2015-2016

Catalog | 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 specific protein products. The product portfolio includes antibody reagents and particle-enhanced antibodies for various clinical diagnostic applications, including turbidimetry and ELISA platforms.

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

Sincerely,

Simon Østergaard

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

Table of Contents

Alphabetical Index

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 (continued)

Alphabetical Index (continued)

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 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.

Application Notes for Turbidimetry and Nephelometry

Dako CE-marked application notes for use with concentrated antibodies, ready-to-use CRP antibody, and immunoparticles are available for a number of automated turbidimeters and they can be found on www.dako.com under each individual analyte. For other instruments, general application notes are available which provide guidelines for working procedures.

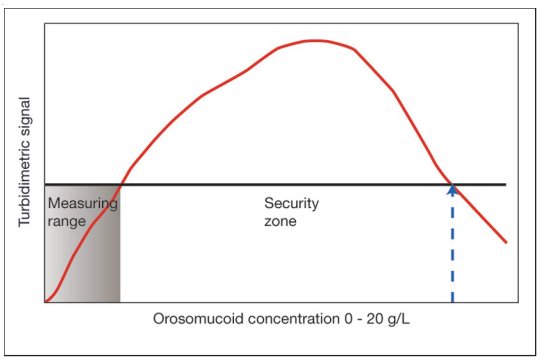
The development of the CE-marked application notes is based on experience generated in Dako on turbidimetric and nephelometric immunoassays over the past decades (1). The performance of assays conducted according to the application notes is tested and documented by a number of different parameters.

The application notes contain information on measuring range, reagents required, reference interval, sample material, assay performance and programming of instrument.

If you have any problems in setting up protein assays on your instrument, please do not hesitate to contact your local distributor for assistance.

Reference:

1. Blirup-Jensen S. Protein standardization III: Method optimisation. Basic principles for quantitative determination of human serum proteins on automated instruments based on turbidimetry or nephelometry. Clin Chem Lab Med 2001;39:1098-109



Perfomance Study

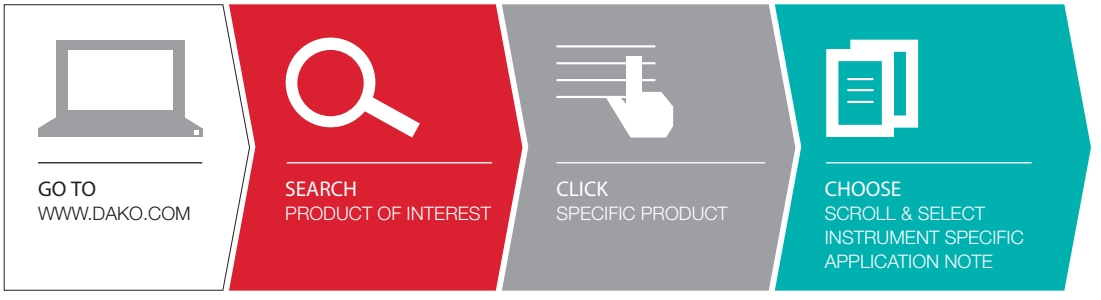
Heidelberger-Kendall curve for Anti-Orosomucoid

Corresponding Calibrators, Controls and Antibodies for Assay of Individual Proteins by Turbidimetry and Nephelometry

Analyte	Sample*	Antibody/Kit	Calibrator	Low Control	High Control
Albumin	Serum/Plasma	Q0328	X0908	X0939	
Albumin	Urine	Q0328	X0975	X0976	X0977
Albumin	CSF	Q0328	X0908		
Alpha-1-Antitrypsin	Serum/Plasma	Q0363	X0908	X0939	X0940
Alpha-1-Microglobulin (Protein HC)	Urine	Q0495	X0975	X0976	X0977
Alpha-2-Macroglobulin	Serum/Plasma	Q0102	X0908	X0939	X0940
Apolipoprotein A-I	Serum/Plasma	Q0496	X0958	X0961	X0962
Apolipoprotein B	Serum/Plasma	Q0497	X0958	X0961	X0962
Beta-2-Microglobulin	Serum/Plasma	K0052	incl.	incl.	incl.
C3c Complement	Serum/Plasma	Q0368	X0908	X0939	X0940
C4c Complement	Serum/Plasma	Q0369	X0908	X0939	X0940
Ceruloplasmin	Serum/Plasma	Q0121	X0908	X0939	X0940
C-Reactive Protein (CRP)	Serum/Plasma	Q0329	X0923	X0925	X0926
Cystatin C (ERM-DA471/IFCC Standardized)	Serum/Plasma	LX004	X7912	X7913	X7913
Cystatin C	Serum/Plasma	LX002	X0974	X0973	X0973
Fibrinogen	Plasma	Q0122			
Fibronectin	Serum/Plasma	Q0149			
Gc-Globulin	Serum	A0021	X0908	X0939	
Haptoglobin	Serum/Plasma	Q0330	X0908	X0939	X0940
IgA	Serum/Plasma	Q0332	X0908	X0939	X0940
IgG	Serum/Plasma	Q0331	X0908	X0939	X0940
IgG	CSF	Q0331	X0908		
IgM	Serum/Plasma	Q0333	X0908	X0939	X0940
Kappa Light Chains	Serum/Plasma	Q0498	X0908	X0939	X0940
Lambda Light Chains	Serum/Plasma	Q0499	X0908	X0939	X0940
Orosomucoid (Alpha-1-Acid Glycoprotein)	Serum/Plasma	Q0326	X0908	X0939	X0940
Prealbumin (Transthyretin)	Serum/Plasma	Q0362	X0908	X0939	X0940
Retinol-Binding Protein	Serum	A0040	X0908	X0939	X0940
Transferrin	Serum/Plasma	Q0327	X0908	X0939	X0940

* Plasma refers to EDTA-plasma and/or heparin-plasma, please see individual Application Note for details

Guide to find CE-marked application notes



Please contact rpsupport@dako.com for recommendations to application notes on instrument platforms that are not listed on our Web site.

