i>E. coli</i>	\leq 1.4 ng/ml; proliferation of BaF3 cells	50 μ g	RFGFB50
G-CSF	L	<i>E. coli</i>	\leq 50.1 ng/ml; proliferation of murine M-NFS-60 cells	10 μ g	RGCSF10
GM-CSF	L, PF and CF	<i>E. coli</i>	\leq 0.1 ng/ml; proliferation of human TF-1 cells	10 μ g	RGMCSF10
IFN α 2 (α 2b)	F and PF	<i>E. coli</i>	2.8 x 10 ⁸ units/mg; cytopathic effect inhibition assay	1.0 x 10 ⁵ units	111051
IFN α A (α 2a)	F	<i>E. coli</i>	2.8 x 10 ⁸ units/mg; cytopathic effect inhibition assay	5.0 x 10 ⁶ units	111001
IFN α A	F, PF and CF	<i>E. coli</i>	3.8 x 10 ⁸ units/mg; cytopathic effect inhibition assay	5 μ g	111011
IFN α A	F, PF and CF	<i>E. coli</i>	3.8 x 10 ⁸ units/mg; cytopathic effect inhibition assay	20 μ g	111012
IFN α Sampler (12 indiv. spec.)	F	<i>E. coli</i>	Multiple	12 vials	110011
IFN β 1a	F	<i>E. coli</i>	2.8 x 10 ⁸ units/mg; cytopathic effect inhibition assay	1.0 x 10 ⁵ units	114101
IFN γ	L, PF and CF	<i>E. coli</i>	\leq 0.05 ng/ml; viral resistance assay	50 μ g	RIFNG50
IFN γ	L, PF and CF	<i>E. coli</i>	\leq 0.05 ng/ml; viral resistance assay	100 μ g	RIFNG100
IFN ω	L	<i>E. coli</i>	1.0 x 10 ⁸ units/mg; cytopathic effect inhibition assay	25 μ g	113951
IFN, leukocyte (IFN α and IFN ω)	L, PF and CF	Chicken eggs	1.0 x 10 ⁶ units/mg; cytopathic effect inhibition assay	1.0 x 10 ⁶ units	113501
IL-1 α	L, PF and CF	<i>Pichia pastoris</i>	7.9-13.5 μ g/ml; proliferation of mouse D10S cells	20 μ g	RIL1AI
IL-1 β	L, PF and CF	<i>Pichia pastoris</i>	1.8-4.2 μ g/ml; proliferation of mouse D10S cells	20 μ g	RIL1BI
IL-2	L, PF and CF	<i>Pichia pastoris</i>	3.8-5.6 ng/ml; proliferation of mouse CTLL-2 cells	20 μ g	RIL2I
IL-4	F, PF and CF	<i>Pichia pastoris</i>	0.14-0.29 ng/ml; proliferation of human TF-1 cells	20 μ g	RIL4I
IL-4	F, PF and CF	<i>Pichia pastoris</i>	0.14-0.29 ng/ml; proliferation of human TF-1 cells	1 μ g	RIL4MI
IL-5	L, PF and CF	<i>E. coli</i>	\leq 0.15 ng/ml; proliferation of human TF-1 cells	10 μ g	RIL510
IL-6	L, PF and CF	<i>Pichia pastoris</i>	0.03-0.07 ng/ml; proliferation of mouse B9 cells	20 μ g	RIL6I
IL-7	L, PF and CF	<i>E. coli</i>	\leq 0.5 ng/ml; proliferation of mouse IXN/2B cells	5 μ g	RIL75
IL-8	F and PF	<i>E. coli</i>	6.8 x 10 ³ units/mg; myeloperoxidase release from human neutrophils	25 μ g	R202625
IL-10	L, PF and CF	<i>E. coli</i>	2 ng/ml; proliferation of MC/9 cells	5 μ g	RIL105
IL-10	L, PF and CF	<i>E. coli</i>	2 ng/ml; proliferation of MC/9 cells	25 μ g	RIL1025
IL-11	L, PF and CF	<i>E. coli</i>	\leq 10 ng/ml; proliferation of mouse 7TD1 cells	10 μ g	RIL1110
IL-13	L, PF and CF	<i>E. coli</i>	\leq 1 ng/ml; proliferation of human TF-1 cells	5 μ g	RIL135

See page 9 for a key to abbreviations.



