2015-2016

Catalog USA

Flow Cytometry & Specific Proteins

Dako

An **Agilent Technologies** Company

Agilent Technologies

Dear Valued Customer,

Since our beginning in 1966, when Danish doctor Niels Harboe began manufacturing antibodies, Dako has become a global leader in reagent manufacturing and providing diagnostic solutions. Every employee is driven by passion for Dako's role in the fight against cancer by innovating new solutions, delivering the highest quality, and providing the best possible service to our customers and partners.

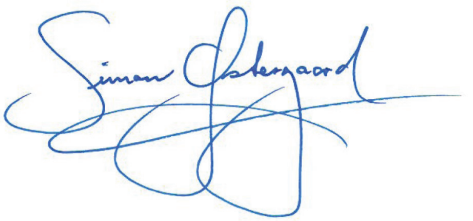
Dako was acquired by Agilent in 2012, and is now a cornerstone of the new Diagnostics & Genomics Group (DDG). As a leader in life sciences, diagnostics and applied chemical markets, Agilent provides powerful support to what we do, including additional R&D resources, investments, and synergies with other Agilent divisions.

With this pivotal view of our rich history and promising future, you can be assured that our commitment to our core values of scientific advancement, certainty and building lasting partnerships with our customers will stay the same. We will continue to drive scientific advancement in developing and improving products. We will provide certainty in the diagnostic results from our solutions, by dedicating ourselves to constantly providing quality products. Finally, we will continue to develop and honor our partnership with you.

This catalog presents the Dako portfolio of flow cytometry and specific protein products. The product portfolio includes antibodies to many different biomarkers in a variety of conjugates and antibodies for multipurpose use. Also included are our world-class polyclonal kappa and lambda light chain products.

We look forward to establishing new cooperation and thank our present customers for their continued partnership.

Sincerely,



Simon Østergaard, PhD, MBA
Country General Manager Denmark
GM, Head of Reagent Partnership Division
Diagnostics & Genomics Group

Agilent Technologies Company

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Specific Proteins

For customers outside USA, please see separate Flow Cytometry and Specific Proteins catalogs or www.dako.com as our product offering is market dependent.

Flow Cytometry

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Alphabetical Index for Flow Cytometry Products

This index lists all products available from Dako. More detailed information appears on the pages mentioned for each individual product.

Abbreviations:

a	**Anti-**
Gt	**Goat**
Hu	**Human**
Mo	**Mouse**
Rb	**Rabbit**
Sw	**Swine**

Labels:

APC	**Allophycocyanin**
FITC	**Fluorescein isothiocyanate**
PB	**Pacific Blue**
PerCP	**Pericinin chlorophyll protein complex**
RPE	**R-phycoerythrin**
RPE-Cy5	**R-phycoerythrin-Cy5**

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Alphabetical Index for Flow Cytometry Products (continued)

Alphabetical Index for Flow Cytometry Products (continued)

Introduction to Flow Cytometry

Reagents

Dako's extensive range of antibody and isotype reagents for flow cytometry are introduced on overview tables, and then presented with brief, individual descriptions as follows:

Reagents are supplied in liquid form with sodium azide as preservative. All conjugated monoclonal antibodies have been prepared from purified antibodies, while the majority of the polyclonal antibodies are affinity-isolated $F(ab')_2$ fragments.

Apoptosis Kit

APOPTEST™-FITC kit for flow cytometric distinction between viable cells in single cell suspensions.
See p 27.

Calibration Beads

FluoroSpheres are suited for daily monitoring of the flow cytometer. A broad excitation range allows the kit to be used in instruments with UV, and single or dual laser light sources. See p 28.

Kit for Enumeration of Stem Cells

A CD34Count Kit for optimal enumeration of CD34+ hematopoietic stem cells is presented on p 28.

Lysing, Fixation and Permeabilization Reagents

Reagents for lysing of erythrocytes and for optimal specimen preparation before immunochemical labeling of intracellular antigens are presented on p 28.

Quantitative Analysis

QIFIKIT® allows the measurement of antigen density. Additionally, it may permit interlaboratory comparisons of flow cytometric data. See p 29.

Telomere PNA Kit

Telomere PNA Kit/FITC for the measurement of telomere length in vertebrate hematopoietic cells by flow cytometry is described on p 29.

Further Information

A package insert with a thorough product description accompanies all Dako reagents and is also available on www.dako.com.

Overview, Primary Single-Color Reagents

Antibody Description		Available Form/Code					
Anti-Human	**Clone**	**APC**	**FITC**	**PB**	**PerCP**	**RPE**	**RPE-Cy5**
B Cell	FMC7		F7110				
BCL2 Oncoprotein	124		F7053				
Bromodeoxyuridine	Bu20a		F7210				
CD1a	NA1/34		F7141			R7189	
CD2	MT910					R0807	
CD3	UCHT1		F0818	PB982	PR702	R0810	C7067
CD4	MT310	C7226	F0766			R0805	C7069
CD5	DK23	C7242	F0795			R0842	
CD7	CBC.37		F7276			R7277	
CD7	DK24		F0789				
CD8	DK25	C7227	F0765	PB984		R0806	C7079
CD10	SS2/36		F0826			R0848	
CD11b	2LPM19c					R0841	
CD11c	KB90		F0713				
CD13	WM-47		F0831			R0715	
CD14	TÜK4		F0844			R0864	
CD15	C3D-1		F0830				
CD16	DJ130c		F7011			R7012	
CD19	HD37	C7224	F0768	PB985		R0808	C7066
CD20	B-Ly1		F0799			R7013	C7132
CD22	4KB128	C7281	F7060			R7061	
CD23	MHM6		F7062			R7108	
CD24	SN3		F7134				
CD25	ACT-1		F0801			R0811	
CD27	M-T271		F7178			R7179	
CD28	CD28.1					R7164	
CD30	Ber-H2		F0849				
CD33	WM-54		F0832			R0745	
CD34 Class III	BIRMA-K3	C7238	F7081			R7125	
CD38	AT13/5		F7101			R7144	
CD41	5B12		F7088			R7058	
CD42b	AN51					R7014	
CD43	DF-T1		F7102				
CD45	2D1				PR701		
CD45	T29/33	C7230	F0861	PB986		R7087	C7099
CD45R0	UCHL1		F0800			R0843	
CD45RA	4KB5					R7086	
CD54	6.5B5		F7143				
CD56	C5.9					R7251	
CD56	MOC-1					R7127	
CD57	TB01		F7270				
CD61	Y2/51	C7280	F0803				
CD64	10.1	C7278				R7219	
CD66abce	Kat4c		F7112				
CD68	KP1		F7135				
CD69	FN50					R7173	
CD71	Ber-T9		F0829				
CD79αcy	HM57	C7252				R7159	
CD79β	SN8		F7137			R7272	
CD86	BU63		F7205				
CD90	5E10		F7274				
CD95	DX2					R7154	
CD103	Ber-ACT8		F7138			R7188	
CD117	104D2	C7244				R7145	
CD138	MI15	C7256				R7229	
CD235a	JC159		F0870			R7078	
Epithelial Antigen	Ber-EP4		F0860				

Overview, Primary Single-Color Reagents (continued)

Antibody Description		Available Form/Code						
Anti-Human	**Clone**	**APC**	**CY**	**FITC**	**PB**	**PerCP**	**RPE**	
HLA-ABC Antigen	W6/32							R7000
HLA-DP, DQ, DR Antigen	CR3/43			F0817				
HLA-DR Antigen	AB3			F7266			R7267	
IgA*	Polyclonal Rabbit			F0188				
IgD*	Polyclonal Rabbit			F0189			R5112	
IgG*	Polyclonal Rabbit			F0185				
IgM*	Polyclonal Rabbit			F0058			R5111	
Kappa Light Chains*	Polyclonal Rabbit	C0222		F0434			R0436	
Ki-67 Antigen	Ki-67			F0788				
Ki-67 Antigen	MIB-1			F7268				
Lactoferrin	Polyclonal Rabbit			F0395				
Lambda Light Chains*	Polyclonal Rabbit			F0435			R0437	
Lysozyme	Polyclonal Rabbit			F0372				
Myeloperoxidase	MPO-7	C7246		F0714			R7209	
Plasma Cell	VS38c			F7149				
Terminal Deoxynucleotidyl Transferase	HT-6			F7139				

* $F(ab')_2$ fragment of affinity-isolated antibody

Overview, Isotype or Control Reagents for Single-Color Reagents

	Available Form/Code					
	APC	**FITC**	**PB**	**PerCP**	**RPE**	**RPE-Cy5**
Mouse IgG1	X0968	X0927	X0987	X7909	X0928	X0955
Mouse IgG2a		X0933			X0950	
Mouse IgG2b		X0941			X0951	
Mouse IgM		X0934				
Rabbit $F(ab')_2$	X0998	X0929			X0930	

Overview, Dual-Color Reagents

Anti-Human	Clones	Code
CD3/FITC	UCHT1	FR866
CD19/RPE	HD37	
CD4/FITC	MT310	FR868
CD8/RPE	DK25	
CD45/FITC	T29/33	FR700
CD14/RPE	TÜK4	

Anti-Human	Clones	Code
Kappa Light Chains/ FITC*	Polyclonal Rabbit	FR048
CD19/RPE	HD37	
Kappa Light Chains/ FITC*	Polyclonal Rabbit	FR481
Lambda Light Chains/RPE*	Polyclonal Rabbit	
Lambda Light Chains/FITC*	Polyclonal Rabbit	FR044
CD19/RPE	HD37	

* $F(ab')_2$ fragment of affinity-isolated antibody

Overview, Rabbit Ig Reagents for Dual-Color Reagents

	Code
Rabbit $F(ab')_2$/FITC + Rabbit $F(ab')_2$/RPE	X0935
Rabbit $F(ab')_2$/FITC + Mouse IgG1/RPE	X0952

Overview, Triple-Color Reagents

Anti-Human	Clones	Code
CD19/FITC	HD37	TC669
Lambda Light Chains/RPE*	Polyclonal Rabbit	
Kappa Light Chains/APC*	Polyclonal Rabbit	

Anti-Human	Clones	Code
Kappa Light Chains/FITC*	Polyclonal Rabbit	TC051
Lambda Light Chains/RPE*	Polyclonal Rabbit	
CD19/RPE-Cy5	HD37	

* $F(ab')_2$ fragment of affinity-isolated antibody

Overview, Rabbit Ig/Isotype Reagents for Triple-Color Reagents

	Code
Rabbit $F(ab')_2$/FITC + Rabbit $F(ab')_2$/RPE + Mouse IgG1/RPE-Cy5	X0957
Mouse IgG1/FITC + Rabbit $F(ab')_2$/RPE + Rabbit $F(ab')_2$/APC	X0979

Overview, Secondary Antibody Conjugates

Antibody Description		Available Form/Code					
Anti-Mouse	Clone	APC	FITC	PB	PerCP	RPE	RPE-Cy5
Immunoglobulins	**Polyclonal Goat**		F0479			R0480	
Immunoglobulins	**Polyclonal Rabbit**		F0313			R0439	
Anti-Rabbit							
Immunoglobulins	**Polyclonal Swine**		F0054				

Primary Single-Color Reagents

These primary antibodies are conjugated with a single fluorochrome type. After conjugation, unreacted fluorochromes are completely removed by gel filtration. Below is a description of the excitation and emission wavelength of the different fluorochromes as well as the approximate molar fluorochrome/antibody ratio for each fluorochrome.

Allophycocyanin (APC) Conjugates

The molar APC/antibody ratio is approximately 1. APC conjugates can be excited at 633 nm or 635 nm (red lasers), and emit light at 660 nm.

Fluorescein (FITC) Conjugates

The molar FITC/antibody ratio is approximately 4. FITC conjugates can be excited at 488 nm (blue argon laser) and emit light at 530 nm.

Pacific Blue (PB) Conjugates

The molar PB/antibody ratio is approximately 6. PB conjugates can be excited at 406 nm (violet laser) and emit light at 456 nm.

Peridinin Chlorophyll Protein (PerCP) Conjugates

The molar PerCP/antibody ratio is approximately 2.PerCP conjugates can be excited at 488 nm (blue argon laser) and emit light at 676 nm.

Phycoerythrin (RPE) Conjugates

The molar RPE/antibody ratio is approximately 1. RPE conjugates can be excited at 488 nm (blue argon laser) and emit light at 570 nm.

Phycoerythrin-Cy5 (RPE-Cy5) Conjugates

The excitation energy, absorbed at 488 nm (blue argon laser) by RPE, is transferred to Cy5, which emits light at 670 nm. The molar RPE-Cy5/antibody ratio of the conjugate is approximately 1.

Monoclonal Mouse Anti-Human
B Cell

Clone: FMC7
Isotype: IgM, kappa

ASR	F7110	FITC. Purified	1 mL

The target for this antibody is probably a conformational epitope on CD20. The antibody labels a subpopulation of functionally mature B cells.

Monoclonal Mouse Anti-Human
BCL2 Oncoprotein

Clone: 124
Isotype: IgG1, kappa

ASR	F7053	FITC. Purified	1 mL

Reacts with the BCL2 oncoprotein encoded by a gene involved in the t(14;18) chromosomal translocation. The BCL2 oncoprotein plays a central role in apoptosis (programmed cell death), acting as an inhibitor of the apoptotic process, and it has given name to a family of proteins engaged in the promotion/inhibition of apoptosis (1).

Reference:
1. Chao DT, Korsmeyer SJ. BCL-2 family: regulators of cell death. Annu Rev Immunol 1998;16:395-419.

Monoclonal Mouse Anti-
Bromodeoxyuridine

Clone: Bu20a
Isotype: IgG1, kappa

	F7210	FITC. Purified	1 mL

Reacts with cells which have incorporated bromodeoxyuridine into their DNA during the S-phase of the cell cycle.

C3bi Receptor

See: CD11b, C3bi Receptor

Monoclonal Mouse Anti-Human
CD1a

Clone: NA1/34
Isotype: IgG2a, kappa

ASR	F7141	FITC. Purified	1 mL
ASR	R7189	RPE. Purified	1 mL

The CD1a antigen is a transmembrane α-chain non-covalently associated with β-2-microglobulin. CD1a is expressed by cortical thymocytes and Langerhans' cells in normal, dysplastic and neoplastic tissue.

Monoclonal Mouse Anti-Human
CD2

Clone: MT910
Isotype: IgG1, kappa

ASR	R0807	RPE. Purified	1 mL

Reacts with virtually all thymocytes, T lymphocytes and NK cells. CD2 is a pan-T marker.

Monoclonal Mouse Anti-Human
CD3

Clone: UCHT1
Isotype: IgG1, kappa

IVD	F0818	FITC. Purified	100 tests, 1 mL
ASR	PB982	Pacific Blue. Purified	1 mL
ASR	PR702	PerCP. Purified	1 mL
IVD	R0810	RPE. Purified	100 tests, 1 mL
IVD	C7067	RPE-Cy5. Purified	100 tests, 1 mL

Anti-CD3, UCHT1, reacts with the ε-chain of the CD3 part of the TCR/CD3 complex. CD3 is a pan-T marker.

Monoclonal Mouse Anti-Human
CD4

Clone: MT310
Isotype: IgG1, kappa

ASR	C7226	APC. Purified	1 mL
IVD	F0766	FITC. Purified	100 tests, 1 mL
IVD	R0805	RPE. Purified	100 tests, 1 mL
ASR	C7069	RPE-Cy5. Purified	1 mL

CD4 is a 55 kDa transmembrane glycoprotein expressed by helper/inducer T cells, 55-65% of mature peripheral blood T cells and by thymocyte subsets. CD4 is also expressed by monocytes/macrophages, Langerhans' cells and other dendritic cells. CD4 is not expressed by B cells.

Monoclonal Mouse Anti-Human
CD5

Clone: DK23
Isotype: IgG1, kappa

ASR	C7242	APC. Purified	1 mL
ASR	F0795	FITC. Purified	1 mL
ASR	R0842	RPE. Purified	1 mL

CD5 is a 67 kDa transmembrane glycoprotein. CD5 appears early in thymocyte development, and is expressed at low density on thymocytes and at high density on all mature T lymphocytes. CD5 is also expressed on a subpopulation of normal B cells. A review on CD5+ B cells is given in reference 1.