Guide to the Choice of Reaction Buffer for Turbidimetry and Nephelometry

Analyte	Antibody	Instrument and Reaction Buffer Code		
		Cobas MIRA Plus	Hitachi 911/917/ Modular P	Other Instruments*
Albumin in Serum	Q0328	S2007	S2006	S2007
Albumin in Urine	Q0328		S2007	S2007
Alpha-1-Antitrypsin	Q0363	S2007	S2006	S2007
Alpha-1-Microglobulin (Protein HC)	Q0495		S2007	S2007
Alpha-2-Macroglobulin	Q0102	S2007	S2006	S2007
Apolipoprotein A-I	Q0496	S2007	S2006	S2007
Apolipoprotein B	Q0497	S2007	S2006	S2007
C3c Complement	Q0368	S2007	S2006	S2007
C4c Complement	Q0369	S2008	S2006	S2007
Ceruloplasmin	Q0121	S2008	S2007	S2007
C-Reactive Protein (CRP)	Q0329	S2011	S2011	S2011
Cystatin C (ERM-DA471/IFCC Standardized)	LX004▲		S2361	
Cystatin C	LX002▲	S2361	S2361	S2361
Fibrinogen	Q0122	S2007	S2006	S2007
Fibronectin	Q0149	S2007	S2006	S2007
Gc-Globulin	A0021		S2007	
Haptoglobin	Q0330	S2007	S2006	S2007
IgA	Q0332	S2007	S2006	S2007
IgG	Q0331	S2007	S2006	S2007
IgM	Q0333	S2007	S2006	S2007
Kappa Light Chains	Q0498	S2007	S2006	S2007
Lambda Light Chains	Q0499	S2007	S2006	S2007
Orosomucoid (Alpha-1-Acid Glycoprotein)	Q0326	S2008	S2007	S2007
Prealbumin (Transthyretin)	Q0362	S2008	S2007	S2007
Retinol-Binding Protein	A0040		S2007	
Transferrin	Q0327	S2007	S2006	S2007

* Please refer to General Application Notes

▲ Antibody-coated particles

Turbidimetry and Nephelometry Kits and Reagents

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

Beta-2-Microglobulin PET Kit

CE K0052 80-150 tests

Beta-2-Microglobulin PET Kit is for the quantitative determination of beta-2-microglobulin (B2M) in human plasma or serum. B2M is a low molecular mass protein of Mr 11 815. B2M is synthesized in all nucleated cells, and is associated with the heavy chain of the class I major histocompatibility complex. B2M is mainly catabolized by renal glomerular filtration followed by reabsorption in the proximal tubules and subsequent degradation. Upon activation of the immune system both B and T lymphocytes actively release B2M into circulation. In several disorders the B2M level has been found to be higher than expected when considering the glomerular filtration rate. These disorders are AIDS, rheumatoid arthritis, many lymphoproliferative and myeloproliferative diseases as well as several non-hematological malignancies (1). The B2M/cystatin C ratio has also been shown to be a promising marker of lymphoproliferation in patients with normal or mildly impaired renal function (2).
The kit can be used for measuring B2M in the range 0.5-20 mg/L. The kit contains immunoparticles, i.e. polyclonal rabbit antibody to B2M covalently coupled to polystyrene particles, and, in addition, calibrators, controls and buffers. All reagents are ready for use. A detailed working procedure and Application Notes for Cobas and Hitachi automated instruments are supplied with the kit.

References:

1. Martinez-Bru C, Cortes M, Planella T, Barrio J, Cadafalch J, Domingo P, et al. β_2-microglobulin and immunoglobulins are more useful markers of disease progression in HIV than neopterin and adenosine deaminase. Ann Clin Biochem 1999;36:601-8.
2. Bökenkamp A, Grabensee A, Stoffel-Wagner B, Hasan C, Henne T, Offner G, et al. The beta2-microglobulin/cystatin C ratio - a potential marker of post-transplant lymphoproliferative disease. Clin Nephrol 2002;58:417-22.

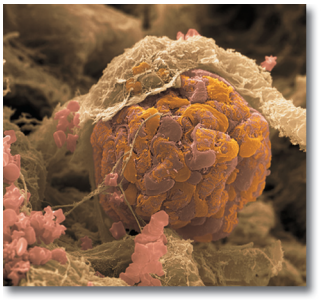
Cystatin C Immunoparticles (ERM-DA471/IFCC Standardized)

CE LX004 Ready-to-use for turbidimetry 10 mL

Cystatin C Immunoparticles (ERM-DA471/IFCC Standardized) is polyclonal rabbit antibody to cystatin C covalently coupled to polystyrene particles and is intended for the quantitative determination of cystatin C in human serum and plasma by turbidimetry. Cystatin C is an excellent indicator of GFR and measurements are used as an aid in the diagnosis of renal diseases. 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 (1). In another meta-analysis incorporating 2007 subject samples, the diagnostic accuracy for impaired renal dysfunction was favored by serum cystatin C over serum creatinine (2).
In conjunction with Dako Cystatin C Calibrator (ERM-DA471/IFCC Standardized) (X7912), Cystatin C Control Set (ERM-DA471/IFCC Standardized) (X7913), and Dako Turbidimetry/Nephelometry Reaction Buffer 9 (S2361), they form an assay. The calibrator of this assay is value assigned by turbidimetry against the new international reference preparation ERM-DA471/IFCC (3).
Application Notes for the cystatin C determination on several automated instruments are available on www.dako.com.

References:

1. 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.
2. Roos JF, Doust J, Tett SE, Kirkpatrick CM: Diagnostic accuracy of cystatin C compared to serum creatinine for the estimation of renal dysfunction in adults and children-A meta-analysis. Clin Biochem 2007;40: 383-91.
3. Grubb A, Blirup-Jensen S, Lindström V, Schmidt C, Althaus H, Zegers I. First certified reference material for cystatin C in human serum ERM-DA471/IFCC. Clin Chem Lab Med 2010;48:1619-21.
4. Grubb AO. Cystatin C - properties and use as diagnostic marker. Adv Clin Chem 2000;35:63-99.
5. 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 (ERM-DA471/IFCC Standardized)

CE X7912 Liquid form 1 mL

Cystatin C Calibrator (ERM-DA471/IFCC Standardized) comprises recombinant human cystatin C in human serum. The cystatin C concentration in the calibrator is approximately 7.25 mg/L. The calibrator has been designed for use with Dako Cystatin C Immunoparticles (ERM-DA471/IFCC Standardized) (LX004) for the quantitative determination of cystatin C in human serum and plasma by turbidimetry.