HUMAN, continued

Analyte	Format	Protein Source	Biological Activity	Pkg. Size	Product #
IL-13	L, PF and CF	<i>E. coli</i>	≤ 1 ng/ml; proliferation of human TF-1 cells	25µg	RIL1325
IL-15	L, PF and CF	<i>E. coli</i>	≤ 0.5 ng/ml; proliferation of mouse CTLL-2 cells	5µg	RIL155
IL-17	L, PF and CF	<i>Pichia pastoris</i>	1 ng/ml; induction of IL-6 from human dermal fibroblasts	20µg	RIL1720
MCP-1	L, PF and CF	<i>E. coli</i>	Maximal activity = 20 ng/ml; chemotaxis of human blood monocytes	20µg	RMCP120
MIP-1α	L, PF and CF	<i>E. coli</i>	Maximal activity = 50 ng/ml; chemotaxis of human blood monocytes	20µg	RMIP1A20
RANTES	L, PF and CF	<i>E. coli</i>	Maximal activity = 50 ng/ml; chemotaxis of human blood monocytes	20µg	RRNTS20
SCF	L, PF and CF	<i>E. coli</i>	≤ 2 ng/ml; proliferation of human TF-1 cells	10µg	RSCF10
TNFα	L, PF and CF	<i>Pichia pastoris</i>	0.04-0.07 ng/ml; cytolytic effect on mouse WEHI-13 VAR-164 cells	20µg	RTNFAI
TNFβ	L, PF and CF	<i>E. coli</i>	≤ 0.05 ng/ml; cytolytic effect on mouse L929 cells	20µg	RTNFB20
VEGF₁₆₅	L, PF and CF	<i>Pichia pastoris</i>	1.1-4.9 ng/ml; proliferation of human umbilical vein endothelial cells (HUVEC)	20µg	RVEGFI

MOUSE

GM-CSF	L, PF and CF	<i>E. coli</i>	≤ 0.2 ng/ml; proliferation of mouse FDC-P1 cells	10µg	RMGMCSF10
IFNαA	F and PF	<i>E. coli</i>	1.1 x 10 ⁸ units/mg; cytopathic effect inhibition assay	1.0 x 10 ⁵ units	121001
IFNγ	F and PF	CHO	9.4 x 10 ⁶ units/mg; induction of resistance to infection with EMC virus in A547 cells	20µg	RM200120
IL-1α	F and PF	<i>E. coli</i>	1.1 x 10 ⁹ units/mg; proliferation of mouse D10 (N4)M cells	10µg	RM200410
IL-1β	L, PF and CF	<i>Pichia pastoris</i>	2.5-5.5 pg/ml; proliferation of mouse D10S cells	20µg	RMIL1BI
IL-2	L, PF and CF	<i>Pichia pastoris</i>	0.4-0.7 ng/ml; proliferation of mouse CTLL-2 cells	20µg	RMIL2I
IL-3	L, PF and CF	<i>E. coli</i>	≤ 0.1 ng/ml; proliferation of mouse FDC-P1 cells	10µg	RMIL310
IL-4	L, PF and CF	<i>Pichia pastoris</i>	2-3 ng/ml; proliferation of mouse HT-2 cells	20µg	RMIL4I
IL-6	L, PF and CF	<i>Pichia pastoris</i>	0.03-0.07 ng/ml; proliferation of mouse B9 cells	20µg	RMIL6I
IL-10	L, PF and CF	<i>E. coli</i>	2 ng/ml; proliferation of MC/9 cells	5µg	RMIL105
KC	L, PF and CF	<i>Pichia pastoris</i>	3 pg/ml; neutrophil migration <i>in vitro</i>	20µg	RMKCI
TNFα	L, PF and CF	<i>Pichia pastoris</i>	0.003 ng/ml; cytolytic effect on mouse WEHI-13 VAR-164 cells	20µg	RMTNFAI

PORCINE

IFNγ	L, PF and CF	<i>Pichia pastoris</i>	73% increase in cytotoxicity using 30 ng/ml; potentiation of the cytotoxicity caused by porcine natural killer (NK) cells on human K562 cells	20µg	RPIFNGI
IL-1β	L, PF and CF	<i>Pichia pastoris</i>	≤ 0.78 ng/ml; proliferation of mouse D10S cells	20µg	RPIL1BI
IL-6	L, PF and CF	<i>Pichia pastoris</i>	0.04 pg/ml; proliferation of mouse B9 cells	20µg	RPIL6I
IL-12 p40	L, PF and CF	<i>Pichia pastoris</i>	Not applicable	20µg	RPIL12P40I
TNFα	L, PF and CF	<i>Pichia pastoris</i>	0.007-0.02 ng/ml; cytolytic effect on porcine PK(15) cells	20µg	RPTNFAI