Reference:
1. Hardy RR, Hayakawa K. CD5 B-cells, a fetal B-cell lineage. Adv Immunol 1994;55:297-339.

Monoclonal Mouse Anti-Human
CD7

Clone: CBC.37
Isotype: IgG2b, kappa

ASR	F7276	FITC. Purified	1 mL
ASR	R7277	RPE. Purified	1 mL

CD7 is a 40 kDa membrane-bound glycoprotein expressed on thymocytes, mature T cells, a large majority of natural killer cells, pluripotent hematopoietic stem cells, and progenitor cells of lymphoid and myeloid cells. CD7 is the earliest T-cell specific antigen to be expressed by lymphocytes and the only early marker to persist throughout differentiation.

Monoclonal Mouse Anti-Human
CD7

Clone: DK24
Isotype: IgG2b, kappa

ASR	F0789	FITC. Purified	1 mL

CD7 is a 40 kDa membrane-bound glycoprotein expressed on thymocytes, mature T cells, a large majority of natural killer cells, pluripotent hematopoietic stem cells, and progenitor cells of lymphoid and myeloid cells. CD7 is the earliest T-cell specific antigen to be expressed by lymphocytes and the only early marker to persist throughout differentiation.

Monoclonal Mouse Anti-Human
CD8

Clone: DK25
Isotype: IgG1, kappa

ASR	C7227	APC. Purified	1 mL
ASR	F0765	FITC. Purified	1 mL
ASR	PB984	Pacific Blue. Purified	1 mL
IVD	R0806	RPE. Purfied	100 tests, 1 mL
ASR	C7079	RPE-Cy5. Purified	1 mL

CD8 is a 68 kDa transmembrane glycoprotein expressed by class I major histocompatibility complex restricted, mature suppressor/cytotoxic T cells, the great majority of cortical thymocytes and approximately 30% of medullary thymocytes. In addition a proportion of γδ T cells and NK cells express CD8.

Monoclonal Mouse Anti-Human
CD10

Clone: SS2/36
Isotype: IgG1, kappa

ASR	F0826	FITC. Purified	1 mL
ASR	R0848	RPE. Purified	1 mL

CD10 is a 100 kDa transmembrane protein. CD10 is expressed on immature T and B-precursor cells but is lost as the cells reach maturation.

Monoclonal Mouse Anti-Human
CD11b, C3bi Receptor

Clone: 2LPM19c
Isotype: IgG1, kappa

ASR	R0841	RPE. Purified	1 mL

Reacts specifically with a leucocyte surface receptor (CR3) for the C3bi complement fragment. CD11b is expressed by most granulocytes and monocytes as well as a subpopulation of 'null cell' peripheral lymphocytes containing most of the circulating natural killer cells. CD11b (Mac-1) is the specific α-chain in the CD11b/CD18 molecule, which is a member of the LFA-1 and β2 integrin subfamilies.

Monoclonal Mouse Anti-Human
CD11c, Protein 150,95

Clone: KB90
Isotype: IgG1, kappa

ASR	F0713	FITC. Purified	1 mL

The antibody is directed against the CD11c chain of the CD11c/CD18 protein, which is an adhesion molecule of integrin type (integrin αXβ2). An alternative name is complement receptor type 4 or CR4. CD11c is expressed by a variety of cells, including granulocytes, monocytes, macrophages, NK cells and dendritic cells.

Monoclonal Mouse Anti-Human
CD13

Clone: WM-47
Isotype: IgG1, kappa

ASR	F0831	FITC. Purified	1 mL
ASR	R0715	RPE. Purified	1 mL

CD13 is identical to aminopeptidase N. CD13 is expressed by committed granulocyte-monocyte progenitor (CFU-GM) cells, and normal granulocytic and monocytic cells at all stages of differentiation. Lymphocytes and platelets do not express CD13.

Monoclonal Mouse Anti-Human
CD14

Clone: TÜK4
Isotype: IgG2a, kappa

ASR	F0844	FITC. Purified	1 mL
ASR	R0864	RPE. Purified	1 mL

CD14 is a 55 kDa protein, which functions as a receptor for the complex of lipopolysaccharide (LPS) and LPS-binding protein (LPB). CD14 is primarily expressed on monocytes and macrophages.

Reference:
1. Wright SD, Ramos RA, Tobias PS, Ulevitch RJ, Mathison JC. CD14, a receptor for complexes of lipopolysaccharide (LPS) and LPS binding protein. Science 1990;249:1431-3.

Monoclonal Mouse Anti-Human
CD15

Clone: C3D-1
Isotype: IgM, kappa

ASR	F0830	FITC Purified	1 mL

Reacts with an oligosaccharide termed Lewis X (Le^x), or CD15, found on mature granulocytes and monocytes.

Monoclonal Mouse Anti-Human
CD16, Fc Gamma Receptor III

Clone: DJ130c
Isotype: IgG1, kappa

ASR	F7011	FITC. Purified	1 mL
ASR	R7012	RPE. Purified	1 mL

Reacts with an antigen (FcγRIII) present on NK cells, neutrophils and basophils in peripheral blood and bone marrow.

Monoclonal Mouse Anti-Human
CD19

Clone: HD37
Isotype: IgG1, kappa

ASR	C7224	APC. Purified	1 mL
ASR	F0768	FITC. Purified	1 mL
ASR	PB985	Pacific Blue. Purified	1 mL
IVD	R0808	RPE. Purified	100 tests, 1 mL
IVD	C7066	RPE-Cy5. Purified	100 tests, 1 mL

CD19 is the broadest lineage-specific surface marker for B cells. CD19 is present on the surface of virtually all B lymphocytes, including early B progenitor cells, but it is lost upon terminal differentiation to plasma cells (1). CD19 is also expressed on follicular dendritic cells.

Reference:
1. Sato S, Tedder TF. BC3. CD19 workshop panel report. In: Kishimoto T, Kikutani H, von dem Borne AEG, Goyert SM, Mason DY, Miyasaka M, et al., editors. Leucocyte typing VI. White cell differentiation antigens. Proceedings of the 6th International Workshop and Conference; 1996 Nov 10-14; Kobe, Japan. New York, London: Garland Publishing Inc.; 1997. p. 133-5.

Monoclonal Mouse Anti-Human
CD20

Clone: B-Ly1
Isotype: IgG1, kappa

ASR	F0799	FITC. Purified	1 mL
ASR	R7013	RPE. Purified	1 mL
ASR	C7132	RPE-Cy5. Purified	1 mL

Reacts with an epitope located on the surface of B cells. CD20 appears early during B-cell maturation and is lost shortly before the terminal plasma cell stage.

Monoclonal Mouse Anti-Human
CD22

Clone: 4KB128
Isotype: IgG1, kappa

ASR	C7281	APC. Purified	1 mL
ASR	F7060	FITC. Purified	1 mL
ASR	R7061	RPE. Purified	1 mL

CD22 appears in the cytoplasm of late pro and early pre-B cells and on the surface of mature B lymphocytes. CD22 is a pan-B marker of normal and neoplastic B cells in peripheral blood.

Monoclonal Mouse Anti-Human
CD23

Clone: MHM6
Isotype: IgG1, kappa

ASR	F7062	FITC. Purified	1 mL
ASR	R7108	RPE. Purified	1 mL

CD23, the low affinity IgE (Fc-epsilon) receptor, is a glycoprotein present on a subpopulation of B lymphocytes in germinal centres. CD23 is also expressed on monocytes and dendritic cells.

Monoclonal Mouse Anti-Human
CD24

Clone: SN3
Isotype: IgG1, kappa

ASR	F7134	FITC. Purified	1 mL

Reacts with an antigen expressed at multiple stages of B-cell development, beginning with early progenitor cells and continuing through maturation. The antigen is lost as cells differentiate to plasma cells.

Monoclonal Mouse Anti-Human
CD25, Interleukin-2 Receptor

Clone: ACT-1
Isotype: IgG1, kappa

ASR	F0801	FITC. Purified	1 mL
ASR	R0811	RPE. Purified	1 mL

CD25 is the low-affinity α-chain of the interleukin-2 receptor that has at least 3 subunits (α, β, γ). The CD25 antigen is expressed on activated T and B cells and activated macrophages.

Monoclonal Mouse Anti-Human
CD27

Clone: M-T271
Isotype: IgG1, kappa

RUO	F7178	FITC. Purified	100 tests, 1 mL
RUO	R7179	RPE. Purified	1 mL

CD27 is a transmembrane antigen expressed on the majority of human peripheral blood T cells, on a subpopulation of B cells, and on a portion of natural killer (NK) cells. CD27 acts in a co-stimulatory fashion with the ligand, CD70. During activation, the expression of CD27 is increased on B cells and unprimed T cells.

Monoclonal Mouse Anti-Human
CD28

Clone: CD28.1
Isotype: IgG1, kappa

RUO	R7164	RPE. Purified	100 tests, 1 mL

CD28 is a T-cell surface molecule expressed on approximately 95% of CD4+ and 50% of CD8+ peripheral T cells. CD28 mediates adhesion to activated B cells through the ligands CD80 and CD86, and is believed to play an important role in the interaction between T and B cells.

Monoclonal Mouse Anti-Human
CD30

Clone: Ber-H2
Isotype: IgG1, kappa

ASR	F0849	FITC. Purified	1 mL

CD30 is expressed by activated, but not resting, T and B cells.

Monoclonal Mouse Anti-Human
CD33

Clone: WM-54
Isotype: IgG1, kappa

ASR	F0832	FITC. Purified	1 mL
ASR	R0745	RPE. Purified	1 mL

CD33 is a member of the Siglec family (sialic acid binding Ig-like lectins) and is also referred to as Siglec-3. The main cellular expression of CD33 is in myeloid progenitors, monocytes/macrophages and in granulocyte progenitors, while the expression is low in mature granulocytes. The fluorescence intensity of RPE conjugates is, generally, somewhat higher than that of corresponding FITC conjugates.

Monoclonal Mouse Anti-Human
CD34 Class III

Clone: BIRMA-K3
Isotype: IgG1, kappa

ASR	C7238	APC. Purified	0.5 mL
ASR	F7081	FITC. Purified	1 mL
ASR	R7125	RPE. Purified	1 mL

Reacts with an antigen present on immature hematopoietic cells.

Monoclonal Mouse Anti-Human
CD38

Clone: AT13/5
Isotype: IgG1, kappa

ASR	F7101	FITC. Purified	1 mL
ASR	R7144	RPE. Purified	1 mL

CD38 is expressed on plasma cells, on early cells of B and T cell lineages, and on activated B and T cells. Approximately 60% of peripheral blood mononuclear CD34+ cells express CD38. The least mature CD34+ cells are characterized by a lack of CD38.

Monoclonal Mouse Anti-Human
CD41, Platelet Glycoprotein IIb

Clone: 5B12
Isotype: IgG1, kappa

ASR	F7088	FITC. Purified	1 mL
ASR	R7058	RPE. Purified	1 mL

CD41 is a 135 kDa protein which is a selective marker of platelets and platelet precursors.

Primary Single-Color Reagents (continued)

Monoclonal Mouse Anti-Human
CD42b, Platelet Glycoprotein Ib

Clone: AN51
Isotype: IgG2a, kappa

ASR	R7014	RPE. Purified	1 mL

CD42b is a 145 kDa protein restricted to platelets and megakaryocytes. CD42a, CD42b, CD42c and CD42d form a complex in the platelet plasma membrane which serves as a receptor for von Willebrand factor and thrombin, and mediates adhesion of platelets to subendothelial matrices exposed upon damage to the endothelium. The binding sites for von Willebrand factor and thrombin lies on CD42b.

Monoclonal Mouse Anti-Human
CD43

Clone: DF-T1
Isotype: IgG1, kappa

ASR	F7102	FITC. Purified	1 mL

Reacts with a heavily glycosylated transmembrane protein, also called leucosialin. CD43 is expressed on virtually all leucocytes.

Monoclonal Mouse Anti-Human
CD45, Leucocyte Common Antigen

Clone: 2D1
Isotype: IgG1, kappa

ASR	PR701	PerCP. Purified	1 mL

Labels the cell membrane of almost all leucocytes. The expression of CD45 on the surface of mature granulocytes is less than that of lymphocytes.

Monoclonal Mouse Anti-Human
CD45, Leucocyte Common Antigen

Clone: T29/33
Isotype: IgG1, kappa

ASR	C7230	APC. Purified	1 mL
ASR	F0861	FITC. Purified	1 mL
ASR	PB986	Pacific Blue. Purified	1 mL
ASR	R7087	RPE. Purified	1 mL
ASR	C7099	RPE-Cy5. Purified	1 mL

Labels the cell membrane of almost all leucocytes. The expression of CD45 on the surface of mature granulocytes is less than that of lymphocytes.

Monoclonal Mouse Anti-Human
CD45R0

Clone: UCHL1
Isotype: IgG2a, kappa

ASR	F0800	FITC. Purified	1 mL
ASR	R0843	RPE. Purified	1 mL

Reacts with an epitope unique for CD45R0.

Monoclonal Mouse Anti-Human
CD45RA

Clone: 4KB5
Isotype: IgG1, kappa

ASR	R7086	RPE. Purified	1 mL

Reacts with the CD45 isoforms, ABC and AB. The antibody labels most B cells in peripheral blood and tissue sections.

Monoclonal Mouse Anti-Human
CD54, ICAM-1

Clone: 6.5B5
Isotype: IgG1, kappa

RUO	F7143	FITC. Purified	100 tests, 1 mL

Reacts with the cell surface glycoprotein ICAM-1. ICAM-1 (intercellular adhesion molecule-1) is expressed mainly on monocytes and endothelial cells, but expression can be induced or upregulated on many cell types including B and T lymphocytes.

Monoclonal Mouse Anti-Human
CD56

Clone: C5.9
Isotype: IgG2b, kappa

ASR	R7251	RPE. Purified	1 mL

The antibody labels natural killer cells and a subset of CD4+ and CD8+ cells in peripheral blood.

Monoclonal Mouse Anti-Human
CD56

Clone: MOC-1
Isotype: IgG1, kappa

ASR	R7127	RPE. Purified	1 mL

Reacts with natural killer cells and a subset of CD4+ and CD8+ T cells in peripheral blood.

Monoclonal Mouse Anti-Human
CD57

Clone: TB01
Isotype: IgM, kappa

ASR	F7270	FITC. Purified	1 mL

CD57 is expressed by subsets of NK cells and CD8-positive lymphocytes, and by a small percentage of CD4-positive/CD45R0-positive T lymphocytes in lymph node germinal centres. Neuroectodermal cells and striated muscle also express CD57 (1, 2).

References:

1. Leong AS-Y, Cooper K, Leong FJW-M. CD 57. Manual of diagnostic antibodies for immunohistology. London: Oxford University Press; 1999. p. 103-6.
2. Funaro A, Malavasi F. NK5. CD57 Workshop panel report. In: Kishimoto T, Kikutani H, von dem Borne AEG, Goyert SM, Mason DY, Miyasaka M, et al., editors. Leucocyte typing VI. White cell differentiation antigens. Proceedings of the 6th International Workshop and Conference; 1996 Nov 10-14; Kobe, Japan. New York, London: Garland Publishing Inc.; 1997. p. 274-6.

Monoclonal Mouse Anti-Human
CD61, Platelet Glycoprotein IIIa

Clone: Y2/51
Isotype: IgG1, kappa

ASR	C7280	APC. Purified	1 mL
ASR	F0803	FITC. Purified	1 mL

Detects platelets in peripheral blood and bone marrow and reacts also with megakaryocytes and megakaryoblasts.

Monoclonal Mouse Anti-Human
CD64, Fc Gamma Receptor I

Clone: 10.1
Isotype: IgG1, kappa

ASR	C7278	APC. Purified	1 mL
ASR	R7219	RPE. Purified	1 mL

Reacts with an antigen (FcγRI) constitutively expressed on monocytes, macrophages and blood dendritic cells. The antigen expression can be induced on neutrophils and eosinophils by interferon γ and granulocyte colony-stimulating factor (G-CSF).

Monoclonal Mouse Anti-Human
CD66abce

Clone: Kat4c
Isotype: IgG1, kappa

ASR	F7112	FITC. Purified	1 mL

CD66 refers to a family of heavily glycosylated glycoproteins whose members are designated CD66a to CD66f. CD66 antibodies often react with two or more members of this family, and antibody Kat4c recognizes three myeloid-associated molecules (CD66a, b, c) and also CD66e (CEA).