Cystatin C Control Set (ERM-DA471/IFCC Standardized)

CE X7913 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 (ERM-DA471/IFCC Standardized) (LX004) for the quantitative determination of cystatin C in human serum and plasma by turbidimetry.

Cystatin C Immunoparticles

CE 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.

Cystatin C Calibrator

CE 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

CE 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.

Antibodies for Turbidimetry and Nephelometry

Dako antibodies for turbidimetry and nephelometry have been tailored for convenient use on a number of commonly employed instruments such as Aeroset, Cobas MIRA Plus, Hitachi 911 and 917, and Modular P. Additionally, the antibodies are well-suited for a number of other instruments.

All CE-marked application notes providing guidelines on working procedures are available on www.dako.com. Application notes for turbidimeters and nephelometers not mentioned on the Web site are available on request.

Polyclonal Rabbit Anti-Human
Albumin

CE Q0328 Ig fraction 5 mL

Polyclonal Rabbit Anti-Human
Alpha-1-Antitrypsin

CE Q0363 Ig fraction 5 mL

Polyclonal Rabbit Anti-Human
Alpha-1-Microglobulin (Protein HC)

CE Q0495 Ig fraction 5 mL

The antigen used for production of Q0495 has been isolated from pooled human pathological urine (tubular proteinuria).

References:
1. Grubb A. Diagnostic value of analysis of cystatin C and protein HC in biological fluids. Clin Nephrol 1992;38 Suppl 1:20-7.
2. Weber MH, Verwiebe R. Alpha 1-microglobulin (protein HC): features of a promising indicator of proximal tubular dysfunction. Eur J Clin Chem Clin Biochem 1992;30:683-91.

Polyclonal Rabbit Anti-Human
Alpha-2-Macroglobulin

CE Q0102 Ig fraction 5 mL

Polyclonal Rabbit Anti-Human
Apolipoprotein A-I

CE Q0496 Ig fraction 5 mL

Polyclonal Rabbit Anti-Human
Apolipoprotein B

CE Q0497 Ig fraction 5 mL

Polyclonal Rabbit Anti-Human
C3c Complement

CE Q0368 Ig fraction 5 mL

The antigen used for immunization is C3c. Thus, the antibody reacts with C3c as well as with the C3c part of native C3 and C3b. There is no reaction with C3a and C3d.

Polyclonal Rabbit Anti-Human
C4c Complement

CE Q0369 Ig fraction 5 mL

The antigen used for immunization is C4c. The antibody reacts with C4, C4b, C4c, and, in general, with breakdown products of C4 containing C4c.

Polyclonal Rabbit Anti-Human
Ceruloplasmin

CE Q0121 Ig fraction 5 mL

Ceruloplasmin exists in two antigenic forms. The ratio between these two forms vary in serum and plasma. The antibody reacts with both forms, but serum is recommended as sample material.

Polyclonal Rabbit Anti-Human
C-Reactive Protein (CRP)

CE Q0329 Ig fraction 10 mL

The measuring range is approximately 5-160 mg/L.

Polyclonal Rabbit Anti-Human
Fibrinogen

CE Q0122 Ig fraction 5 mL

Reacts with fibrinogen, fibrin, and the fibrinogen fragments D and E.

Polyclonal Rabbit Anti-Human
Fibronectin

CE Q0149 Ig fraction 5 mL

Fibronectin is also called cold-insoluble globulin. The antigen used for immunization has been isolated from pooled human citrate plasma.

Polyclonal Rabbit Anti-Human
Gc-Globulin

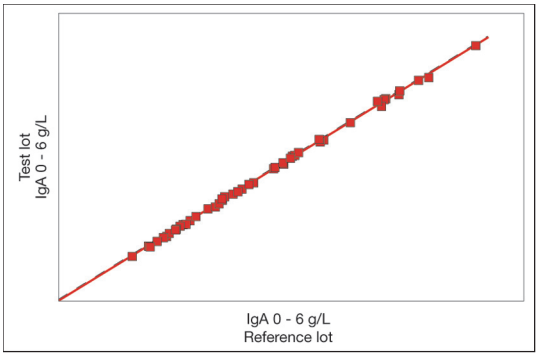
CE A0021 Ig fraction 2 mL

Polyclonal Rabbit Anti-Human
Haptoglobin

CE Q0330 Ig fraction 5 mL

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

CE Q0332 Ig fraction 5 mL



Quality Control
Turbidimetric lot-to-lot comparison for Anti-IgA, Q0332.
Linear regression
y = 0.991x + 0
r = 0.9997

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

CE Q0331 Ig fraction 5 mL

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

CE Q0333 Ig fraction 5 mL

Polyclonal Rabbit Anti-Human
Kappa Light Chains

CE Q0498 Ig fraction 5 mL

Has been produced in a manner that ensures a particularly wide specificity for kappa-chains. The antibody reacts with free kappa-chains as well as with kappa-chains in intact immunoglobulin molecules.

Polyclonal Rabbit Anti-Human
Lambda Light Chains

CE Q0499 Ig fraction 5 mL

The antigen used for immunization is a pool of human lambda Bence Jones proteins. Therefore, a reagent with a particularly wide specificity for lambda-chains is obtained. The antibody reacts with free lambda-chains as well as with lambda-chains in intact immunoglobulin molecules.

Polyclonal Rabbit Anti-Human
Orosomucoid (Alpha-1-Acid Glycoprotein)

CE Q0326 Ig fraction 5 mL

Polyclonal Rabbit Anti-Human
Prealbumin (Transthyretin)

CE Q0362 Ig fraction 5 mL

A brief historical and clinical overview of transthyretin is presented in reference 1.