RAT

IFNα	L, PF and CF	Baculovirus	3.0 x 10 ⁷ units/mg; cytopathic effect inhibition assay	1.0 x 10 ⁵ units	131001
IFNβ	L, PF and CF	CHO	6.0 x 10 ⁷ units/mg; cytopathic effect inhibition assay	1.0 x 10 ⁵ units	134001
IFNγ	L, PF and CF	CHO	5.0 x 10 ⁶ units/mg; inhibition of the cytopathic effect of vasicular stomatitis virus infection in rat R4tec cells	20µg	RR200720
IL-1β	F and PF	<i>E. coli</i>	8.3 x 10 ⁶ units/mg; proliferation of mouse D10 (N4)M cells	20µg	RR202420
IL-2	L, PF and CF	<i>Pichia pastoris</i>	3 ng/ml; proliferation of mouse CTLL-2 cells	20µg	RRIL2I
IL-4	L, PF and CF	<i>E. coli</i>	≤ 1.5 ng/ml; proliferation of rat spleen cells	10µg	RRIL410
IL-6	L, PF and CF	<i>E. coli</i>	0.01 ng/ml; proliferation of mouse 7TD1 cells	5µg	RRIL65
IL-18	L, PF and CF	<i>Pichia pastoris</i>	480 pg/ml and 610 pg/ml of IFNγ is induced by 20 ng/ml and 40 ng/ml of recombinant rat IL-18, respectively; induction of IFNγ from KG-1 cells	20µg	RRIL18I
MCP-1	L, PF and CF	<i>E. coli</i>	Maximal activity = 100 ng/ml; chemotaxis of human blood monocytes	10µg	RRMCP110
TNFα	L, PF and CF	<i>Pichia pastoris</i>	≤ 0.005 ng/ml; cytolytic effect on mouse WEHI-13 VAR-164 cells	20µg	RRTNFAI

See page 9 for a key to abbreviations.

Recombinant Proteins (cont.)

Recombinant Proteins, continued

OTHER SPECIES					
Analyte	Format	Protein Source	Biological Activity	Pkg. Size	Product #
Canine – IL-6	L	<i>Pichia pastoris</i>	62-98 ng/ml; proliferation of mouse 7TD1 cells	20µg	RCIL6I
Canine – TNF α	L, PF and CF	<i>Pichia pastoris</i>	10 µg/ml; cytolytic effect on mouse WEHI-13 VAR-164 cells	20µg	RCTNFAI
Feline – IL-6	L, PF and CF	<i>Pichia pastoris</i>	0.52-1.0 µg/ml; proliferation of mouse 7TD1 cells	20µg	RFIL6I
Feline – TNF α	L, PF and CF	<i>Pichia pastoris</i>	0.15-0.2 ng/ml; cytolytic effect on mouse WEHI-13VAR cells	20µg	RFTNFAI
Rhesus Monkey – IL-18	L, PF and CF	<i>Pichia pastoris</i>	270 µg/ml and 470 µg/ml of IFN γ is induced by 20 ng/ml and 40 ng/ml of recombinant rhesus macaque IL-18, respectively; induction of IFN γ from KG-1 cells	20µg	RRMIL18I

Calibrated Single-Assay ELISA Standards

Sufficient for one standard curve.

Ordering Information

HUMAN

Analyte Standard	Calibration	Product #
GM-CSF	NIBSC reference lot 88/646	SGMCSF
IFN γ	NIAID reference lot Gxg-01-902-535	SIFNG
IL-1 α	NIBSC reference lot 86/632	SIL1A
IL-1 β	NIBSC reference lot 86/680	SIL1B
IL-2	NIBSC reference lot 86/504	SIL2
IL-4	NIBSC reference lot 88/656	SIL4
IL-5	NIBSC reference lot 90/586	SIL5
IL-6	NIBSC reference lot 89/514	SIL6
IL-8	NIBSC reference lot 89/520	SIL8
IL-10	NIBSC reference lot 93/722	SIL10
IL-12 p70	NIBSC reference lot 95/544	SIL12
IL-13	NIBSC reference lot 94/622	SIL13
IL-16	Internal reference standard	SIL16
TNF α	NIAID reference lot 87/650	STNFA

Visit our website to obtain additional information about recombinant proteins, including species homology tables for various proteins.

MOUSE

Analyte Standard	Calibration	Product #
IFN γ	NIBSC reference lot Gg-02-901-533	SM2IFNG
IL-1 β	Internal reference standard	SMIL1B
IL-2	Internal reference standard	SMIL2
IL-4	NCI-BRB reference lot 91/656	SMIL4
IL-5	Internal reference standard	SMIL5
IL-6	NIBSC reference lot 93/730	SMIL6
IL-10	Internal reference standard	SMIL10
IL-12	Internal reference standard	SMIL12
TNF α	NIBSC reference lot 88/532	SMTNFA



Assay Development Technical Handbook

The Thermo Scientific Pierce Assay Development Handbook provides 72 pages packed with helpful information on enzyme-linked immunosorbent assays (ELISAs). Broken down by application step, the handbook provides guidance on coated microplates, blocking and washing reagents, antibody labeling techniques and the choice of appropriate detection substrates.

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