Monoclonal Mouse Anti-Human
CD68

Clone: KP1
Isotype: IgG1, kappa

ASR	F7135	FITC. Purified	1 mL

Reacts with an intracellular lysosomal membrane protein expressed by human monocytes, macrophages and myeloid cells.

Monoclonal Mouse Anti-Human
CD69

Clone: FN50
Isotype: IgG1, kappa

RUO	R7173	RPE. Purified	100 tests, 1 mL

CD69 is not expressed by resting T cells, but is upregulated upon in vitro T-cell activation. CD69 is an early activation antigen expressed prior to CD25 and CD71.

Monoclonal Mouse Anti-Human
CD71, Transferrin Receptor

Clone: Ber-T9
Isotype: IgG1, kappa

ASR	F0829	FITC. Purified	1 mL

Reacts with many proliferating cells in both normal and neoplastic tissue.

Monoclonal Mouse Anti-Human
CD79αcy

Clone: HM57
Isotype: IgG1, kappa

ASR	C7252	APC. Purified	1 mL
ASR	R7159	Purified	1 mL

Synthetic human CD79α peptide has been used as immunogen. Anti-CD79αcy, HM57, labels normal and neoplastic B cells. It reacts with an intracytoplasmic epitope. The antibody labels B cells in many mammalian species (1).

Reference:

1. Jones M, Cordell JL, Beyers AD, Tse AG, Mason DY. Detection of T and B cells in many animal species using cross-reactive antipeptide antibodies. J Immunol 1993;150:5429-35.

Monoclonal Mouse Anti-Human
CD79β

Clone: SN8
Isotype: IgG1, kappa

ASR	F7137	FITC. Purified	1 mL
ASR	R7272	RPE. Purified	1 mL

Reacts with an epitope on the extracellular portion of the β-chain of the CD79 antigen. The antibody is specific for B cells.

Monoclonal Mouse Anti-Human
CD86

Clone: BU63
Isotype: IgG1, kappa

RUO	F7205	FITC. Purified	100 tests, 1 mL

Reacts with resting monocytes and dendritic cells, and activated, but not resting, T, NK and B cells.

Monoclonal Mouse Anti-Human
CD90

Clone: 5E10
Isotype: IgG1, kappa

ASR	F7274	FITC. Purified	1 mL

CD90 is identical to the cell surface glycoprotein known as Thy-1. CD90 is expressed on primitive hematopoietic stem cells in normal bone marrow, cord blood and fetal liver cells.

Monoclonal Mouse Anti-Human
CD95, Fas

Clone: DX2
Isotype: IgG1, kappa

RUO	R7154	RPE. Purified	100 tests, 1 mL

CD95, originally named Fas, is involved in mediation of apoptosis (programmed cell death). CD95 is a cell surface glycoprotein expressed by a substantial minority of resting T and B cells, and by about 5% of resting NK cells. Among T cells, CD95 is preferentially expressed by $CD45RA^{low}$ $CD45R0^{high}$ memory T cells. CD95 is strongly upregulated on activated T, B and NK cells.

Monoclonal Mouse Anti-Human
CD103, Mucosa Lymphocyte Antigen (MLA)

Clone: Ber-ACT8
Isotype: IgG1, kappa

ASR	F7138	FITC. Purified	1 mL
ASR	R7188	RPE. Purified	1 mL

CD103 is the αE integrin subunit of the heterodimeric αEβ7 integrin belonging to a small β7 integrin subfamily. CD103 is expressed on more than 95% of intraepithelial CD8+ cells and on 40% of mucosa-associated T cells, whereas less than 2% of resting blood lymphocytes are CD103-positive.

Reference:

1. Kruschwitz M, Fritzsche G, Schwarting R, Micklem K, Mason DY, Falini B, et al. Ber-ACT8: monoclonal antibody to the mucosa lymphocyte antigen. J Clin Pathol 1991;44:636-45.

Monoclonal Mouse Anti-Human
CD117, c-kit

Clone: 104D2
Isotype: IgG1, kappa

ASR	C7244	APC. Purified	1 mL
ASR	R7145	RPE Purified	1 mL

CD117, a membrane tyrosine kinase receptor, is encoded by the *KIT* proto-oncogene, also called *c-kit*. CD117 is expressed on 1-4% of normal bone marrow cells. The majority of positive cells (50-70%) co-expresses CD34 and comprises progenitor cells and their precursors of all hematopoietic cell lineages.

Monoclonal Mouse Anti-Human
CD138

Clone: MI15
Isotype: IgG1, kappa

ASR	C7256	APC Purified	1 mL
ASR	R7229	RPE. Purified	1 mL

CD138, syndecan-1, is a transmembrane proteoglycan with a main cellular expression in stratified and simple epithelia. Within the hemopoietic system, CD138 is mainly confined to late stages of B-cell differentiation (1).

References:

1. Jourdan M, Ferlin M, Legouffe E, Horvathova M, Liautard J, Rossi JF, et al. The myeloma cell antigen syndecan-1 is lost by apoptotic myeloma cells. Br J Haematol 1988;100:637-46.

Monoclonal Mouse Anti-Human
CD235a, Glycophorin A

Clone: JC159
Isotype: IgG1, kappa

ASR	F0870	FITC. Purified	1 mL
ASR	R7078	RPE. Purified	1 mL

Reacts with normal erythroid cells at essentially all stages of differentiation from erythroblasts to mature erythrocytes.

c-kit

See: CD117, c-kit

Monoclonal Mouse Anti-Human
Epithelial Antigen

Clone: Ber-EP4
Isotype: IgG1, kappa

ASR	F0860	FITC. Purified	1 mL

This antibody shows a very broad reactivity with the majority of human epithelial tissues. It does rarely label mesothelial cells. The antibody labels an epitope present on the cell surface and in the cytoplasm.

Fas

See: CD95, Fas

Fc Gamma Receptor I and III

See: CD64 and CD16, respectively

FMC7

See: B Cell

Glycophorin A

See: CD235a, Glycophorin A

Monoclonal Mouse Anti-Human
HLA-ABC Antigen

Clone: W6/32
Isotype: IgG2a, kappa

ASR	R7000	RPE. Purified	1 mL

Is directed against a monomorphic epitope on the 45 kDa polypeptide products of the *HLA-A*, *B* and *C* loci. These antigens belong to class I of the mammalian major histocompatibility complex (MHC), in humans known as human leucocyte-associated antigens (HLA). The antibody labels all nucleated cells in peripheral blood or tonsil cell preparations, including polymorphs, monocytes, lymphocytes and eosinophils. Erythrocytes are not labeled. The reagent is not intended for use in tissue typing.

Monoclonal Mouse Anti-Human
HLA-DP, DQ, DR Antigen

Clone: CR3/43
Isotype: IgG1, kappa

ASR	F0817	FITC. Purified	1 mL

Labels principally B cells, most monocytes and activated T cells, but is unreactive with normal T cells and polymorphs. The reagent is not intended for use in tissue typing.

Monoclonal Mouse Anti-Human
HLA-DR Antigen

Clone: AB3
Isotype: IgG2a, kappa

ASR	F7266	FITC. Purified	1 mL
ASR	R7267	RPE. Purified	1 mL

HLA-DR antigen is constitutively expressed on antigen-presenting cells, such as B lymphocytes, monocytes and dendritic cells, but it can also be detected on activated T lymphocytes and activated granulocytes. The reagent is not intended for use in tissue typing.

ICAM-1

See: CD54, ICAM-1

Polyclonal Rabbit Anti-Human
IgA, Specific for Alpha-Chains

ASR	F0188	FITC. Affinity-isolated F(ab')$_2$	1 mL

The antigen used for immunization is serum IgA. F0188 labels surface IgA on normal and neoplastic B cells.

Polyclonal Rabbit Anti-Human
IgD, Specific for Delta-Chains

ASR	F0189	FITC. Affinity-isolated F(ab')$_2$	1 mL
	R5112	RPE. Affinity-isolated F(ab')$_2$	1 mL

The antigen used for immunization is serum IgD. F0189 and R5112 label surface IgD on B cells.

Polyclonal Rabbit Anti-Human
IgG, Specific for Gamma-Chains

ASR	F0185	FITC. Affinity-isolated F(ab')$_2$	1 mL

The antigen used for immunization is serum IgG. F0185 labels surface IgG on B cells.

Polyclonal Rabbit Anti-Human
IgM, Specific for Mu-Chains

ASR	F0058	FITC. Affinity-isolated F(ab')$_2$	1 mL
ASR	R5111	RPE. Affinity-isolated F(ab')$_2$	1 mL

The antigen used for immunization is serum IgM. F0058 and R5111 label surface IgM on normal and neoplastic B cells.

Interleukin-2 Receptor

See: CD25, Interleukin-2 Receptor

Polyclonal Rabbit Anti-Human
Kappa Light Chains

ASR	C0222	APC. Affinity-isolated F(ab')$_2$	1 mL
ASR	F0434	FITC. Affinity-isolated F(ab')$_2$	1 mL
ASR	R0436	RPE. Affinity-isolated F(ab')$_2$	1 mL

These reagents have been produced in a manner that ensures a particularly wide specificity for kappa-chains. Most B cells, with the exception of pre-B progenitors, pre-B cells and mature plasma cells, express immunoglobulin on their surface. Each cell expresses only one light chain type. In normal peripheral blood and lymph nodes there is a mixture of kappa+ and lambda+ cells with two-thirds of the cells expressing kappa and one-third expressing lambda (1).

Reference:

1. Johnson A, Olofsson T. Flow cytometric clonal excess analysis of peripheral blood, routine handling, and pitfalls in interpretation. Cytometry 1993;14:188-95.

Ki-1 Antigen

See: CD30

Monoclonal Mouse Anti-Human
Ki-67 Antigen

Clone: Ki-67
Isotype: IgG1, kappa

ASR	F0788	FITC. Purified	1 mL

Reacts with a nuclear antigen expressed by all human proliferating cells. The antibody recognizes cells at all stages of the cell cycle (late G_1, S, M and G_2 phases), but not cells in G_0 phase.

Monoclonal Mouse Anti-Human
Ki-67 Antigen

Clone: MIB-1
Isotype: IgG1, kappa

ASR	F7268	FITC. Purified	1 mL

Reacts with Ki-67 antigen, a nuclear antigen expressed by all human proliferating cells. The antibody recognizes proliferating cells at all stages of the cell cycle (late G_1, S, M and G_2 phases), but not cells in G_0 phase.

References:

1. Scholzen T, Gerdes J. The Ki-67 protein: from the known and the unknown. J Cell Physiol 2000;182:311-22.

Polyclonal Rabbit Anti-Human
Lactoferrin

ASR	F0395	FITC. Ig fraction	1 mL

Reacts with the secondary granules of myeloid cells. Lactoferrin is present in the secondary granules of neutrophil granulocytes and is rarely demonstrated in monocytes and lymphocytes.

Polyclonal Rabbit Anti-Human
Lambda Light Chains

ASR	F0435	FITC. Affinity-isolated F(ab')$_2$	1 mL
ASR	R0437	RPE. Affinity-isolated F(ab')$_2$	1 mL

The antigen used for immunization is a pool of human lambda Bence Jones proteins. F0435 and R0437 label lambda light chains of surface immunoglobulin on B cells.

Leucocyte Common Antigen

See: CD45

Polyclonal Rabbit Anti-Human
Lysozyme EC 3.2.1.17

ASR	F0372	FITC. Ig fraction	1 mL

Reacts with the primary and secondary granules of myeloid cells.

Mucosa-Lymphocyte Antigen (MLA)

See: CD103, Mucosa-Lymphocyte Antigen (MLA)

Monoclonal Mouse Anti-Human
Myeloperoxidase

Clone: MPO-7
Isotype: IgG1, kappa

ASR	C7246	APC. Purified	1 mL
ASR	F0714	FITC. Purified	1 mL
ASR	R7209	RPE. Purified	1 mL

Reacts with granula in the cytoplasm of neutrophil granulocytes and with monocytes.

Monoclonal Mouse Anti-Human
Plasma Cell

Clone: VS38c
Isotype: IgG1, kappa

ASR	F7149	FITC. Purified	1 mL

Recognizes an intracellular protein of 63 kDa identical with the rough endoplasmic reticulum-associated protein p63. The antibody labels plasma cells strongly, but frequently also labels melanocytic cells and a number of epithelial cells, e.g. in mucous glands and tonsils, and secretory epithelia in breast, thyroid and pancreas.

Platelet Glycoprotein Ib, IIb and IIIb

See: CD42b, CD41 and CD61, respectively

Protein 150,95

See: CD11c, Protein 150,95

Monoclonal Mouse Anti-Human
Terminal Deoxynucleotidyl Transferase

Clone: HT-6
Isotype: IgG1, kappa

ASR	F7139	FITC. Purified	0.5 mL

Reacts with the nuclei of normal T and B-lymphocyte precursors.

Dual-Color Reagents

Dako Dual-Color Reagents are based on the combination of two or more antibodies labeled with fluorescein isothiocyanate (FITC) and R-phycoerythrin (RPE), respectively. This combination is particularly effective as both fluorochromes can be excited at 488 nm. The fluorescence emission for FITC is in the green region around 530 nm while the RPE emission is in the orange region above 570 nm.

Monoclonal Mouse Anti-Human
CD3/FITC +
CD19/RPE

Clones: UCHT1 and HD37
Isotypes: IgG1, kappa and IgG1, kappa

IVD FR866 FITC and RPE. Purified 50 tests, 0.5 mL

FR866 allows simultaneous detection and enumeration of T cells and B cells.

Monoclonal Mouse Anti-Human
CD4/FITC +
CD8/RPE

Clones: MT310 and DK25
Isotypes: IgG1, kappa and IgG1, kappa

IVD FR868 FITC and RPE. Purified 50 tests, 0.5 mL

FR868 allows simultaneous detection and enumeration of helper/inducer T cell and suppressor/cytotoxic T-cell subsets.

Monoclonal Mouse Anti-Human
CD45/FITC +
CD14/RPE

Clones: T29/33 and TÜK4
Isotypes: IgG1, kappa and IgG2a, kappa

IVD FR700 FITC and RPE. Purified 50 tests, 0.5 mL

FR700 allows simultaneous subdivision of leucocytes into lymphocytes, monocytes and granulocytes.

Polyclonal Rabbit Anti-Human
Kappa Light Chains/FITC +
Monoclonal Mouse Anti-Human
CD19/RPE

Clone: HD37
Isotype: IgG1, kappa

FR048 FITC. Affinity-isolated $F(ab')_2$; RPE. Purified 0.5 mL

Polyclonal Rabbit Anti-Human
Kappa Light Chains/FITC +
Lambda Light Chains/RPE

FR481 FITC and RPE. Affinity-isolated $F(ab')_2$ 0.5 mL

Polyclonal Rabbit Anti-Human
Lambda Light Chains/FITC +
Monoclonal Mouse Anti-Human
CD19/RPE

Clone: HD37
Isotype: IgG1, kappa

FR044 FITC. Affinity-isolated $F(ab')_2$; RPE. Purified 0.5 mL

Triple-Color Reagents

FITC/RPE/APC Reagent Line

The FITC/RPE/APC Reagent Line is based on the combination of three antibodies labeled with fluorescein isothiocyanate (FITC), R-phycoerythrin (RPE) and allophycocyanin (APC). The Triple-Color Reagent is designed for flow cytometers equipped with a 488 nm (blue) light source for excitation of FITC and RPE, and a 633/635 nm (red) light source for excitation of APC.

Monoclonal Mouse Anti-Human
CD19/FITC +
Polyclonal Rabbit Anti-Human
Lambda Light Chains/RPE +
Kappa Light Chains/APC

Clone: HD37
Isotype: IgG1, kappa

TC669	FITC. Purified; RPE and APC. Affinity-isolated $F(ab')_2$	1 mL

FITC/RPE/RPE-Cy5 Reagent Line

The FITC/RPE/RPE-Cy5 Reagent Line is based on the combination of three antibodies labeled with fluorescein isothiocyanate (FITC), R-phycoerythrin (RPE) and R-phycoerythrin-Cy5 (RPE-Cy5). The Triple-Color Reagent is designed for flow cytometers equipped with a 488 nm (blue) light source for excitation of FITC, RPE and RPE-Cy5.