Reference:
1. Ingenbleek Y. Historical aspects and perspectives in transthyretin research (editorial). Clin Chem Lab Med 2002;40:1181-2.

Polyclonal Rabbit Anti-Human
Retinol-Binding Protein

CE A0040 Ig fraction 2 mL

Polyclonal Rabbit Anti-Human
Transferrin

CE Q0327 Ig fraction 5 mL

Dako Buffers for Turbidimetry and Nephelometry

Dako buffers for turbidimetry and nephelometry have been developed especially for use in the quantitative determination of proteins by turbidimetry and nephelometry using antibodies or immunoparticles.

The reaction buffer should be chosen according to the antibody and the turbidimeter or nephelometer applied. See page 10 for overview table.

Dilution Buffer 1

CE S2005 Ready-to-use 1 L

For the dilution of concentrated antibodies, calibrators and patient samples in turbidimetry and nephelometry. Dilution Buffer 1 is a phosphate-buffered saline solution, pH 7.1-7.3.

Reaction Buffer 1

CE S2007 Ready-to-use 1 L

For the enhancement of the reaction between analyte and antibody. Reaction Buffer 1 is a specially designed solution of polymers in phosphate-buffered saline, pH 7.1-7.3.

Reaction Buffer 2

CE S2008 Ready-to-use 1 L

For the enhancement of the reaction between analyte and antibody. Reaction Buffer 2 is a specially designed solution of polymers in phosphate-buffered saline, pH 7.1-7.3.

Reaction Buffer 3

CE S2006 Ready-to-use 1 L

For the enhancement of the reaction between analyte and antibody. Reaction Buffer 3 is a specially designed solution of polymers in phosphate-buffered saline, pH 7.1-7.3.

Reaction Buffer 4

CE S2011 Ready-to-use 1 L

For the enhancement of the reaction between analyte, e.g. C-reactive protein and antibody. Reaction Buffer 4 is a specially designed solution of polymers in phosphate-buffered saline, pH 7.4-7.6.

Reaction Buffer 9

CE 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.

Calibrators and Controls for Turbidimetry and Nephelometry

Dako calibrators and controls for turbidimetry and nephelometry have been especially prepared for the quantitative immunological determination of the stated proteins by turbidimetry and nephelometry*.

For calibrators, 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. For controls, 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.

* Please note that X7912 and X7913 have not been validated for nephelometry.

Cystatin C Calibrator (ERM-DA471/IFCC Standardized)

CE X7912 Liquid form 1 mL

Cystatin C Calibrator (ERM-DA471/IFCC Standardized) comprises recombinant human cystatin C in human serum. The cystatin C concentration in the calibrator is approximately 7.25 mg/L. The calibrator has been designed for use with Dako Cystatin C Immunoparticles (ERM-DA471/IFCC Standardized) (LX004) for the quantitative determination of cystatin C in human serum and plasma by turbidimetry.

Cystatin C Control Set (ERM-DA471/IFCC Standardized)

CE X7913 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 (ERM-DA471/IFCC Standardized) (LX004) for the quantitative determination of cystatin C in human serum and plasma by turbidimetry.

Human Serum C-Reactive Protein (CRP) Calibrator

CE X0923 Liquid form 1 mL

X0923 is delipidated, pooled human serum enriched in CRP. The CRP concentration is approximately 160 mg/L. The internationally recognized reference preparation, CRM 470, was used as reference (1, 2).

References:
1. Whicher JT, Ritchie RF, Johnson MA, Baudner S, Bienvenu J, Blirup-Jensen S, et al. New international reference preparation for proteins in human serum (RPPHS). Clin Chem 1994;40:934-8.
2. Dati F, Schumann G, Thomas L, Aguzzi F, Baudner S, Bienvenu J, et al. Consensus of a group of professional societies and diagnostic companies on guidelines for interim reference ranges for 14 proteins in serum based on the standardization against the IFCC/BCR/CAP reference material (CRM 470). Eur J Clin Chem Clin Biochem 1996;34:517-20.

Human Serum C-Reactive Protein (CRP) High Control

CE X0926 Liquid form 5 mL

X0926 is delipidated, pooled human serum enriched in CRP. The CRP concentration is approximately 100 mg/L.

Human Serum C-Reactive Protein (CRP) Low Control

CE X0925 Liquid form 5 mL

X0925 is delipidated, pooled human serum enriched in CRP. The CRP concentration is approximately 30 mg/L.

Human Serum Cystatin C Calibrator

CE 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.

Human Serum Cystatin C Control Set

CE 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.

Human Serum Lipoprotein Calibrator

CE X0958 Lyophilized form 1 mL

X0958 is prepared from a stabilized pool of human sera. X0958 is well-suited as calibrator for the quantitative immunological determination of human apolipoprotein A-I and apolipoprotein B. The internationally recognized reference preparations, SP1-01 and SP3-07, have been used as reference for apolipoprotein A-I and B, respectively.

Human Serum Lipoprotein High Control

CE X0962 Lyophilized form 1 mL

X0962 is prepared from a stabilized pool of human sera. X0962 is well-suited as high control for the quantitative immunological determination of human apolipoprotein A-I and apolipoprotein B.

Human Serum Lipoprotein Low Control

CE X0961 Lyophilized form 1 mL

X0961 is prepared from a stabilized pool of human sera. X0961 is well-suited as low control for the quantitative immunological determination of human apolipoprotein A-I and apolipoprotein B.

Human Serum Protein Calibrator

CE X0908 Liquid form 1 mL

X0908 is delipidated, pooled human serum. For the 17 proteins with assigned values, the international reference preparation, CRM 470, has been used as reference (1-3). Kappa and lambda values have been calculated according to reference 4.

