

product list 2008 immune reagents

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Introduction

Sanquin Blood Supply Foundation

The Central Laboratory of the Netherlands Red Cross Blood Transfusion Service (CLB) was founded in 1943. By that time, aseptic collection, storage and administration of human blood had become a reality and blood transfusion developed into a new and promising mode of therapy. In 1948 CLB became an independent foundation, in the board of which were presented the Dutch government, the municipality of Amsterdam and the Netherlands Red Cross. CLB was soon recognised as an authority in blood and blood transfusion, in the fields of both scientific research and public health care.

On January 1998 the Dutch Red Cross Blood Banks and the CLB merged into the Sanquin Blood Supply Foundation, generally known as Sanquin. Sanquin is a not-for-profit organisation that provides blood supplies and promotes transfusion medicine, in a manner that meets the most stringent quality, safety and efficiency requirements. The foundation provides products and services, carries out research and provides education. Sanquin has over 3000 employees in the Netherlands.

Sanquin Reagents

Sanquin (CLB) was among the first manufacturers of blood group and immune reagents. As a spin-off of its research facilities and diagnostic laboratories, Sanquin has been able to develop a broad range of reagents, including several innovative products for diagnostic use and for fundamental and clinical research. Sanquin's blood grouping and immune reagents are worldwide available through a network of distributors, who act as an intermediate between the local clients and Sanquin for physical product distribution, information and services. Sanquin is ISO 9001 and ISO 14385-2003 certified and all diagnostic products are CE marked according to the European IVD- guidelines. Sanquin Reagents has 60 employees dedicated to development, production, QA/QC, marketing, sales and distribution.

Sanquin Blood Grouping Reagents (not in this catalogue)

Blood grouping reagents are essential tools for diagnostic laboratories specialised in serology. These reagents developed by Sanquin Reagents are used in several serological tests, especially focused on red blood cells and platelets. These diagnostic tests are of the highest importance before a blood transfusion (with donor red blood cells or platelets) is given, or to prevent immunisation during pregnancy. The blood grouping reagents are not included in this catalogue. Please contact Sanquin Reagents to receive a separate catalogue.

Sanquin Immune Reagents

The results of the work at Sanquin Research and Sanquin Diagnostic Services form the base for the development of reagents and kits for diagnostic and research purposes. During the last decade a number of reagents has been successfully introduced on the commercial market. Sanquin Immune Reagents fall into three main categories:

human IgG subclass reagents

Immunoglobulins are important proteins of our immune system. Immunoglobulin G is the major class of immunoglobulin in blood. Immunoglobulin G, abbreviated as IgG, consists of four subclasses: IgG1, IgG2, IgG3 and IgG4. IgG subclass reagents are used to measure concentrations of the four IgG subclasses in serum.

Deficiencies of one or more of the IgG subclasses are an indication of a disturbed immune system. Several disease states are associated with decreased or elevated levels of (one or more) IgG subclasses. The most conspicuous consequence of a deficiency in one of the IgG subclasses is a defect of the so-called humoral immunity, which is mainly directed against bacteria. Nevertheless, this does not necessarily lead to clinical manifestations. Specific examples of diseases associated with disturbed IgG subclass levels are: bronchiectasis and severe, recurrent stages of otitis media, sinusitis, pneumonia and bronchitis.

Different methods are used for the quantitative determination of IgG subclasses. Sanquin Reagents manufactures kits and reagents for the most frequently used techniques: Radial Immunodiffusion, ELISA and nephelometry.