Polyclonal Rabbit Anti-Human
Kappa Light Chains/FITC +
Lambda Light Chains/RPE +
Monoclonal Mouse Anti-Human
CD19/RPE-Cy5

Clone: HD37
Isotype: IgG1, kappa

TC051	FITC and RPE. Affinity-isolated $F(ab')_2$; RPE-Cy5. Purified	0.5 mL

Isotype or Control Reagents

Conjugated Isotype or Control Reagents

Single-Color Mouse Reagents

Mouse IgG1

	X0968	APC. Purified	1 mL
IVD	X0927	FITC. Purified	1 mL
	X0987	Pacific Blue. Purified	1 mL
	X7909	PerCP. Purified	1 mL
IVD	X0928	RPE. Purified	1 mL
IVD	X0955	RPE-Cy5. Purified	1 mL

Mouse IgG2a

	X0933	FITC. Purified	1 mL
	X0950	RPE. Purified	1 mL

Mouse IgG2b

	X0941	FITC. Purified	1 mL
	X0951	RPE. Purified	1 mL

Mouse IgM

	X0934	FITC. Purified	1 mL

Single-Color Rabbit Ig Reagents

Rabbit $F(ab')_2$

	X0998	APC. Solid-phase absorbed $F(ab')_2$	1 mL
	X0929	FITC. Solid-phase absorbed $F(ab')_2$	1 mL
	X0930	RPE. Solid-phase absorbed $F(ab')_2$	1 mL

Dual-Color Reagents

Rabbit $F(ab')_2$/FITC + Rabbit $F(ab')_2$/RPE

	X0935	FITC and RPE. Solid-phase absorbed $F(ab')_2$	0.5 mL

Rabbit $F(ab')_2$/FITC + Mouse IgG1/RPE

	X0952	FITC and RPE. Solid-phase absorbed $F(ab')_2$	0.5 mL

Triple-Color Isotype Reagents FITC/RPE/RPE-Cy5 Reagent Line

Rabbit $F(ab')_2$/FITC + Rabbit $F(ab')_2$/RPE + Mouse IgG1/RPE-Cy5

	X0957	FITC and RPE. Solid-phase absorbed $F(ab')_2$; RPE-Cy5. Purified	0.5 mL

Mouse IgG1/FITC + Rabbit $F(ab')_2$/RPE + Rabbit $F(ab')_2$/APC

	X0979	RPE and APC. Solid-phase absorbed $F(ab')_2$; FITC. Purified	1 mL

Unconjugated Control Reagents

Mouse IgG1

IVD X0931 Culture supernatant 1 mL

X0931 is a cell culture supernatant containing monoclonal mouse IgG1 antibody to *Aspergillus niger* glucose oxidase, an enzyme which is neither present nor inducible in mammalian tissues. X0931 is well-suited as a negative control in all techniques utilizing monoclonal mouse antibodies of isotype IgG1.

Mouse IgG2a

IVD X0943 Culture supernatant 1 mL

X0943 is a cell culture supernatant containing monoclonal mouse IgG2a antibody to *Aspergillus niger* glucose oxidase, an enzyme which is neither present nor inducible in mammalian tissues. X0943 is well-suited as a negative control in all techniques utilizing monoclonal mouse antibodies of isotype IgG2a.

Mouse IgG2b

IVD X0944 Culture supernatant 1 mL

X0944 is a cell culture supernatant containing monoclonal mouse IgG2b antibody to *Aspergillus niger* glucose oxidase, an enzyme which is neither present nor inducible in mammalian tissues. X0944 is well-suited as a negative control in all techniques utilizing monoclonal mouse antibodies of isotype IgG2b.

Mouse IgM

IVD X0942 Culture supernatant 1 mL

X0942 is a cell culture supernatant containing monoclonal mouse IgM antibody to *Aspergillus niger* glucose oxidase, an enzyme which is neither present nor inducible in mammalian tissues. X0942 is well-suited as a negative control in all techniques utilizing monoclonal mouse antibodies of isotype IgM.

Secondary Antibody Conjugates and Streptavidin Conjugate

Polyclonal Goat Anti-
Mouse Immunoglobulins

IVD F0479 FITC. Affinity-isolated F(ab')$_2$ 2 mL
IVD R0480 RPE. Affinity-isolated F(ab')$_2$ 1 mL

Cross-reaction with human immunoglobulins and fetal calf serum has been removed by solid-phase absorption.

Polyclonal Rabbit Anti-
Mouse Immunoglobulins

IVD F0313 FITC. F(ab')$_2$ 2 mL
IVD R0439 RPE. Affinity-isolated F(ab')$_2$ 1 mL

Cross-reaction with human immunoglobulins and fetal calf serum has been removed by solid-phase absorption.

Polyclonal Swine Anti-
Rabbit Immunoglobulins

IVD F0054 FITC. Affinity-isolated F(ab')$_2$ 1 mL

Cross-reaction with human immunoglobulins has been removed by solid-phase absorption.

Ancillary for Flow Cytometry

Phosphate-Buffered Saline (PBS), pH 7.0

IVD S3024 6 x 1 L

The buffer is supplied as 6 packages. Each makes 1 L of 0.02 mol/L sodium phosphate buffer, 0.15 mol/L NaCl, pH 7.0.

Apoptosis Kit

During apoptosis, cells expose phosphatidylserine at the cell surface. Annexin V is a phospholipid-binding protein, which in the presence of calcium ions binds selectively and with high affinity to phosphatidylserine. It displays very low affinity for phospholipid species such as phosphatidylethanolamine, sphingomyelin and phosphatidylcholine. This binding profile makes annexin V a powerful and selective tool for the detection of apoptotic cells. In several papers, the successful use of annexin V for the measurement of apoptosis of various cell types by flow cytometry has been described (1-3).

The APOPTEST™-FITC kit includes fluorescein-conjugated annexin V and the dye, propidium iodide, thus allowing separate identification of viable, apoptotic, and necrotic cells.

References:
1. Koopman G, Reutelingsperger CP, Kuijten GA, Keehnen RM, Pals ST, van Oers MH. Annexin V for flow cytometric detection of phosphatidylserine expression on B cells undergoing apoptosis. Blood 1994;84:1415-20.
2. Vermes I, Haanen C, Steffens-Nakken H, Reutelingsperger CP. A novel assay for apoptosis. Flow cytometric detection of phosphatidylserine expression on early apoptotic cells using fluorescein labeled annexin V. J Immunol Methods 1995;184:39-51.
3. Van Engeland M, Ramaekers FC, Schutte B, Reutelingsperger CP. A novel assay to measure loss of plasma membrane asymmetry during apoptosis of adherent cells in culture. Cytometry 1996;24:131-9.

APOPTEST™-FITC*

RUO K2350 100 tests

APOPTEST™-FITC has been designed to measure apoptosis in a variety of suspended cell types by flow cytometry. The kit contains fluorescein-conjugated annexin V, propidium iodide and binding buffer. Cells suspended in binding buffer are mixed with the fluorescein-conjugated annexin V and propidium iodide. After incubation for 10 minutes, cells are ready for analysis. The combination of annexin V/FITC and propidium iodide makes it possible to discriminate three distinct phenotypes: The non-apoptotic live cells that are unlabeled, the apoptotic cells that are labeled by annexin V/FITC, and the necrotic cells that are labeled by both annexin V/FITC and propidium iodide.

* Trade name of NEXINS Research, The Netherlands. European Patent 755,516 and U.S. Patent 5,834,196

Calibration Beads

FluoroSpheres 6-Peak, Sensitivity Particles

RUO K0110 Calibration beads for daily monitoring 1.7 mL

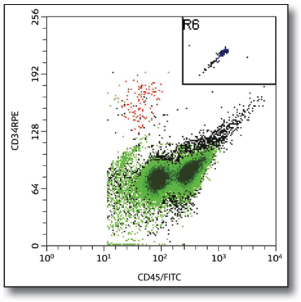
FluoroSpheres 6-Peak are polystyrene microparticles. FluoroSpheres contain a mixture of 3.2 µm microparticles of six different fluorescence intensities. Each particle contains a mixture of fluorochromes to be excited at any wavelength from 364 to 650 nm.

CD34+ Cells, Enumeration Kit and Count Kit

CD34Count Kit

RUO K2370 17 mL

CD34Count Kit is for enumeration of CD34+ hematopoietic stem cells.

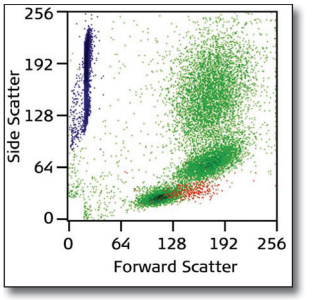


CD45/FITC vs. CD34/RPE. R6 is set around the CytoCount™ Beads. The red population is the CD34+ stem cells.

CytoCount™, Count Control Beads for Flow Cytometry

RUO S2366 17 mL

CytoCount™, Count Control Beads are polystyrene fluorospheres. CytoCount™, Count Control Beads are 5.2 µm in diameter and are excited by 488 nm lasers. Each fluorosphere contains dye that has a fluorescent emission range of 520 to 700 nm.



Normal peripheral blood with CytoCount™ Beads, Code S2366. The purple population represents the CytoCount™ Beads.

Lysing, Fixation and Permeabilization Reagents

Erythrocyte-Lysing Reagent, Uti-Lyse™

IVD S3325 Ready-to-use 250 tests, 25 mL

This reagent provides complete and gentle lysis of erythrocytes. It is used following immunofluorescence staining of cells from whole blood or bone marrow, and prior to flow cytometric analysis. Due to the optical matching properties of the lysing buffer, the residual red cell debris does not need to be removed by centrifugation for most samples, making the reagent suitable for use in both 'wash' and 'no wash' staining procedures. In addition to lysis of red cells, Uti-Lyse™ fixes and stabilizes leucocytes. The reagent works with Dako antibodies, and is designed for use with most commercially available flow cytometers.

Erythrocyte-Lysing Reagent without Fixative, EasyLyse™

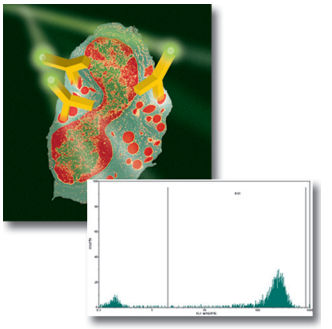
IVD S2364 Concentrated x 20 300 tests, 6 x 5 mL

This reagent provides complete and gentle lysis of erythrocytes. It is used following immunofluorescence staining of cells from whole blood, leukapheresis samples or cord blood, and prior to flow cytometric analysis. The reagent contains ammonium chloride and no fixative. One package contains 6 vials of 5 mL 20 x concentrated solution. Owing to the optical matching properties of EasyLyse™, the residual red cell debris does not need to be removed by centrifugation for most samples, making the reagent suitable for use in both 'wash' and 'no wash' staining procedures. The reagent works with Dako antibodies, and is designed for use with most commercially available flow cytometers.

IntraStain

IVD K2311 100 tests

Fixation and permeabilization kit for flow cytometry. IntraStain is intended for two-step fixation and permeabilization of single-cell suspensions. This procedure allows immunological detection of intracellular antigens while the cellular structure, morphologic light scatter, and cell surface immunoreactivity remain intact. Cells treated with IntraStain can, therefore, be identified in flow cytometry by their light scatter properties and surface marker expression, while simultaneously being analysed for intracellular antigens.



Intracellular staining of cells from a case of acute myeloid leukemia using IntraStain, Code K2311, and Anti-Myeloperoxidase/FITC, Code F0714.

Quantitative Analysis

QIFIKIT®*

RUO K0078 10 calibrations

QIFIKIT® is intended for the quantitative determination of cell surface antigens by flow cytometry using indirect immunofluorescence assay (1, 2).
QIFIKIT® consists of a series of 6-bead populations, approximately 10 µm in diameter and coated with different, but well-defined quantities of a mouse monoclonal antibody (Mab). The number of Mab molecules on the 6-bead populations ranges from 0 to 400 000-800 000. The precise values are provided with the kit. The beads mimic cells labeled with a specific primary mouse monoclonal antibody.
Briefly, the procedure for quantitation is as follows: Specimen cells are labeled with primary mouse Mab at saturating concentration. Under this condition the primary Mab binds to the cell surface antigen monovalently. Therefore, the number of bound antibody molecules corresponds to the number of antigenic sites. Then, the cells are incubated, in parallel with the QIFIKIT® beads, with Polyclonal Goat Anti-Mouse Immunoglobulins/FITC, Goat $F(ab')_2$, Code F0479, at saturating concentration.
A calibration curve is constructed by plotting the fluorescence intensity of the individual bead populations against the number of Mab molecules on the beads. The number of antigenic sites on the specimen cells are then determined by interpolation.

The kit is presented as two complementary bead cocktails: A 'Set-Up Cocktail' and a 'Calibration Cocktail', each containing 1 mL, enough for 10 calibrations. Also included in the kit is 200 µL Polyclonal Goat Anti-Mouse Immunoglobulins/FITC, Goat $F(ab')_2$, Code F0479.
The kit is economical in use, as different cell specimens may be labeled with different primary antibodies and then quantitated using the same set of calibration beads. The only requirement is that specimens and beads are incubated with the conjugate simultaneously.

* Registered trademark of BIOCYTEX

References:

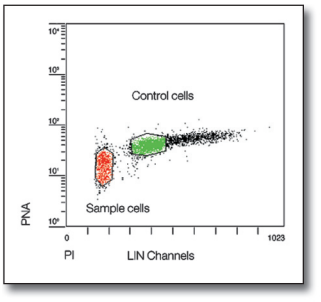
1. Poncelet P, Carayon P. Cytofluorometric quantification of cell-surface antigens by indirect immunofluorescence using monoclonal antibodies. J Immunol Methods 1985;85:65-74.
2. Poncelet P, Lavabre-Bertrand T, Carayon P. Quantitative phenotypes of B chronic lymphocytic leukemia B cells established with monoclonal antibodies from the B cell protocol. In: Reinherz EL et al., eds. Leukocyte Typing II. New York-Berlin-Heidelberg-Tokyo: Springer-Verlag, 1986;2:329-43.

Telomere PNA Kit

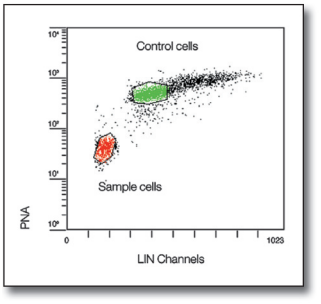
Telomere PNA Kit/FITC, for Flow Cytometry

RUO K5327 20 duplicate tests

Telomere PNA Kit/FITC for Flow Cytometry provides a convenient method for measuring telomeric sequences in vertebrate interphase hematopoietic cells. The kit contains reagents for 20 duplicate tests (40 single tests). In addition to the fluorescein-conjugated peptide nucleic acid (PNA) probe in hybridization solution, the kit contains hybridization solution without probe for correction of cell autofluorescence, wash solution for post-hybridization washes and DNA-staining solution for identification of $G_{0/1}$-cells. The kit has been designed so that post-hybridization washes are kept to a minimum and formamide washes are avoided. In a mixture of sample cells (provided by the user) and control cells (provided by the user), the sample DNA is denatured at 82 °C for 10 minutes in an Eppendorf tube in the presence of hybridization solution with or without fluorescein-conjugated PNA telomere probe. Then, hybridization takes place in the dark at room temperature overnight. The hybridization is followed by 2 washes in wash solution at 40 °C for 10 minutes each. Finally the cells are resuspended in DNA-staining solution and stored in the dark at 2-8 °C for 2-3 hours before analysis by flow cytometry. The specific fluorescence from telomere staining will be observed in FL1, and fluorescence from DNA staining will be observed in FL3. Compared with the traditional telomere restriction fragment (TRF) method, a major advantage of the Dako Telomere PNA Kit/FITC assay is that it does not suffer from the interaction of subtelomere sequences.



Cells mixed with hybridization solution without probe.



Cells hybridized with hybridization solution containing Dako Telomere PNA Probe/FITC.