References:
1. Whicher JT, Ritchie RF, Johnson MA, Baudner S, Bienvenu J, Blirup-Jensen S, et al. New international reference preparation for proteins in human serum (RPPHS). Clin Chem 1994;40:934-8.
2. Dati F, Schumann G, Thomas L, Aguzzi F, Baudner S, Bienvenu J, et al. Consensus of a group of professional societies and diagnostic companies on guidelines for interim reference ranges for 14 proteins in serum based on the standardization against the IFCC/BCR/CAP reference material (CRM 470). Eur J Clin Chem Clin Biochem 1996;34:517-20.
3. Baudner S, Bienvenu J, Blirup-Jensen S, Milford Ward A, Raeside A, Svendsen PJ, et al. The complementary certification of BCR CRM 470 for antichymotrypsin (CRM 470). EUR 16882 1996.
4. Lievens MM. Medical and technical usefulness of measurement of kappa and lambda immunoglobulin light chains in serum with an M-component. J Clin Chem Clin Biochem 1989;27:519-23.

Turbidimetry and Nephelometry Test Systems (continued)

Human Serum Protein High Control

CE X0940 Liquid form 1 mL

X0940 is delipidated, pooled human serum. Values are stated for 16 proteins.

Human Serum Protein Low Control

CE X0939 Liquid form 1 mL

X0939 is delipidated, pooled human serum. Values are stated for 17 proteins.

Human Urine Protein Calibrator

CE X0975 Liquid form 1 mL

X0975 is intended to be used as a calibrator for the quantitative determination of human albumin and human alpha-1-microglobulin in urine by turbidimetry. The concentration of albumin is approximately 200 mg/L and the concentration of alpha-1-microglobulin is approximately 100 mg/L.

Human Urine Protein High Control

CE X0977 Liquid form 1 mL

X0977 is intended to be used as a high control for the quantitative determination of human albumin and human alpha-1-microglobulin in urine by turbidimetry. The concentration of albumin is approximately 100 mg/L and the concentration of alpha-1-microglobulin is approximately 80 mg/L.

Human Urine Protein Low Control

CE X0976 Liquid form 1 mL

X0976 is intended to be used as a low control for the quantitative determination of human albumin and human alpha-1-microglobulin in urine by turbidimetry. The concentration of albumin is approximately 15 mg/L and the concentration of alpha-1-microglobulin is approximately 15 mg/L.

ELISA Kits and Accessory

Dako is featuring a Chromogranin A ELISA Kit and an Insulin ELISA kit. The ELISA format provides high sensitivity helping in the investigation of neuroendocrine tumors and of diabetes. Chromogen for ELISA is also provided as a separate product.

ELISA Kits

CgAnalyze Kit

CE K2378 NEW 96 test wells

CgAnalyze Kit is a sandwich ELISA assay designed for quantitative measurement of chromogranin A (CgA) in human serum and plasma. The assay is easy to use with short incubation time of 105 minutes in total. CgA is generally considered a useful serological marker for tumors of neuroendocrine origin and is routinely used in various phases of the management of patients suffering from NET (neuroendocrine tumor). In recent years, several international guidelines, which highly recommend the use of CgA in the management of NET patients, have been published (1-3).
In addition to a detailed working procedure, each kit contains peroxidase conjugate, six calibrators, two controls, buffers, chromogenic substrate, stop and wash solutions, and a microwell plate.

References:

1. Ramage JK, Ahmed A, Ardill J, Bax N, Breen DJ, Caplin ME, et al. Guidelines for the management of gastroenteropancreatic neuroendocrine (including carcinoid) tumours (NETs). Gut 2012;61;6-32.
2. Pape UF, Perren A, Niederle B, Gross D, Gress T, Costa F, et al. ENETS consensus guidelines for the management of patients with neuroendocrine neoplasms from the jejuno-ileum and the appendix, including goblet cell carcinomas. Neuroendocrin 2012;95:135-56.
3. Vinik A, Woltering E, Warner R, Caplin M, O'Dorisio T, Wiseman G, et al. NANETS consensus guidelines for the diagnosis of neuroendocrine tumor. Pancreas 2010;39:713-34.

Insulin ELISA Kit

CE 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 1½ hours for up to 86 samples. The kit shows excellent precision, sensitivity and specificity, is easy to use and requires only non-dedicated instrumentation.

Accessory for ELISA

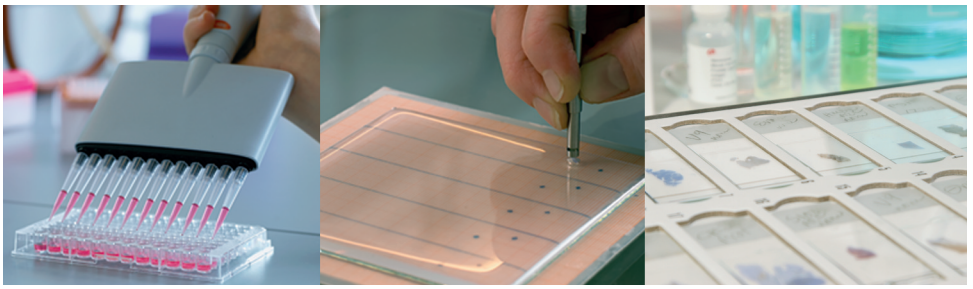
TMB One-Step Substrate System

CE S1599 TMB+ 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.

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
Albumin

■ Precipitation ■ Blot ■ ELISA ■ IHC

CE A0001 Ig fraction 2 mL

A0001 is well-suited for quantitation of albumin in biological fluids.

Polyclonal Rabbit Anti-Human
Alpha-1-Antitrypsin

■ Precipitation ■ Blot ■ IHC

CE 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

CE 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

■ Precipitation ■ IHC

CE A0136 Ig fraction 2 mL

Polyclonal Rabbit Anti-Human
C3c Complement

■ Precipitation ■ IHC

CE A0062 Ig fraction 2 mL

The antigen used for immunization is C3c. Thus, the antibodies react both with C3c as well as with the C3c part of native C3 and C3b. There is no reaction with C3d and C3a. Please see reference 1 where the use of A0062 for immunofixation is described. A0062 can also be used for immunohistochemistry (2).

References:

1. Whicher JT, Higginson J, Riches PG, Radford S. Clinical applications of immunofixation: detection and quantitation of complement. J Clin Pathol 1980;33:791-5.
2. Sinclair RA, Burns J, Dunnill MS. Immunoperoxidase staining of formalin-fixed, paraffin-embedded, human renal biopsies with a comparison of the peroxidase anti-peroxidase (PAP) and indirect methods. J Clin Pathol 1981;34:859-65.