General Product Information

Monoclonal Antibodies

Dako produces a wide range of monoclonal mouse and monoclonal rabbit antibodies. Each antibody has been carefully selected on the basis of its value, either for research or for the analysis of pathological human cells by immunohistochemistry or flow cytometry.

Tissue Culture Antibodies. With only a few exceptions, Dako monoclonal antibodies are produced in tissue culture. This gives advantages in the use of the antibodies. For example, background problems are virtually absent with such reagents because all the mouse immunoglobulin molecules are directed against the target antigen.

Specificity. Dako monoclonal antibodies are extensively screened on a multitude of tissue sections or other relevant biological material to ascertain that they possess the necessary specificity and give consistent, strong labeling reactions.

Solvent. Dako monoclonal antibodies are, generally, supplied in the liquid form. The majority of unconjugated antibodies are supplied as tissue culture supernatants containing 0.05 mol/L Tris/HCl, pH 7.2, and 15 mmol/L sodium azide. The azide can be removed by dialysis or gel filtration if it interferes with the use of the antibody. However, after removal of the azide, the antibody must be stored frozen.

Storage. 2-8 °C.

Further Information. A package insert is supplied with each vial of monoclonal antibody. It states intended/recommended use, clone, isotype, specificity, as well as recommended staining procedure when applicable. Package inserts are also avaliable on www.dako.com.

The products require no hazard labeling.

Polyclonal Antibodies

Since 1966 Dako has produced a continually widening range of polyclonal antibodies. Extensive knowledge of protein chemistry and immunochemistry, careful selection of animals for immunization, and optimal, long-term immunization schemes form the basis of our highquality products. Most of our polyclonal antibodies are produced in rabbits. This provides several advantages:

Human antibodies reacting with rabbit immunoglobulins occur rarely. Therefore, rabbit antibodies can be used with minimal risk of nonspecific reactions even in sensitive techniques.

A batch of antibody will always consist of the pooled sera from a large number of animals. This eliminates the possibility of a single, atypical antibody predominating and gives minimal batch-to-batch variation.

Immunoglobulin fractions: Dako polyclonal antibodies are offered in the form of immunoglobulin fractions, with a few exceptions.

Specificity: Monospecificity of Dako polyclonal antibodies is obtained by the use of highly purified antigens for immunization. Traces of sometimes unavoidable, unwanted antibodies are removed by liquid or, in the majority of cases, by solid phase absorption.

Affinity-isolated antibodies: Dako affinity-isolated antibodies are prepared by immune affinity chromatography, using antigens coupled to a solid matrix. The elution and adsorption techniques used guarantee antibodies of high affinity.

$F(ab')_2$: Dako also provides antibodies lacking the Fc region. These $F(ab')_2$ fragments are derived from full length antibody by proteolytic cleavage and carries the antigen binding region.

Dako purifies the antigen binding fragment by chromatographic methods to ensure consistent high purity and quality.

Fluorochrome-Conjugated Antibodies

Characterization of Allophycocyanin (APC) Conjugates. Purified monoclonal antibodies or F(ab')$_2$ fragments of affinity-isolated antibodies are conjugated with cross-linked allophycocyanin (APC). After conjugation, unreacted APC and unreacted antibodies are completely removed by gel filtration. The molar APC/antibody ratio is approximately 1. APC conjugates can be excited at 633 nm or 635 nm (red lasers), and emit light at 660 nm.

Characterization of Fluorescein (FITC) Conjugates. Purified monoclonal antibodies or F(ab')$_2$ fragments of affinity-isolated polyclonal antibodies are conjugated with fluorescein isothiocyanate isomer 1 (FITC). After conjugation, unreacted FITC is completely removed by gel filtration. The molar FITC/antibody ratio is approximately 4. FITC conjugates can be excited at 488 nm (blue argon laser) and emit light at 530 nm.

Characterization of Pacific Blue (PB) Conjugates. Purified monoclonal antibodies are conjugated with Pacific Blue (PB)*. After conjugation, unreacted PB is completely removed by gel filtration. The molar PB/ab ratio is approximately 6. PB conjugates can be excited at 406 nm (violet laser) and emit light at 456 nm.

Characterization of Peridinin Chlorophyll Protein (PerCP) Conjugates. Purified monoclonal antibodies or F(ab')$_2$ fragments of affinity-isolated polyclonal antibodies are conjugated with Peridinin Chlorophyll Protein (PerCP). After conjugation, unreacted PerCP is completely removed by gel filtration. The molar PerCP/antibody ratio is approximately 2. PerCP conjugates can be excited at 488 nm (blue argon laser) and emit light at 676 nm.

Characterization of Phycoerythrin (RPE) Conjugates. Purified monoclonal antibodies or F(ab')$_2$ fragments of affinity-isolated polyclonal antibodies are conjugated with R-phycoerythrin (RPE). After conjugation, unreacted RPE and unreacted antibodies are completely removed by gel filtration. The molar RPE/antibody ratio is approximately 1. RPE conjugates can be excited at 488 nm (blue argon laser) and emit light at 570 nm.

* The Pacific Blue™ antibody conjugates are sold under license from Life Technologies Corporation.

** Cy5 is trademark of GE Healthcare Bio-Sciences Corp.

Characterization of Phycoerythrin-Cy5 (RPE-Cy5) Conjugates. Purified monoclonal antibodies are conjugated with an energy transfer fluorochrome (RPE-Cy5) consisting of a cyanine dye, Cy5**, covalently coupled to R-phycoerythrin (RPE). The excitation energy, absorbed at 488 nm by RPE, is transferred to Cy5, which emits light at 670 nm. After conjugation, unreacted RPE-Cy5-complex and unreacted antibodies are completely removed by gel filtration. The molar RPE-Cy5/antibody ratio of the conjugate is approximately 1. Please note that RPE-Cy5 conjugates may bind to monocytes resulting in background staining (1).

Performance Testing. All conjugates are thoroughly tested to confirm optimal performance in flow cytometry.

Solvent. The fluorochrome conjugates are offered in liquid form in buffer, containing 15 mmol/L sodium azide and1% bovine serum albumin.

Storage. The conjugates should be stored in the dark at 2-8 °C.

Further Information A package insert is supplied with each vial of conjugate. It provides product-specific details. Package inserts are also available on www.dako.com.

The products require no hazard labeling.

Reference

1. van Vugt MJ, van den Herik-Oudijk IE, van de Winkel JGJ. Binding of PE-Cy5 conjugates to the human high-affinity receptor for IgG (CD64). Blood 1996;88:2358-61.

Product Code Index for Flow Cytometry

Code	Product	Package Size	Order No	See Page
C				
C0222	Polyclonal Rabbit Anti-Human Kappa Light Chains/APC, Rabbit F(ab')$_2$	1 mL	C022201	22
C7066	Monoclonal Mouse Anti-Human CD19/RPE-Cy5, Clone HD37	100 tests, 1 mL	C706601	17
C7067	Monoclonal Mouse Anti-Human CD3/RPE-Cy5, Clone UCHT1	100 tests, 1 mL	C706701	16
C7069	Monoclonal Mouse Anti-Human CD4/RPE-Cy5, Clone MT310	1 mL	C706901	16
C7079	Monoclonal Mouse Anti-Human CD8/RPE-Cy5, Clone DK25	1 mL	C707901	17
C7099	Monoclonal Mouse Anti-Human CD45, Leucocyte Common Antigen/RPE-Cy5, Clone T29/33	1 mL	C709901	19
C7132	Monoclonal Mouse Anti-Human CD20/RPE-Cy5, Clone B-Ly1	1 mL	C713201	18
C7224	Monoclonal Mouse Anti-Human CD19/APC, Clone HD37	1 mL	C722401	17
C7226	Monoclonal Mouse Anti-Human CD4/APC, Clone MT310	1 mL	C722601	16
C7227	Monoclonal Mouse Anti-Human CD8/APC, Clone DK25	1 mL	C722701	17
C7230	Monoclonal Mouse Anti-Human CD45, Leucocyte Common Antigen/APC, Clone T29/33	1 mL	C723001	19
C7238	Monoclonal Mouse Anti-Human CD34 Class III/APC, Clone BIRMA-K3	0.5 mL	C723850	18
C7242	Monoclonal Mouse Anti-Human CD5/APC, Clone DK23	1 mL	C724201	16
C7244	Monoclonal Mouse Anti-Human CD117, c-kit/APC, Clone 104D2	1 mL	C724401	21
C7246	Monoclonal Mouse Anti-Human Myeloperoxidase/APC, Clone MPO-7	1 mL	C724601	22
C7252	Monoclonal Mouse Anti-Human CD79αcy/APC, Clone HM57	1 mL	C725201	20
C7256	Monoclonal Mouse Anti-Human CD138/APC, Clone MI15	1 mL	C725601	21
C7278	Monoclonal Mouse Anti-Human CD64, Fc Gamma Receptor I/APC, Clone 10.1	1 mL	C727801	20
C7280	Monoclonal Mouse Anti-Human CD61, Platelet Glycoprotein IIIa/APC, Clone Y2/51	1 mL	C728001	20
C7281	Monoclonal Mouse Anti-Human CD22/APC, Clone 4KB128	1 mL	C728101	18
F				
F0054	Polyclonal Swine Anti-Rabbit Immunoglobulins/FITC, Swine F(ab')$_2$	1 mL	F005401	27
F0058	Polyclonal Rabbit Anti-Human IgM/FITC, Rabbit F(ab')$_2$	1 mL	F005801	21
F0185	Polyclonal Rabbit Anti-Human IgG/FITC, Rabbit F(ab')$_2$	1 mL	F018501	21
F0188	Polyclonal Rabbit Anti-Human IgA/FITC, Rabbit F(ab')$_2$	1 mL	F018801	21
F0189	Polyclonal Rabbit Anti-Human IgD/FITC, Rabbit F(ab')$_2$	1 mL	F018901	21
F0313	Polyclonal Rabbit Anti-Mouse Immunoglobulins/FITC, Rabbit F(ab')$_2$	2 mL	F031302	27
F0372	Polyclonal Rabbit Anti-Human Lysozyme EC 3.2.1.17/FITC	1 mL	F037201	22
F0395	Polyclonal Rabbit Anti-Human Lactoferrin/FITC	1 mL	F039501	22
F0422	Streptavidin/FITC	1 mL	F042201	27
F0434	Polyclonal Rabbit Anti-Human Kappa Light Chains/FITC, Rabbit F(ab')$_2$	1 mL	F043401	22
F0435	Polyclonal Rabbit Anti-Human Lambda Light Chains/FITC, Rabbit F(ab')$_2$	1 mL	F043501	22
F0479	Polyclonal Goat Anti-Mouse Immunoglobulins/FITC, Goat F(ab')$_2$	2 mL	F047902	27
F0713	Monoclonal Mouse Anti-Human CD11c, Protein 150,95/FITC, Clone KB90	1 mL	F071301	17
F0714	Monoclonal Mouse Anti-Human Myeloperoxidase/FITC, Clone MPO-7	1 mL	F071401	22
F0765	Monoclonal Mouse Anti-Human CD8/FITC, Clone DK25	1 mL	F076501	17
F0766	Monoclonal Mouse Anti-Human CD4/FITC, Clone MT310	100 tests, 1 mL	F076601	16
F0768	Monoclonal Mouse Anti-Human CD19/FITC, Clone HD37	1 mL	F076801	17
F0788	Monoclonal Mouse Anti-Human Ki-67 Antigen/FITC, Clone Ki-67	1 mL	F078801	22
F0789	Monoclonal Mouse Anti-Human CD7/FITC, Clone DK24	1 mL	F078901	17
F0795	Monoclonal Mouse Anti-Human CD5/FITC, Clone DK23	1 mL	F079501	16
F0799	Monoclonal Mouse Anti-Human CD20/FITC, Clone B-Ly1	1 mL	F079901	18
F0800	Monoclonal Mouse Anti-Human CD45R0/FITC, Clone UCHL1	1 mL	F080001	19
F0801	Monoclonal Mouse Anti-Human CD25, Interleukin-2 Receptor/FITC, Clone ACT-1	1 mL	F080101	18
F0803	Monoclonal Mouse Anti-Human CD61, Platelet Glycoprotein IIIa/FITC, Clone Y2/51	1 mL	F080301	20
F0817	Monoclonal Mouse Anti-Human HLA-DP, DQ, DR Antigen/FITC, Clone CR3/43	1 mL	F081701	21
F0818	Monoclonal Mouse Anti-Human CD3/FITC, Clone UCHT1	100 tests, 1 mL	F081801	16
F0826	Monoclonal Mouse Anti-Human CD10/FITC, Clone SS2/36	1 mL	F082601	17
F0829	Monoclonal Mouse Anti-Human CD71, Transferrin Receptor/FITC, Clone Ber-T9	1 mL	F082901	20
F0830	Monoclonal Mouse Anti-Human CD15/FITC, Clone C3D-1	1 mL	F083001	17
F0831	Monoclonal Mouse Anti-Human CD13/FITC, Clone WM-47	1 mL	F083101	17
F0832	Monoclonal Mouse Anti-Human CD33/FITC, Clone WM-54	1 mL	F083201	18
F0844	Monoclonal Mouse Anti-Human CD14/FITC, Clone TÜK4	1 mL	F084401	17
F0849	Monoclonal Mouse Anti-Human CD30/FITC, Clone Ber-H2	1 mL	F084901	18
F0860	Monoclonal Mouse Anti-Human Epithelial Antigen/FITC, Clone Ber-EP4	1 mL	F086001	21
F0861	Monoclonal Mouse Anti-Human CD45, Leucocyte Common Antigen/FITC, Clone T29/33	1 mL	F086101	19
F0870	Monoclonal Mouse Anti-Human CD235a, Glycophorin A/FITC, Clone JC159	1 mL	F087001	21
F7011	Monoclonal Mouse Anti-Human CD16, Fc Gamma Receptor III/FITC, Clone DJ130c	1 mL	F701101	17
F7053	Monoclonal Mouse Anti-Human BCL2 Oncoprotein/FITC, Clone 124	1 mL	F705301	16
F7060	Monoclonal Mouse Anti-Human CD22/FITC, Clone 4KB128	1 mL	F706001	18
F7062	Monoclonal Mouse Anti-Human CD23/FITC, Clone MHM6	1 mL	F706201	18
F7081	Monoclonal Mouse Anti-Human CD34 Class III/FITC, Clone BIRMA-K3	1 mL	F708101	18
F7088	Monoclonal Mouse Anti-Human CD41, Platelet Glycoprotein IIb/FITC, Clone 5B12	1 mL	F708801	18
F7101	Monoclonal Mouse Anti-Human CD38/FITC, Clone AT13/5	1 mL	F710101	18
F7102	Monoclonal Mouse Anti-Human CD43/FITC, Clone DF-T1	1 mL	F710201	19
F7110	Monoclonal Mouse Anti-Human B Cell/FITC, Clone FMC7	1 mL	F711001	16
F7112	Monoclonal Mouse Anti-Human CD66abce/FITC, Clone Kat4c	1 mL	F711201	20
F7134	Monoclonal Mouse Anti-Human CD24/FITC, Clone SN3	1 mL	F713401	18

Product Code Index for Flow Cytometry (continued)