Polyclonal Rabbit Anti-Human
C3d Complement

■ Precipitation ■ IHC

CE A0063 Ig fraction 2 mL

Polyclonal Rabbit Anti-Human
Carcinoembryonic Antigen (CEA)

■ Precipitation ■ IHC

CE 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
Factor VIII-Related Antigen

■ Blot ■ ELISA

CE P0226 HRP. Ig fraction 2 mL

The term 'Factor VIII-related antigen' has been replaced by the more precise designation 'von Willebrand factor'. Therefore, P0226 has been described under the heading von Willebrand factor. A reference to the nomenclature is given below.

Reference:

1. Marder VJ, Mannucci PM, Firkin BG, Hoyer LW, Meyer D. Standard nomenclature for factor VIII and von Willebrand factor: a recommendation by the International Committee on Thrombosis and Haemostasis. Thromb Haemostas 1985;54:871-2.

Polyclonal Rabbit Anti-Human
Fibrinogen

■ Precipitation ■ ELISA ■ IHC

CE A0080 Ig fraction 2 mL

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

Polyclonal Rabbit Anti-Human
Fibronectin

■ Precipitation ■ ELISA ■ IHC ■ Neph

CE A0245 Ig fraction 2 mL

Fibronectin is also called cold-insoluble globulin. The antigen used for immunization has been isolated from pooled human citrate plasma. For the quantitation of fibronectin, citrate, heparin or EDTA-plasma should be used. Serum is not suited as the amount of fibronectin left in serum after the blood coagulation, is variable. Nephelometry, turbidimetry and rocket immunoelectrophoresis are the recommended quantitative methods for fibronectin. Single radial immunodiffusion tends to give erroneous results. If plasma samples have been frozen, they must be thawed at 37 °C before performing quantitative analysis. More details on quantitation of fibronectin are found in references 1 and 2.

References:
1. Eriksen HO, Clemmensen I, Hansen MS, Ibsen KK. Plasma fibronectin concentration in normal subjects. Scand J clin Lab Invest 1982;42:291-5.
2. Van Helden WCH, Kok-Verspuy A, Harff GA, van Kamp GJ. Rate-nephelometric determination of fibronectin in plasma. Clin Chem 1985;31:1182-4.

Polyclonal Rabbit Anti-Human
Gc-Globulin

■ Precipitation ■ Turb/Neph

CE A0021 Ig fraction 2 mL

Gc-globulin is also called vitamin D-binding protein. A0021 is ideal for phenotyping of Gc-globulin by immunofixation (1, 2). The concentration of Gc-globulin in serum can be measured by rocket immunoelectrophoresis and turbidimetry using A0021.

References:
1. Johnson AM. Immunofixation following electrophoresis or isoelectric focusing for identification and phenotyping of proteins. Ann Clin Lab Sci 1978;8:195-200.
2. Thymann M. Gc subtypes determined by agarose isoelectrofocusing. Human Hered 1981;31:214-21.

Polyclonal Rabbit Anti-Human
Gelsolin

■ Precipitation ■ Blot ■ ELISA

CE 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). In pathological conditions where actin is released from necrotic cells, such as in acute liver failure, myocardial infarction, septic shock, myonecrosis and after major trauma, the plasma concentration of gelsolin is reduced (2, 3). Immunodetection of a 65 kDa gelsolin fragment in plasma provides a useful means for diagnosing familial amyloidosis (Finnish type), which is caused by a single amino acid substitution in gelsolin (4).

References:
1. Lee WM, Galbraith RM. The extracellular actin-scavenger system and actin toxicity. New Engl J Med 1992;326:1335-41.
2. Suhler E, Lin W, Yin HL, Lee WM. Decreased plasma gelsolin concentrations in acute liver failure, myocardial infarction, septic shock and myonecrosis. Crit Care Med 1997;25:594-8.
3. Mounzer KC, Moncure M, Smith YR, DiNubile MJ. Relationship of admission plasma gelsolin levels to clinical outcomes in patients after major trauma. Am J Respir Crit Care Med 1999;160:1673-81.
4. Maury CPJ, Sletten K, Totty N, Kangas H, Liljeström M. Identification of the circulating amyloid precursor and other gelsolin metabolites in patients with G654A mutation in the gelsolin gene (Finnish familial amyloidosis): pathogenetic and diagnostic implications. Lab Invest 1997;77:299-304.

Polyclonal Rabbit Anti-Human
Haptoglobin

■ Precipitation ■ Blot

CE A0030 Ig fraction 2 mL

A reference to the use of A0030 for Western blotting is given below.

Reference:
1. Thymann M, Svensmark O, Masumba G, Broks H, Skibsby LB. Haptoglobin subtype determination by isoelectric focusing in agarose gel: application to paternity testing and presentation of a new α_2-variant. Electrophoresis 1990;11:61-5.

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

■ Precipitation

CE 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 µL 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

CE 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

CE 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

■ Precipitation ■ Blot ■ ELISA ■ IHC

CE 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 µL antibody per square cm gel area against 2 µL human plasma.

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

■ Precipitation ■ Blot ■ ELISA ■ IHC

CE 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

CE 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 µL 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

CE 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 µL 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

CE 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 screening 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
Kappa Light Chains

■ Precipitation ■ Blot ■ ELISA ■ IHC

CE A0192 Ig fraction 2 mL

This reagent has been produced in a manner that ensures a particularly wide specificity for kappa-chains. The specificity is directed against surface as well as hidden determinants and has been ascertained by gel precipitation techniques and immunohistochemistry.
A0192 is excellent for the typing of free and bound monoclonal kappa-chains by immunoelectrophoresis and immunofixation.