Code	Product	Package Size	Order No	See Page
F7135	Monoclonal Mouse Anti-Human CD68/FITC, Clone KP1	1 mL	F713501	20
F7137	Monoclonal Mouse Anti-Human CD79β/FITC, Clone SN8	1 mL	F713701	20
F7138	Monoclonal Mouse Anti-Human CD103, Mucosa Lymphocyte Antigen/FITC, Clone Ber-ACT8	1 mL	F713801	21
F7139	Monoclonal Mouse Anti-Human Terminal Deoxynucleotidyl Transferase/FITC, Clone HT-6	0.5 mL	F713950	22
F7141	Monoclonal Mouse Anti-Human CD1a/FITC, Clone NA1/34	1 mL	F714101	16
F7143	Monoclonal Mouse Anti-Human CD54, ICAM-1/FITC, Clone 6.5B5	100 tests, 1 mL	F714301	19
F7149	Monoclonal Mouse Anti-Human Plasma Cell/FITC, Clone VS38c	1 mL	F714901	22
F7172	Monoclonal Mouse Anti-Human CD69/FITC, Clone FN50	100 tests, 1 mL	F717201	20
F7178	Monoclonal Mouse Anti-Human CD27/FITC, Clone M-T271	100 tests, 1 mL	F717801	18
F7205	Monoclonal Mouse Anti-Human CD86/FITC, Clone BU63	100 tests, 1 mL	F720501	20
F7210	Monoclonal Mouse Anti-Bromodeoxyuridine/FITC, Clone Bu20a	100 tests, 1 mL	F721001	16
F7266	Monoclonal Mouse Anti-Human HLA-DR Antigen/FITC, Clone AB3	1 mL	F726601	21
F7268	Monoclonal Mouse Anti-Human Ki-67 Antigen/FITC, Clone MIB-1	1 mL	F726801	22
F7270	Monoclonal Mouse Anti-Human CD57/FITC, Clone TB01	1 mL	F727001	20
F7274	Monoclonal Mouse Anti-Human CD90/FITC, Clone 5E10	1 mL	F727401	20
F7276	Monoclonal Mouse Anti-Human CD7/FITC, Clone CBC.37	1 mL	F727601	17
FR044	Dual-Colour Reagent, Anti-Human Lambda Light Chains/FITC + Anti-Human CD19/RPE	0.5 mL	FR04450	23
FR048	Dual-Colour Reagent, Anti-Human Kappa Light Chains/FITC + Anti-Human CD19/RPE	0.5 mL	FR04850	23
FR481	Dual-Colour Reagent, Anti-Human Kappa Light Chains/FITC + Anti-Human Lambda Light Chains/RPE	0.5 mL	FR48150	23
FR700	Dual-Colour Reagent, Anti-Human CD45/FITC + Anti-Human CD14/RPE	50 tests, 0.5 mL	FR70050	23
FR866	Dual-Colour Reagent, Anti-Human CD3/FITC + Anti-Human CD19/RPE	50 tests, 0.5 mL	FR86650	23
FR868	Dual-Colour Reagent, Anti-Human CD4/FITC + Anti-Human CD8/RPE	50 tests, 0.5 mL	FR86850	23
K				
K0078	QIFIKIT	10 calibrations	K007811	29
K0110	FluoroSpheres	1.7 mL	K011011	28
K2311	IntraStain	100 tests	K231111	28
K2350	APOPTEST™-FITC	100 tests	K235011	27
K2370	CD34Count Kit	17 mL	K237011	28
K5327	Telomere PNA Kit/FITC for Flow Cytometry	20 tests	K532711	29
P				
PB982	Monoclonal Mouse Anti-Human CD3/PB, Clone UCHT1	100 tests, 1 mL	PB98201	16
PB984	Monoclonal Mouse Anti-Human CD8/PB, Clone DK25	100 tests, 1 mL	PB98401	17
PB985	Monoclonal Mouse Anti-Human CD19/PB, Clone HD37	100 tests, 1 mL	PB98501	17
PB986	Monoclonal Mouse Anti-Human CD45, Leucocyte Common Antigen/PB, Clone T29/33	100 tests, 1 mL	PB98601	19
PR701	Monoclonal Mouse Anti-Human CD45, Leucotyte Common Antigen/PerCP, Clone 2D1	1 mL	PR70101	19
PR702	Monoclonal Mouse Anti-Human CD3/PerCP, Clone UCHT1	1 mL	PR70201	16
R				
R0436	Polyclonal Rabbit Anti-Human Kappa Light Chains/RPE, Rabbit $F(ab')_2$	1 mL	R043601	22
R0437	Polyclonal Rabbit Anti-Human Lambda Light Chains/RPE, Rabbit $F(ab')_2$	1 mL	R043701	22
R0439	Polyclonal Rabbit Anti-Mouse Immunoglobulins/RPE, Rabbit $F(ab')_2$	1 mL	R043901	27
R0480	Polyclonal Goat Anti-Mouse Immunoglobulins/RPE, Goat $F(ab')_2$	1 mL	R048001	27
R0715	Monoclonal Mouse Anti-Human CD13/RPE, Clone WM-47	1 mL	R071501	17
R0745	Monoclonal Mouse Anti-Human CD33/RPE, Clone WM-54	1 mL	R074501	18
R0805	Monoclonal Mouse Anti-Human CD4/RPE, Clone MT310	100 tests, 1 mL	R080501	16
R0806	Monoclonal Mouse Anti-Human CD8/RPE, Clone DK25	100 tests, 1 mL	R080601	17
R0807	Monoclonal Mouse Anti-Human CD2/RPE, Clone MT910	1 mL	R080701	16
R0808	Monoclonal Mouse Anti-Human CD19/RPE, Clone HD37	100 tests, 1 mL	R080801	17
R0810	Monoclonal Mouse Anti-Human CD3/RPE, Clone UCHT1	100 tests, 1 mL	R081001	16
R0811	Monoclonal Mouse Anti-Human CD25, Interleukin-2 Receptor/RPE, Clone ACT-1	1 mL	R081101	18
R0841	Monoclonal Mouse Anti-Human CD11b, C3bi Receptor/RPE, Clone 2LPM19c	1 mL	R084101	17
R0842	Monoclonal Mouse Anti-Human CD5/RPE, Clone DK23	1 mL	R084201	16
R0843	Monoclonal Mouse Anti-Human CD45R0/RPE, Clone UCHL1	1 mL	R084301	19
R0848	Monoclonal Mouse Anti-Human CD10/RPE, Clone SS2/36	1 mL	R084801	17
R0864	Monoclonal Mouse Anti-Human CD14/RPE, Clone TÜK4	1 mL	R086401	17
R5111	Polyclonal Rabbit Anti-Human IgM/RPE, Rabbit $F(ab')_2$	1 mL	R511101	21
R5112	Polyclonal Rabbit Anti-Human IgD/RPE, Rabbit $F(ab')_2$	1 mL	R511201	21
R7000	Monoclonal Mouse Anti-Human HLA-ABC Antigen/RPE, Clone W6/32	1 mL	R700001	21
R7012	Monoclonal Mouse Anti-Human CD16, Fc Gamma Receptor III/RPE, Clone DJ130c	1 mL	R701201	17
R7013	Monoclonal Mouse Anti-Human CD20/RPE, Clone B-Ly1	1 mL	R701301	18
R7014	Monoclonal Mouse Anti-Human CD42b, Platelet Glycoprotein Ib/RPE, Clone AN51	1 mL	R701401	19
R7058	Monoclonal Mouse Anti-Human CD41, Platelet Glycoprotein IIb/RPE, Clone 5B12	1 mL	R705801	18
R7061	Monoclonal Mouse Anti-Human CD22/RPE, Clone 4KB128	1 mL	R706101	18
R7078	Monoclonal Mouse Anti-Human CD235a, Glycophorin A/RPE, Clone JC159	1 mL	R707801	21
R7086	Monoclonal Mouse Anti-Human CD45RA/RPE, Clone 4KB5	1 mL	R708601	19
R7087	Monoclonal Mouse Anti-Human CD45, Leucocyte Common Antigen/RPE, Clone T29/33	1 mL	R708701	19

Product Code Index for Flow Cytometry (continued)

Code	Product	Package Size	Order No	See Page
R7108	Monoclonal Mouse Anti-Human CD23/RPE, Clone MHM6	1 mL	R710801	18
R7125	Monoclonal Mouse Anti-Human CD34 Class III/RPE, Clone BIRMA-K3	1 mL	R712501	18
R7127	Monoclonal Mouse Anti-Human CD56/RPE, Clone MOC-1	1 mL	R712701	20
R7144	Monoclonal Mouse Anti-Human CD38/RPE, Clone AT13/5	1 mL	R714401	18
R7145	Monoclonal Mouse Anti-Human CD117, c-kit/RPE, Clone 104D2	1 mL	R714501	21
R7154	Monoclonal Mouse Anti-Human CD95, Fas/RPE, Clone DX2	100 tests, 1 mL	R715401	20
R7159	Monoclonal Mouse Anti-Human CD79αcy/RPE, Clone HM57	1 mL	R715901	20
R7164	Monoclonal Mouse Anti-Human CD28/RPE, Clone CD28.1	100 tests, 1 mL	R716401	18
R7173	Monoclonal Mouse Anti-Human CD69/RPE, Clone FN50	100 tests, 1 mL	R717301	20
R7179	Monoclonal Mouse Anti-Human CD27/RPE, Clone M-T271	1 mL	R717901	18
R7188	Monoclonal Mouse Anti-Human CD103, Mucosa Lymphocyte Antigen/RPE, Clone Ber-ACT8	1 mL	R718801	21
R7189	Monoclonal Mouse Anti-Human CD1a/RPE, Clone NA1/34	1 mL	R718901	16
R7209	Monoclonal Mouse Anti-Human Myeloperoxidase/RPE, Clone MPO-7	1 mL	R720901	22
R7219	Monoclonal Mouse Anti-Human CD64, Fc Gamma Receptor I/RPE, Clone 10.1	1 mL	R721901	20
R7229	Monoclonal Mouse Anti-Human CD138/RPE, Clone MI15	1 mL	R722901	21
R7251	Monoclonal Mouse Anti-Human CD56/RPE, Clone C5.9	1 mL	R725101	19
R7267	Monoclonal Mouse Anti-Human HLA-DR Antigen/RPE, Clone AB3	1 mL	R726701	21
R7272	Monoclonal Mouse Anti-Human CD79β/RPE, Clone SN8	1 mL	R727201	20
R7275	Monoclonal Mouse Anti-Human CD90/RPE, Clone 5E10	1 mL	R727501	20
R7277	Monoclonal Mouse Anti-Human CD7/RPE, Clone CBC.37	1 mL	R727701	17
S				
S2364	EasyLyse™, Erythrocyte-Lysing Reagent	300 tests, 6 x 5 mL	S236430	28
S2366	CytoCount™	17 mL	S236630	28
S3024	Phosphate-Buffered Saline (PBS), pH 7.0	6 x 1 L	S302430	27
S3325	Uti-Lyse™, Erythrocyte-Lysing Reagent	250 tests, 25 mL	S332530	28
T				
TC051	Triple-Colour Reagent, Anti-Human Kappa Light Chains/FITC + Anti-Human Lambda Light Chains/RPE + Anti-Human CD19/RPE-Cy5	0.5 mL	TC05150	24
TC669	Triple-Colour Reagent, Anti-Human CD19/FITC + Anti-Human Lambda Light Chains/RPE + Anti-Human Kappa Light Chains/APC	1 mL	TC66901	24
X				
X0927	Negative Control, Mouse IgG1/FITC	1 mL	X092701	25
X0928	Negative Control, Mouse IgG1/RPE	1 mL	X092801	25
X0929	Ig Reagent, Rabbit F(ab')$_2$/FITC	1 mL	X092901	25
X0930	Ig Reagent, Rabbit F(ab')$_2$/RPE	1 mL	X093001	25
X0931	Control Reagent, Mouse IgG1	1 mL	X093101	26
X0933	Isotype Reagent, Mouse IgG2a/FITC	1 mL	X093301	25
X0934	Isotype Reagent, Mouse IgM/FITC	1 mL	X093401	25
X0935	Dual-Colour Reagent, Rabbit F(ab')$_2$/FITC + Rabbit F(ab')$_2$/RPE	0.5 mL	X093550	25
X0941	Isotype Reagent, Mouse IgG2b/FITC	1 mL	X094101	25
X0942	Control Reagent, Mouse IgM	1 mL	X094201	26
X0943	Control Reagent, Mouse IgG2a	1 mL	X094301	26
X0944	Control Reagent, Mouse IgG2b	1 mL	X094401	26
X0950	Isotype Reagent, Mouse IgG2a/RPE	1 mL	X095001	25
X0951	Isotype Reagent, Mouse IgG2b/RPE	1 mL	X095101	25
X0952	Dual-Colour Reagent, Rabbit F(ab')$_2$/FITC + Mouse IgG1/RPE	0.5 mL	X095250	25
X0955	Negative Control, Mouse IgG1/RPE-Cy5	1 mL	X095501	25
X0957	Triple-Colour Reagent, Rabbit F(ab')$_2$/FITC + Rabbit F(ab')$_2$/RPE + Mouse IgG1/RPE-Cy5	0.5 mL	X095750	25
X0968	Isotype Reagent, Mouse IgG1/APC	1 mL	X096801	25
X0979	Triple-Colour Reagent, Mouse IgG1/FITC + Rabbit F(ab')$_2$/RPE + Rabbit F(ab')$_2$/APC	1 mL	X097901	25
X0987	Isotype Reagent, Mouse IgG1/PB	1 mL	X098701	25
X0998	Ig Reagent, Rabbit F(ab')$_2$/APC	1 mL	X099801	25
X7909	Isotype Reagent, Mouse IgG1/PerCP	1 mL	X790901	25

Specific Proteins

Table of Contents

Alphabetical Index for Specific Proteins

This index lists all products available from Dako. More detailed information appears on the pages mentioned for each individual product.

Abbreviations:

a **Anti-**
HRP **Horseradish peroxidase**
Hu **Human**
Rb **Rabbit**

Alphabetical Index for Specific Proteins (continued)

Code	Source	Product	See Page
		P	
A0002	Rb a Hu	**Prealbumin**	42
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A0384	Rb a Hu	**Protein S**	42
		R	
X0903		**Rabbit Immunoglobulin Fraction** (Normal), Negative Control	43
X0936		**Rabbit Immunoglobulin Fraction** (Solid-Phase Absorbed), Negative Control	43
X0902		**Rabbit Serum** (Normal)	43
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A0040	Rb a Hu	**Retinol-Binding Protein**, for Turbidimetry/Nephelometry	42
		S	
A0206	Rb a Hu	**Serum**	42
X0901		**Swine Serum** (Normal)	43
		T	
S1599		**TMB+, One-Step Substrate System**, for ELISA	40
S1601		**TMB Blue, One-Step Substrate System**, for ELISA	40

Introduction to Specific Proteins

Within the field of clinical immunochemistry, Dako has extensive experience in producing reagents for the measurement of proteins in body fluids. These reagents have been developed particularly for turbidimetry, nephelometry and ELISA. These techniques exploit the fast, specific reaction between antibody and antigen.

For turbidimetry and nephelometry we provide a comprehensive range of conventional products as well as products designed for particle-enhanced assays. The products can be used on a variety of different, fully-automated instruments.

Turbidimetry and Nephelometry Test Systems

The Dako turbidimetry and nephelometry test systems for determination of specific proteins in serum, plasma, urine or cerebrospinal fluid are the result of several decades of dedicated research and development, and reflect our company's particular strengths within this area.

The turbidimetry and nephelometry test systems cover a large range of analytes and instruments, and reagents are available separately, making the implementation of turbidimetric and nephelometric assays flexible and economical. Batch-to-batch consistency of reagents is excellent, and the assays are characterized by a wide measuring range - giving the advantage of few re-runs, and a wide security zone - providing maximum security against antigen excess problems.

The Dako turbidimetry and nephelometry test systems comprise:

- High-quality antibodies tailored for turbidimetry and nephelometry.
- Stable and reliable calibrators, value assigned by turbidimetry using a meticulous protocol. The calibrators are traceable to internationally recognized reference preparations when such preparations are available.
- High and low controls with assigned protein values. For use in the daily routine as curve controls.
- Buffers developed for optimal performance and convenience. For enhancement of the reaction and for dilution of antibodies, calibrators, and samples.
- Dedicated application notes for determination of specific proteins on a variety of commonly used instruments. The application notes include information on reagents required, sample material, measuring range, reference interval, assay performance, and instrument programming.

For your convenience, a package insert with a thorough product description accompanies all Dako reagents and is also available on www.dako.com.

Turbidimetry and Nephelometry Test System

Turbidimetry and Nephelometry Kit and Reagents

Dako particle-enhanced turbidimetry and nephelometry assays utilizing immunoparticles (antibody covalently coupled to polystyrene particles) provide increased sensitivity compared with conventional assays, and allow the determination of proteins present in low concentrations.

Buffer, Calibrator and Control for Turbidimetry and Nephelometry

Dako buffer, calibrator and control for turbidimetry and nephelometry have been especially prepared for the quantitative immunological determination of the stated protein by turbidimetry and nephelometry.