Polyclonal Rabbit Anti-Human
Lambda Free Light Chains

■ Precipitation

CE 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 screening 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
Lambda Light Chains

■ Precipitation ■ Blot ■ ELISA ■ IHC

CE A0194 Ig fraction 2 mL

The antigen used for immunization is a pool of human lambda Bence Jones proteins. Therefore, a reagent with a particularly wide specificity for lambda-chains is obtained. The specificity is directed against surface as well as hidden determinants and has been ascertained by gel precipitation techniques and immunohistochemistry.
A0194 is excellent for the typing of free and bound monoclonal lambda-chains by immunoelectrophoresis and immunofixation.

Polyclonal Rabbit Anti-Human
Prealbumin (Transthyretin)

■ Precipitation ■ IHC

CE 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

■ Precipitation ■ ELISA

CE A0384 Ig fraction 1 mL

Protein S is a natural anticoagulant present in plasma. Patients deficient in protein S are subject to recurrent venous thrombotic disease. Protein S occurs in a functional, free form and in a non-functional complex with C4b-binding protein. A0384 reacts in gel precipitation techniques with both forms. These can be quantitated separately (1).

Reference:

1. Comp P, Doray D, Patton D, Esmon CT. An abnormal plasma distribution of protein S occurs in functional protein S deficiency. Blood 1986;67:504-8.

Polyclonal Rabbit Anti-Human
Retinol-Binding Protein

■ Precipitation ■ ELISA ■ Turb/Neph

CE 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) and turbidimetry.

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.

Multipurpose Antibodies for Clinical Immunochemistry (continued)

Polyclonal Rabbit Anti-Human
Serum

■ Precipitation

CE 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.

Polyclonal Rabbit Anti-Human
Transferrin

■ Precipitation ■ IHC

CE A0061 Ig fraction 2 mL

The antibody is well-suited for gel precipitation techniques and also for immunofixation (1). Please see references 2 and 3 where the use of A0061 in immunohistochemistry is described.

References:

1. Johnson AM. Immunofixation electrophoresis and electrofocusing. Clin Chem 1982;28:1797-800.
2. Mason DY, Taylor CR. Distribution of transferrin, ferritin and lactoferrin in human tissues. J Clin Pathol 1978;31:316-27.
3. Massi G, Coli A, De Carolis S. Serum protein distribution in hydatidiform mole. An immunohistochemical study. Arch Pathol Lab Med 1987;111:723-5.

Polyclonal Rabbit Anti-Human
Von Willebrand Factor

■ Blot ■ ELISA

CE P0226 HRP. Ig fraction 2 mL

The former designation for von Willebrand factor was factor VIII-related antigen.
For the use of P0226 in ELISA, please see reference 1. For the study of von Willebrand factor multimers in plasma using P0226, please see reference 2.

References:

1. Cejka J. Enzyme immunoassay for factor VIII-related antigen. Clin Chem 1982;28:1356-8.
2. Bukh A, Ingerslev J, Stenbjerg S, Møller NPH. The multimeric structure of plasma F VIII: RAg studied by electroelution and immunoperoxidase

Normal Animal Sera and Immunoglobulins (Negative Controls and Blocking Sera)

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

CE 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

CE 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

CE 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

CE 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.

Mouse Serum (Normal)

RUO X0910 Whole serum 1 mL

The serum is from healthy mice of SPF standard (specific pathogen-free animals). X0910 is useful as a negative control for antibodies that are in the form of unfractionated whole mouse serum.

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)

CE 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

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. Most 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 usually in the range of 3-10 g/L.

The protein concentration of individual antibodies 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.

DAB was formerly listed, erroneously, by the American National Institute for Occupational Safety and Health, as a carcinogen. However, it has been demonstrated that 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 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