The calibrator, value assignment has been carried out by turbidimetry using a meticulous protocol (1). The protein concentrations with uncertainties are provided in the analytical value sheet included with each product. The control values have been determined by repeated measurements and are provided with a recommended range. Values assigned to calibrators and controls are traceable to international reference preparations when such preparations are available.

For all calibrators and controls prepared from serum, each donor has been tested and found negative for hepatitis B virus surface antigen, anti-HIV 1 and 2, and anti-hepatitis C virus.

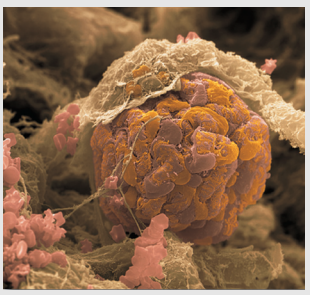
Reference:
1. Blirup-Jensen S, Johnson MA, Larsen M. Protein standardization IV: Value transfer procedure for the assignment of serum protein values from a reference preparation to a target material. Clin Chem Lab Med 2001;39:1110-22.

Cystatin C Immunoparticles

IVD LX002 Ready-to-use 10 mL

Cystatin C Immunoparticles is polyclonal rabbit antibody to cystatin C covalently coupled to polystyrene particles. In conjunction with Dako Cystatin C Calibrator (X0974), the Cystatin C Control Set (X0973), and Dako Turbidimetry/Nephelometry Reaction Buffer 9 (S2361), the Cystatin C Immunoparticles form a 'kit' intended for the quantitative determination of cystatin C in human serum and plasma by turbidimetry and nephelometry. Cystatin C is a small, 13 kDa, non-glycosylated basic protein belonging to the cystatin super-family of cysteine protease inhibitors. Cystatin C is produced by virtually all nucleated cells, and is present in all body fluids investigated. The production rate is constant and is unaffected by inflammatory processes, gender, age and muscle mass (1). In the normal kidney, cystatin C is almost freely filtered through the glomerular membrane and then nearly completely reabsorbed and degraded by the proximal tubular cells. Therefore, the plasma concentration of cystatin C is almost exclusively determined by the glomerular filtration rate (GFR), making cystatin C an excellent indicator of GFR. Numerous studies and a meta-analysis incorporating 4492 subject samples have shown that serum cystatin C is clearly superior to serum creatinine as a marker for GFR (2). Measurement of the serum/plasma cystatin C concentration allows for estimation of GFR using one simple equation for patients from four months old to 93 years old.
Application Notes for the cystatin C determination on several automated instruments are available on www.dako.com.

References:
1. Grubb AO. Cystatin C - properties and use as diagnostic marker. Adv Clin Chem 2000;35:63-99.
2. Dharnidharka VR, Kwon C, Stevens G. Serum cystatin C is superior to serum creatinine as a marker of kidney function: a meta-analysis. Am J Kidney Dis 2002;40:221-6.
3. Grubb A, Nyman U, Björk J, Lindström V, Rippe B, Sterner G, et al. Simple cystatin C-based prediction equations for the glomerular disease prediction equation for adults and the Schwartz and the Counahan-Barratt prediction equations for children. Clin Chem 2005;51:1420-31.



Fast, easy and reliable estimation of renal function

- GFR results within 10 minutes, using only a serum/plasma sample
- 24-hour urine collection and adjustment for weight, height, gender and race no longer necessary
- Superior to GFR estimation based on creatinine

Cystatin C Calibrator

IVD X0974 Liquid form 1 mL

X0974 comprises recombinant human cystatin C in human serum. The cystatin C concentration in the calibrator is approximately 7.5 mg/L. The calibrator has been designed for use with Dako Cystatin C Immunoparticles (LX002) for the quantitative determination of cystatin C in human serum and plasma by turbidimetry and nephelometry.

Cystatin C Control Set

IVD X0973 Liquid form 6 x 1 mL

A set of cystatin C controls comprising recombinant human cystatin C in human serum. Each control set contains 3 x 1 mL of control level 1 (approximately 4.5 mg/L cystatin C) and 3 x 1 mL of control level 2 (approximately 1.1 mg/L cystatin C). The control set has been designed for use with Dako Cystatin C Immunoparticles (LX002) for the quantitative determination of cystatin C in human serum and plasma by turbidimetry and nephelometry.

Reaction Buffer 9

IVD S2361 Ready-to-use 100 mL

For the enhancement of the reaction between analyte, e.g. cystatin C, and Dako Immunoparticles. Reaction Buffer 9 is a specially designed solution of polymers in MOPS-buffered saline, pH 7.1-7.4.

ELISA Kit and Accessories

Dako's Insulin ELISA Kit provides high sensitivity helping in the investigation of diabetes. Chromogens for ELISA are also provided as separate products.

ELISA Kits

Insulin ELISA Kit

IVD K6219 96 test wells

Insulin ELISA Kit is an enzyme immunoassay for the quantitative determination of insulin in human serum and plasma. Each kit contains all necessary reagents and one microplate for 96 tests. The assay is based on a flexible microplate strip format (8 x 1) and the kit comprises two monoclonal mouse antibodies. Total assay time is approximately 1 hours for up to 86 samples. The kit shows excellent precision, sensitivity and specificity, is easy to use and requires only non-dedicated instrumentation.

Accessories for ELISA

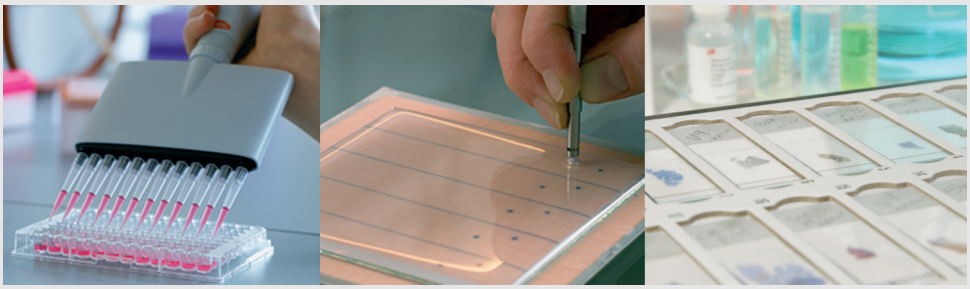
TMB One-Step Substrate System

IVD	S1599	TMB+	1 L
	S1601	TMB Blue	1 L

TMB One-Step Substrate System is a stabilized, ready-to-use chromogenic substrate solution for ELISA when peroxidase is the enzyme label. The TMB One-Step Substrate System contains 3,3'-5,5' tetramethylbenzidine (TMB) and hydrogen peroxide in an organic solvent/buffer solution. Upon oxidation, TMB forms a blue reaction product that can be measured at 605 nm. Upon acidification (to stop the enzymatic reaction) the reaction product turns yellow with an absorbance peak at 450 nm. S1601, TMB Blue, should be chosen when the highest sensitivity in detection is required.

Multipurpose Antibodies for Clinical Immunochemistry

Owing to their high specificity and precipitating ability, a number of primary antibodies, notably polyclonal antibodies, are well-suited for a variety of applications. This section presents these antibodies, and lists the techniques for which they have been tested and proven useful. Research reagents may also be well-suited for techniques that have not been mentioned.



Polyclonal Rabbit Anti-Human
Alpha-1-Antitrypsin

■ Precipitation ■ Blot ■ IHC

IVD A0012 Ig fraction 2 mL

Please see references 1 and 2 where the use of A0012 in immunohistochemistry is described. The antibody is also well-suited for immunoblotting (3).

References:

1. Clausen PP. Immunohistochemical demonstration of alpha-1-antitrypsin in liver tissue. A methodological investigation. Acta path microbiol scand Sect A 1980;88:299-306.
2. Krugliak L, Meyer PR, Taylor CR. The distribution of lysozyme, alpha-1-antitrypsin and alpha-1-antichymotrypsin in normal hematopoietic cells and in myeloid leukaemias: an immunoperoxidase study on cytocentrifuge preparations, smears and paraffin sections. Am J Hematol 1986;21:99-109.
3. Kalsheker NA, Warner JT, Watkins GL. Phenotyping alpha-1-antitrypsin (α_1-AT) variants by isoelectric focusing in agarose and immunoblotting. Clin Chim Acta 1985;148:157-60.

Polyclonal Rabbit Anti-Human
Beta-2-Microglobulin

■ Precipitation ■ Blot ■ ELISA ■ IHC

IVD A0072 Ig fraction 2 mL

For quantitation of beta-2-microglobulin by ELISA using A0072, please see references 1 and 2. The use of A0072 in a gel precipitation technique has been described by Wu et al. (3).

References:

1. Hemmingsen L, Skaarup P. β_2-microglobulin in urine and serum determined by ELISA technique. Scand J Clin Lab Invest 1985;45:367-71.
2. Bjerrum OW, Birgens HS. Measurement of beta-2-microglobulin in serum and plasma by an enzyme-linked immunosorbent assay (ELISA). Clin Chim Acta 1986;155:69-76.
3. Wu JT, Clayton F, Myers S, Knight J. A simple radial immunodiffusion method for assay of β_2-micro-globulin in serum. Clin Chem 1986;32:2070-3.

Polyclonal Rabbit Anti-Human
C1q Complement

ASR A0136 Ig fraction 2 mL

Polyclonal Rabbit Anti-Human
Carcinoembryonic Antigen (CEA)

■ Precipitation ■ IHC

IVD A0115 Ig fraction 2 mL

A0115 has been absorbed with blood group antigens A and B and insolubilized normal human plasma. The antibody shows a strong reaction with CEA and CEA-related glycoproteins such as non-specific cross-reacting antigens (NCA and NCA-2) and biliary glycoprotein (BGP).

Reference:

1. Sheahan K, O'Brien MJ, Burke B, Dervan PA, O'Keane JC, Gottlieb LS,et al. Differential reactivities of carcinoembryonic antigen (CEA) and CEA-related monoclonal and polyclonal antibodies in common epithelial malignancies. Am J Clin Pathol 1990;94:157-64.

Polyclonal Rabbit Anti-Human
Fibrinogen

■ Precipitation ■ ELISA ■ IHC

IVD A0080 Ig fraction 2 mL

A0080 reacts with fibrinogen, fibrin and the fibrinogen fragments D and E.

Polyclonal Rabbit Anti-Human
Gelsolin

■ Precipitation ■ Blot ■ ELISA

IVD A0146 Ig fraction 1 mL

The antigen used for immunization is full-length recombinant human gelsolin. The antibody reacts with free gelsolin and with gelsolin-actin complexes. Plasma gelsolin functions as a scavenger of actin. After binding of actin, the gelsolin-actin complexes are rapidly cleared from the circulation, thus protecting the host from the injurious potential of free actin (1).

Reference:

1. Lee WM, Galbraith RM. The extracellular actin-scavenger system and actin toxicity. New Engl J Med 1992;326:1335-41.

Polyclonal Rabbit Anti-Human
IgA, Specific for Alpha-Chains

■ Precipitation

IVD A0092 Ig fraction 2 mL

This antibody has been developed especially for gel immunoprecipitation. The specificity has been ascertained by crossed immunoelectrophoresis using 12.5 microlitre antibody per square cm gel area against 2 microlitre human plasma. Thus, the specificity control is performed at an antibody concentration 12.5 times higher than the concentration generally used for rocket immunoelectrophoresis and single radial immunodiffusion. The antigen used for immunization is serum IgA.

Polyclonal Rabbit Anti-Human
IgA, Specific for Alpha-Chains

■ Blot ■ ELISA ■ IHC

IVD P0216 HRP. Ig fraction 2 mL

For use in methods demanding a very high specificity. The specificity and performance of the antibody have been ascertained in immunohistochemistry and ELISA. The antigen used for immunization is serum IgA.

Polyclonal Rabbit Anti-Human
IgA, IgG, IgM, Specific for Alpha, Gamma and Mu-Chains

■ Precipitation

IVD A0190 Ig fraction 2 mL

It has been shown that A0190 in combination with a mixture of anti-kappa and anti-lambda is very useful for routine screening of sera for M-components by immunofixation. Immunofixation detected more M-components than agarose electrophoresis or classical immunoelectrophoresis (1).

Reference:

1. Pedersen NS, Axelsen NH. Detection of M-components by an easy immunofixation procedure: comparison with agarose gel electrophoresis and classical immunoelectrophoresis. J Immunol Methods 1979;30:257-62.

Polyclonal Rabbit Anti-Human
IgD, Specific for Delta-Chains

ASR A0093 Ig fraction 2 mL

The specificity and performance of the antibody have been ascertained in immunohistochemistry and ELISA. Additionally, the specificity has been tested by crossed immunoelectrophoresis using 12.5 microlitre antibody per square cm gel area against 2 microlitre human plasma.

Polyclonal Rabbit Anti-Human
IgE, Specific for Epsilon-Chains

IVD A0094 Ig fraction 2 mL

The specificity of A0094 is confirmed in ELISA and crossed immunoelectrophoresis. In gel precipitation techniques A0094 gives a distinct precipitation line with IgE.

Polyclonal Rabbit Anti-Human
IgG, Specific for Gamma-Chains

■ Precipitation

IVD A0424 Ig fraction 2 mL

This antibody has been developed especially for gel immunoprecipitation. The specificity has been ascertained by crossed immunoelectrophoresis using 12.5 microlitre antibody per square cm gel area against 2 microlitre human plasma. Thus, the specificity control is performed at an antibody concentration 25 times higher than the concentration generally used for rocket immunoelectrophoresis and single radial immunodiffusion.

Polyclonal Rabbit Anti-Human
IgM, Specific for Mu-Chains

■ Precipitation

IVD A0426 Ig fraction 2 mL

This antibody has been developed especially for gel immunoprecipitation. The specificity has been ascertained by crossed immunoelectrophoresis using 12.5 microlitre antibody per square cm gel area against 2 microlitre human plasma. Thus, the specificity control is performed at an antibody concentration more than 16 times higher than the concentration generally used for rocket immunoelectrophoresis and single radial immunodiffusion.

Polyclonal Rabbit Anti-Human
Kappa Free Light Chains

■ Precipitation

IVD A0100 Ig fraction 2 mL

The antigen used for production of A0100 is polyclonal free kappa-chains prepared from pooled normal human immunoglobulin. The specificity is directed against the hidden determinants of the kappa-chain, thus, A0100 reacts with free kappa-chains (monoclonal as well as polyclonal), but not with the kappa-chains in intact immunoglobulin molecules.
A0100 is useful for testing unconcentrated urine samples for the presence of free kappa-chains. However, it is important to note that a negative reaction does not prove the absence of free kappa-chains as these proteins from some patients do not precipitate with A0100, possibly because they do not expose free light chain determinants. A positive reaction with A0100 must not be considered as definite proof of the presence of monoclonal free kappa-chains, but should rather lead to further investigation by immunofixation or immunoelectrophoresis in order to establish the monoclonal nature of the reacting kappa-chain. This is necessary because polyclonal light chain excretion is not uncommon in proteinuria of various types. Concentrated urine samples from normal subjects may also contain detectable levels of polyclonal free light chains.
For gel precipitation techniques like double immunodiffusion, immunoelectrophoresis and immunofixation, it is useful to incorporate 4% freshly prepared polyethylene glycol, MW 6000, in the agarose gel to improve the sensitivity of free light chain detection.

Polyclonal Rabbit Anti-Human
Lambda Free Light Chains

■ Precipitation

IVD A0101 Ig fraction 2 mL

The antigen used for production of A0101 is a pool of human free lambda-chains. The specificity is directed against the hidden determinants of the lambda-chain, thus, A0101 reacts with free lambda-chains (monoclonal as well as polyclonal), but not with the lambda-chains in intact immunoglobulin molecules.
A0101 is useful for testing unconcentrated urine samples for the presence of free lambda-chains. However, it is important to note that a negative reaction does not prove the absence of free lambda-chains as these proteins from some patients do not precipitate with A0101, possibly because they do not expose free light chain determinants. A positive reaction with A0101 must not be considered as definite proof of the presence of monoclonal free lambda-chains, but should rather lead to further investigation by immunofixation or immunoelectrophoresis in order to establish the monoclonal nature of the reacting lambda-chain. This is necessary because polyclonal light chain excretion is not uncommon in proteinuria of various types. Concentrated urine samples from normal subjects may also contain detectable levels of polyclonal free light chains.
For gel precipitation techniques like double immunodiffusion, immunoelectrophoresis and immunofixation, it is useful to incorporate 4% freshly prepared polyethylene glycol, MW 6000, in the agarose gel to improve the sensitivity of free light chain detection.