Code	Product	Package Size	Order No.	See Page
A				
A0001	Polyclonal Rabbit Anti-Human Albumin	2 mL	A000102	17
A0002	Polyclonal Rabbit Anti-Human Prealbumin	2 mL	A000202	19
A0012	Polyclonal Rabbit Anti-Human Alpha-1-Antitrypsin	2 mL	A001202	17
A0021	Polyclonal Rabbit Anti-Human Gc-Globulin	2 mL	A002102	12 18
A0030	Polyclonal Rabbit Anti-Human Haptoglobin	2 mL	A003002	18
A0040	Polyclonal Rabbit Anti-Human Retinol-Binding Protein	2 mL	A004002	13 19
A0061	Polyclonal Rabbit Anti-Human Transferrin	2 mL	A006102	20
A0062	Polyclonal Rabbit Anti-Human C3c Complement	2 mL	A006202	17
A0063	Polyclonal Rabbit Anti-Human C3d Complement	2 mL	A006302	17
A0072	Polyclonal Rabbit Anti-Human Beta-2-Microglobulin	2 mL	A007202	17
A0080	Polyclonal Rabbit Anti-Human Fibrinogen	2 mL	A008002	18
A0092	Polyclonal Rabbit Anti-Human IgA	2 mL	A009202	18
A0093	Polyclonal Rabbit Anti-Human IgD	2 mL	A009302	18
A0094	Polyclonal Rabbit Anti-Human IgE	2 mL	A009402	18
A0100	Polyclonal Rabbit Anti-Human Kappa Free Light Chains	2 mL	A010002	19
A0101	Polyclonal Rabbit Anti-Human Lambda Free Light Chains	2 mL	A010102	19
A0115	Polyclonal Rabbit Anti-Human Carcinoembryonic Antigen	2 mL	A011502	17
A0136	Polyclonal Rabbit Anti-Human C1q Complement	2 mL	A013602	17
A0146	Polyclonal Rabbit Anti-Human Gelsolin	1 mL	A014601	18
A0190	Polyclonal Rabbit Anti-Human IgA, IgG, IgM	2 mL	A019002	18
A0192	Polyclonal Rabbit Anti-Human Kappa Light Chains	2 mL	A019202	19
A0194	Polyclonal Rabbit Anti-Human Lambda Light Chains	2 mL	A019402	19
A0206	Polyclonal Rabbit Anti-Human Serum	2 mL	A020602	20
A0230	Polyclonal Rabbit Anti-Human Pregnancy-Associated Plasma Protein A	2 mL	A023002	19
A0245	Polyclonal Rabbit Anti-Human Fibronectin	2 mL	A024502	18
A0384	Polyclonal Rabbit Anti-Human Protein S	1 mL	A038401	19
A0424	Polyclonal Rabbit Anti-Human IgG	2 mL	A042402	19
A0426	Polyclonal Rabbit Anti-Human IgM	2 mL	A042602	19
K				
K0052	Beta-2-Microglobulin PET Kit	80-150 tests	K005211	11
K2378	CgAnalyze Kit	96 test wells	K237811	16
K6219	Insulin ELISA Kit	96 test wells	K621911	16
L				
LX002	Cystatin C Immunoparticles	10 mL	LX00210	11
LX004	Cystatin C Immunoparticles (ERM-DA471/IFCC Standardized)	10 mL	LX00410	11
P				
P0216	Polyclonal Rabbit Anti-Human IgA/HRP	2 mL	P021602	18
P0226	Polyclonal Rabbit Anti-Human Von Willebrand Factor/HRP	2 mL	P022602	17 20
Q				
Q0102	Polyclonal Rabbit Anti-Human Alpha-2-Macroglobulin	5 mL	Q010205	12
Q0121	Polyclonal Rabbit Anti-Human Ceruloplasmin	5 mL	Q012105	12
Q0122	Polyclonal Rabbit Anti-Human Fibrinogen	5 mL	Q012205	12
Q0149	Polyclonal Rabbit Anti-Human Fibronectin	5 mL	Q014905	12
Q0326	Polyclonal Rabbit Anti-Human Orosomucoid (Alpha-1-Acid Glycoprotein)	5 mL	Q032605	13
Q0327	Polyclonal Rabbit Anti-Human Transferrin	5 mL	Q032705	13
Q0328	Polyclonal Rabbit Anti-Human Albumin	5 mL	Q032805	12
Q0329	Polyclonal Rabbit Anti-Human C-Reactive Protein	10 mL	Q032910	12
Q0330	Polyclonal Rabbit Anti-Human Haptoglobin	5 mL	Q033005	12
Q0331	Polyclonal Rabbit Anti-Human IgG	5 mL	Q033105	13
Q0332	Polyclonal Rabbit Anti-Human IgA	5 mL	Q033205	13
Q0333	Polyclonal Rabbit Anti-Human IgM	5 mL	Q033305	13
Q0362	Polyclonal Rabbit Anti-Human Prealbumin (Transthyretin)	5 mL	Q036205	13
Q0363	Polyclonal Rabbit Anti-Human Alpha-1-Antitrypsin	5 mL	Q036305	12
Q0368	Polyclonal Rabbit Anti-Human C3c Complement	5 mL	Q036805	12
Q0369	Polyclonal Rabbit Anti-Human C4c Complement	5 mL	Q036905	12
Q0495	Polyclonal Rabbit Anti-Human Alpha-1-Microglobulin	5 mL	Q049505	12

Product Code Index (continued)

Code	Product	Package Size	Order No.	See Page
Q0496	Polyclonal Rabbit Anti-Human Apolipoprotein A-I	5 mL	Q049605	12
Q0497	Polyclonal Rabbit Anti-Human Apolipoprotein B	5 mL	Q049705	12
Q0498	Polyclonal Rabbit Anti-Human Kappa Light Chains	5 mL	Q049805	13
Q0499	Polyclonal Rabbit Anti-Human Lambda Light Chains	5 mL	Q049905	13
S				
S1599	Dako TMB+	1 L	S159985	16
S2005	Dako Turbidimetry/Nephelometry Dilution Buffer 1	1 L	S200530	13
S2006	Dako Turbidimetry/Nephelometry Reaction Buffer 3	1 L	S200630	13
S2007	Dako Turbidimetry/Nephelometry Reaction Buffer 1	1 L	S200730	13
S2008	Dako Turbidimetry/Nephelometry Reaction Buffer 2	1 L	S200830	13
S2011	Dako Turbidimetry/Nephelometry Reaction Buffer 4	1 L	S201130	13
S2361	Dako Turbidimetry/Nephelometry Reaction Buffer 9	100 mL	S236130	13
X				
X0902	Rabbit Serum (Normal)	10 mL	X090210	20
X0903	Negative Control, Rabbit Immunoglobulin Fraction (Normal)	2 mL 10 mL	X090302 X090310	20
X0907	Goat Serum (Normal)	10 mL	X090710	20
X0908	Human Serum Protein Calibrator	1 mL	X090801	14
X0910	Mouse Serum (Normal)	1 mL	X091001	20
X0923	Human Serum C-Reactive Protein Calibrator	1 mL	X092301	14
X0925	Human Serum C-Reactive Protein Low Control	5 mL	X092505	14
X0926	Human Serum C-Reactive Protein High Control	5 mL	X092605	14
X0931	Negative Control, Mouse IgG1	1 mL	X093101	20
X0936	Negative Control, Rabbit Immunoglobulin Fraction (Solid-Phase Absorbed)	2 mL	X093602	20
X0939	Human Serum Protein Low Control	1 mL	X093901	15
X0940	Human Serum Protein High Control	1 mL	X094001	15
X0942	Negative Control, Mouse IgM	1 mL	X094201	20
X0943	Negative Control, Mouse IgG2a	1 mL	X094301	20
X0944	Negative Control, Mouse IgG2b	1 mL	X094401	20
X0958	Human Serum Lipoprotein Calibrator	1 mL	X095801	14
X0961	Human Serum Lipoprotein Low Control	1 mL	X096101	14
X0962	Human Serum Lipoprotein High Control	1 mL	X096201	14
X0973	Cystatin C Control Set	6 x 1 mL	X097330	12 14
X0974	Cystatin C Calibrator	1 mL	X097401	12 14
X0975	Human Urine Protein Calibrator	1 mL	X097501	15
X0976	Human Urine Protein Low Control	1 mL	X097601	15
X0977	Human Urine Protein High Control	1 mL	X097701	15
X7912	Cystatin C Calibrator (ERM-DA471/IFCC Standardized)	1 mL	X791201	11 14
X7913	Cystatin C Control Set (ERM-DA471/IFCC Standardized)	6 x 1 mL	X791330	11 14