Polyclonal Rabbit Anti-Human
Prealbumin (Transthyretin)

■ Precipitation ■ IHC

IVD A0002 Ig fraction 2 mL

Polyclonal Rabbit Anti-Human
Pregnancy-Associated Plasma Protein A (PAPP-A)

■ Precipitation ■ ELISA ■ IHC

RUO A0230 Ig fraction 2 mL

PAPP-A isolated from a pool of human pregnancy sera has been used for immunization.

Polyclonal Rabbit Anti-Human
Protein S

ASR A0384 Ig fraction 1 mL

Protein S is a natural anticoagulant present in plasma. Protein S occurs in a functional, free form and in a non-functional complex with C4b-binding protein.

Polyclonal Rabbit Anti-Human
Retinol-Binding Protein

■ Precipitation ■ ELISA

IVD A0040 Ig fraction 2 mL

The antigen used for immunization has been purified from pathological urine. A0040 is well-suited for the determination of retinol-binding protein by ELISA (1).

Reference:
1. Topping MD, Forster HW, Dolman C, Luczynska CM, Bernard AM. Measurement of urinary retinol-binding protein by enzyme-linked immunosorbent assay, and its application to detection of tubular proteinuria. Clin Chem 1986;32:1863-6.

Polyclonal Rabbit Anti-Human
Serum

■ Precipitation

IVD A0206 Ig fraction 2 mL

A0206 is especially produced for use in crossed immunoelectrophoresis as the antibody titres have been balanced with the concentrations of the major serum proteins. More than 25 serum proteins will react with A0206.

Normal Animal Sera and Immunoglobulins

The normal animal sera and animal immunoglobulins listed are well-suited as qualitative negative controls for Dako antibodies. The products are in liquid form and contain an antimicrobial agent.

Negative controls should always be diluted to match the concentration of the corresponding antibody.

Goat Serum (Normal)

RUO X0907 Whole serum 10 mL

Mouse IgG1

IVD X0931 Culture supernatant 1 mL

X0931 is a cell culture supernatant containing monoclonal mouse IgG1 antibody to *Aspergillus niger* glucose oxidase, an enzyme which is neither present nor inducible in mammalian tissues. X0931 is well-suited as a negative control in all techniques utilizing monoclonal mouse antibodies of isotype IgG1.

Mouse IgG2a

IVD X0943 Culture supernatant 1 mL

X0943 is a cell culture supernatant containing monoclonal mouse IgG2a antibody to *Aspergillus niger* glucose oxidase, an enzyme which is neither present nor inducible in mammalian tissues. X0943 is well-suited as a negative control in all techniques utilizing monoclonal mouse antibodies of isotype IgG2a.

Mouse IgG2b

IVD X0944 Culture supernatant 1 mL

X0944 is a cell culture supernatant containing monoclonal mouse IgG2b antibody to *Aspergillus niger* glucose oxidase, an enzyme which is neither present nor inducible in mammalian tissues. X0944 is well-suited as a negative control in all techniques utilizing monoclonal mouse antibodies of isotype IgG2b.

Mouse IgM

IVD X0942 Culture supernatant 1 mL

X0942 is a cell culture supernatant containing monoclonal mouse IgM antibody to *Aspergillus niger* glucose oxidase, an enzyme which is neither present nor inducible in mammalian tissues. X0942 is well-suited as a negative control in all techniques utilizing monoclonal mouse antibodies of isotype IgM.

Rabbit Immunoglobulin Fraction (Normal)

RUO X0903 Ig fraction 2 mL/10 mL

This product has been prepared from sera of non-immunized rabbits. The immunoglobulin fraction has been isolated in the same way as the immunoglobulin fration of Dako rabbit antibodies. The protein concentration of X0903 is 20 g/L. X0903 is well-suited as negative control, for example, in immunohistochemistry, ELISA and immunoblotting.

Rabbit Immunoglobulin Fraction (Solid-Phase Absorbed)

IVD X0936 Ig fraction 2 mL

This product has been prepared from sera of non-immunized rabbits. The immunoglobulin fraction has been isolated in the same way as the immunoglobulin fraction of Dako rabbit antibodies. In addition, the product has been passed through a column containing immobilized human plasma proteins. This reduces the non-specific background and makes X0936 particularly well-suited as a negative control for Dako solid-phase absorbed rabbit antibodies. Especially when the primary antibody is used for immunohistochemistry at a relatively high concentration, above 0.1 g/L, X0936 should be preferred to Dako Rabbit Immunoglobulin Fraction (Normal), Code X0903. The protein concentration of X0936 is 15 g/L.

Rabbit Serum (Normal)

RUO X0902 Whole serum 10 mL

Swine Serum (Normal)

RUO X0901 Whole serum 10 mL

Especially for use in immunohistological techniques. Normal swine serum diluted 1:20 might reduce non-specific adsorption of antibodies to tissue, e.g. in the PAP technique.

Polyclonal Antibodies

Since 1966 Dako has produced a continually widening range of polyclonal antibodies. An extensive knowledge of protein chemistry and immunochemistry, careful selection of animals for immunization, and optimal, long-term immunization schemes have formed the basis of the high quality of our products.

Most of the polyclonal antibodies are *produced in rabbits*. This provides several advantages:

Human antibodies reacting with rabbit immunoglobulins occur rarely. Therefore, rabbit antibodies can be used without risk of non-specific reactions even in sensitive techniques.

A batch of antibody will always consist of the pooled sera from a large number of animals. This eliminates the possibility of a single atypical antibody predominating and gives minimal batch-to-batch variation. Rabbit antibodies exhibit very broad precipitation curves, so precipitation will occur even at high antigen or antibody excess.

Immunoglobulin Fractions. All Dako polyclonal antibodies are offered in the form of immunoglobulin fractions with a few exceptions mentioned under the individual product. The immunoglobulin fraction is prepared by salting out and ion exchange chromatography. The elimination of bulk proteins gives a stable product with reduced background in gel precipitation techniques, and minimal non-specific reactions in other applications.

Affinity-Isolated Antibodies. Dako affinity-isolated antibodies are prepared by immunoaffinity chromatography, using antigens coupled to a solid matrix. The elution and adsorption techniques used, guarantee antibodies of high affinity.

Specificity. Monospecificity of Dako polyclonal antibodies is obtained by the use of highly purified antigens for immunization. Traces of sometimes unavoidable, unwanted antibodies are removed by liquid or, in the majority of cases, solid-phase absorption. Crossed immunoelectrophoresis, with its high sensitivity and resolving power, is included in our specificity controls. For this test, antibody is used at a very high concentration (12.5 microliters per square cm of gel).
For a steadily increasing number of antibodies the specificity is also ascertained by ELISA. Antibodies which are specified "for immunohistochemistry only" have not necessarily been subjected to the above specificity tests.

Antibody Titre. The titre variation between batches of unconjugated polyclonal antibodies is less than 10%. The titre of most antibodies is measured by single radial immunodiffusion (SRI) (1). The SRI titre states how many milligrams of antigen which is precipitated in an agarose gel by 1 L of antibody.

Application. Because of their high purity and avidity, Dako unconjugated polyclonal antibodies are generally well-suited for a variety of techniques, including *nephelometry, turbidimetry, immunofixation, immunoblotting* and qualitative as well as quantitative gel precipitation techniques. Many of our antibodies have proven to be well-suited for use in enzyme-linked immunosorbent assays (ELISA).

In addition, our immunohistochemistry laboratory as well as numerous investigators have shown for a large number of Dako unconjugated polyclonal antibodies, that they give highly specific immunohistochemical reactions when used as primary antibodies in immunofluorescence or immunoenzymatic techniques. The intended/recommended use of each antibody is stated in the package insert.

Protein Concentration. For Dako concentrated, unconjugated polyclonal rabbit antibodies (immunoglobulin fractions) the protein concentration is stated on the label of each vial.

Solvent. All antibodies are offered in liquid form. For unconjugated antibodies in the form of immunoglobulin fractions, the solvent is 0.1 mol/L sodium chloride, 15 mmol/L sodium azide.

Storage. We recommend that our antibodies be stored at 2-8 °C. When stored in this manner, loss of antibody activity for unconjugated antibodies is approximately 2% per year.

Bulk Sales. Dako supplies bulk quantities of unconjugated as well as conjugated antibodies as OEM Products for further manufacturing, processing or repackaging.

Further Information. A package insert is supplied with each vial of polyclonal antibody. It states immunogen and specificity, and gives additional product-specific information. Package inserts are also available on www.dako.com.

The products require no hazard labeling.

Reference

1. Becker W. Determination of antisera titres using the single radial immunodiffusion method. Immunochem 1969;6:539-46.

Peroxidase-Conjugated Antibodies

Characterization. Dako peroxidase-conjugated antibodies have been prepared from the chromatographically purified immunoglobulin fraction of antisera or affinity-isolated antibodies and horseradish peroxidase (HRP) of the highest specific enzymatic activity available. The coupling reaction is a modification, developed at Dako, of the two-step glutaraldehyde method of Avrameas and Ternynck (1). The reaction is gentle, efficient, highly reproducible and gives conjugate molecules of molecular weight predominantly 200 000-240 000.

Specificity. The specificity of the antibodies is ascertained by crossed immunoelectrophoresis and, when applicable, by ELISA.

Application. Dako peroxidase conjugates are generally used for light and electron microscopy, enzyme-linked immunosorbent assays (ELISA), immunoblotting techniques, and amplification of immunoprecipitates in agarose gels. Working dilutions should be optimized for each individual system, but are usually for histological work in the range 1:20-1:200, for ELISA 1:500-1:2000, and for enzymatic amplification of immunoprecipitates and immunoblotting about 1:100-1:1000. Intended/ recommended use and recommended dilutions are stated in the package insert.

Solvent. Peroxidase conjugates are sold in liquid form with preservative added.

Storage. Shelf life stated for Dako peroxidase-conjugated antibodies is for undiluted antibodies at 2-8 °C.

Chromogens for Peroxidase Staining. For light and electron microscopy, diaminobenzidine (DAB) is recommended. Considerable enhancement of staining intensity can be obtained very simply by using DAB in conjunction with imidazole and heavy metal salts (2,3). For immunoblotting, tetramethylbenzidine (TMB) used as described by McKimm-Breschkin (4) produces a stable color of high intensity. The most sensitive stain for amplification of immunoprecipitates in agarose gels is 3-amino-9-ethylcarbazole (AEC) (5,6). DAB (7), TMB (4) and AEC can with advantage be prepared as stock solutions, thus easing the work, and especially for DAB, eliminating possible staining variations due to variable amounts of impurities present in small aliquots of DAB powder. Hydrogen peroxide should not be added to the staining solution until shortly before use.

Even at very high dose levels - 4-8 g/kg - DAB produces only minimal toxic effects in male rats and male mice, and has no effects in female mice (8).

For ELISA, 3,3'-5,5'- tetra-methylbenzidine (TMB) is a good and very sensitive chromogen. DAB and TMB are available from Dako.

Further Information. A package insert is supplied with each vial of conjugate. It provides product-specific details. Package inserts are also available on www.dako.com.

The products require no hazard labeling.

References

1. Avrameas S, Ternynck T. Peroxidase labelled antibody and Fab conjugates with enhanced intracellular penetration. Immunochemistry 1971;8:1175-9.
2. Trojanowski JQ, Obrocka MA, Lee VMY. A comparison of eight different chromogen protocols for the demonstration of immunoreactive neurofilaments or glial filaments in rat cerebellum using the peroxidase-antiperoxidase method and monoclonal antibodies. J Histochem Cytochem 1983;31:1217-23.
3. Scopsi L, Larsson LI. Increased sensitivity in peroxidase immunocytochemistry. A comparative study of a number of peroxidase visualization methods employing a model system. Histochemistry 1986;84:221-30.
4. McKimm-Breschkin JL. The use of tetramethylbenzidine for solid phase immunoassays. J Immunol Methods 1990;135: 277-80.
5. Graham RC, Lundholm U, Karnovsky MJ. Cytochemical demonstration of peroxidase activity with 3-amino-9-ethyl-carbazole. J Histochem Cytochem 1965;13:150-2.
6. Broe MK, Ingild A. Amplification of immunoprecipitates in agarose gels by horseradish peroxidase-labelled antibody. Scand J Immunol 1983;17:255-8.
7. Pelliniemi LJ, Dym M, Karnovsky MJ. Peroxidase histochemistry using diaminobenzidine tetrahydrochloride stored as a frozen solution. J Histochem Cytochem 1980;28:191-2.
8. Weisburger EK, Russfield AB, Homburger F, Weisburger JH, Boger E, Van Dongen CG, et al. Testing of twenty-one environmental aromatic amines or derivatives for long-term toxicity or carcinogenicity. J Environ Pathol Toxicol 1978;2:325-56.

Product Code Index for Specific Proteins

Code	Product	Package Size	Order No.	See Page
A				
A0002	Polyclonal Rabbit Anti-Human Prealbumin	2 mL	A000202	42
A0012	Polyclonal Rabbit Anti-Human Alpha-1-Antitrypsin	2 mL	A001202	41
A0040	Polyclonal Rabbit Anti-Human Retinol-Binding Protein	2 mL	A004002	42
A0072	Polyclonal Rabbit Anti-Human Beta-2-Microglobulin	2 mL	A007202	41
A0080	Polyclonal Rabbit Anti-Human Fibrinogen	2 mL	A008002	41
A0092	Polyclonal Rabbit Anti-Human IgA	2 mL	A009202	41
A0093	Polyclonal Rabbit Anti-Human IgD	2 mL	A009302	42
A0094	Polyclonal Rabbit Anti-Human IgE	2 mL	A009402	42
A0100	Polyclonal Rabbit Anti-Human Kappa Free Light Chains	2 mL	A010002	42
A0101	Polyclonal Rabbit Anti-Human Lambda Free Light Chains	2 mL	A010102	42
A0115	Polyclonal Rabbit Anti-Human Carcinoembryonic Antigen	2 mL	A011502	41
A0136	Polyclonal Rabbit Anti-Human C1q Complement	2 mL	A013602	41
A0146	Polyclonal Rabbit Anti-Human Gelsolin	1 mL	A014601	41
A0190	Polyclonal Rabbit Anti-Human IgA, IgG, IgM	2 mL	A019002	41
A0206	Polyclonal Rabbit Anti-Human Serum	2 mL	A020602	42
A0230	Polyclonal Rabbit Anti-Human Pregnancy-Associated Plasma Protein A	2 mL	A023002	42
A0384	Polyclonal Rabbit Anti-Human Protein S	1 mL	A038401	42
A0424	Polyclonal Rabbit Anti-Human IgG	2 mL	A042402	42
A0426	Polyclonal Rabbit Anti-Human IgM	2 mL	A042602	42
K				
K6219	Insulin ELISA Kit	96 test wells	K621911	40
L				
LX002	Cystatin C Immunoparticles	10 mL	LX00210	39
P				
P0216	Polyclonal Rabbit Anti-Human IgA/HRP	2 mL	P021602	41
S				
S1599	Dako TMB+	1 L	S159985	40
S1601	Dako TMB Blue	1 L	S160185	40
S2361	Dako Turbidimetry/Nephelometry Reaction Buffer 9	100 mL	S236130	39
X				
X0901	Swine Serum (Normal)	10 mL	X090110	43
X0902	Rabbit Serum (Normal)	10 mL	X090210	43
X0903	Negative Control, Rabbit Immunoglobulin Fraction (Normal)	2 mL 10 mL	X090302 X090310	43
X0907	Goat Serum (Normal)	10 mL	X090710	43
X0931	Negative Control, Mouse IgG1	1 mL	X093101	43
X0936	Negative Control, Rabbit Immunoglobulin Fraction (Solid-Phase Absorbed)	2 mL	X093602	43
X0942	Negative Control, Mouse IgM	1 mL	X094201	43
X0943	Negative Control, Mouse IgG2a	1 mL	X094301	43
X0944	Negative Control, Mouse IgG2b	1 mL	X094401	43
X0973	Cystatin C Control Set	6 x 1 mL	X097330	39
X0974	Cystatin C Calibrator	1 mL	X097401	39