New in the range of measuring immune deficiencies is the Mannose Binding Lectin (MBL) kit in a 288 test format. This MBL kit is CE labelled. MBL deficiency is associated with increased susceptibility to infections, such as otitis media, pneumonitis, gastro-enteritis, meningitis and sepsis.

cytokines, granzymes, perforin and related proteins

Under the trade name PeliKine™ Sanquin Reagents offers a broad range of (ELISA) kits and reagents for determination of human cytokine levels. Cytokines are a group of hormone-like proteins, produced by a variety of cells of the immune system. They are soluble molecules, which mediate interactions between cells. Cytokines are involved in a large number of important cellular activities: e.g. maturation of blood stem cells, induction of cell proliferation, maintenance of cell viability and regulation of immunity and inflammation. Quantification of cytokines is strongly increasing in many diagnostic and research laboratories. Originally, cytokines could be detected only by their biological activities, but with the highly sensitive immuno assays developed by Sanquin they can be detected directly. Granzymes are enzymes (proteinases) which are released from cytotoxic lymphocytes, important cells of the immune

system. Granzymes enhance the activity of these cells in their ability to destroy cells, which are infected with virus. Reagents for measuring granzymes and perforin are important in both fundamental research in apoptosis and applied clinical research.

New in this range are the PeliSPOT™ kits. ELISPOT is a technique in which cytokines or other proteins, like granzymes, can be demonstrated on a single cell level. The big advantage of this technique is the high sensitivity, resulting in a factor 100 times higher than in other techniques (ELISA).

Sanquin Reagents is also the exclusive distributor of the Aelvis reader for Elispot plates. The system consists of a reader (scanner or camera), a computer and specially developed user-friendly software.

Reagents for flow cytometry

The broad range of cell specific monoclonal antibodies and granzymes are the result of Sanquin's long history of research into human leukocytes. Whereas the development of the first cell specific monoclonal antibodies goes back as far as the early 80s, antibodies against granzymes are the result of current research. These cell specific monoclonal antibodies are specifically directed against typical cell surface structures (antigens), also called 'CDs'. CDs are cell surface molecules of leukocytes and platelets which can be distinguished from monoclonal antibodies. With these reagents cell populations can be differentiated and different types of leukocytes can be distinguished and isolated from the blood.

PeliMers: MHC-Multimers

MHC-multimers have revolutionised immunological research, as they are the first reagents that identify antigen-specific T-cells in FACS analysis. MHC-multimer technology is increasingly recognised as the golden standard for the quantification of specific T-cell immune response, illustrated by the more than 500 citations of the original publication: Phenotypic Analysis of Antigen-Specific T-Lymphocytes; Altman, John et. al. Science 1996 274: 94-96. In 1999, Sanquin Reagents / Research in Amsterdam and the Netherlands Cancer Institute (NKI) in Amsterdam launched an MHC-multimer core facility at Sanquin's premises. Our goal to combine knowledge in order to optimise the synthesis of HLA class I and II multimers has been achieved and since 2000 we offer Class I PeliMers, custom synthesis and peptides.

Benelux distribution

Sanquin Reagents also distributes products from other manufacturers in the Benelux. These products, from the companies Richter-Helm Biologics GmbH (former Strathmann) and Diaclone (Cytokine reagents, kits), are not included in the catalogue. Please use the reply card to receive the catalogues from these manufacturers.

Sanquin OEM facilities

Sanquin Reagents manufactures OEM assays for the largest companies in the diagnostics industry. Sanquin's view is that large diagnostic companies will avoid investing time and resources in small markets, since the outcome is veiled with uncertainty. Therein lies the opportunity for smaller, private enterprises, the strengths of which definitely include shorter decision-making pathways, withheld autonomy and less competitive pressure. Sanquin's modern, well-equipped laboratories are staffed with highly qualified scientists experienced in the design of immunoassays. Capabilities include development, bulk formulation, filling, labelling through to complete kit manufacture and quality control.

Sanquin Reagents offers high quality immune reagents tailored to customer requirements such as absorption, purification, fragmentation, conjugation and adjustment in concentration.

All work is performed in accordance with ISO9001 Quality System.

terms and conditions

These terms and conditions are for Benelux customers or for customers in countries without an official distributor for Sanquin Reagents. Please contact our local distributor for terms and conditions in other countries.

terms of delivery

Prices are not mentioned in the catalogue, the p-codes are price codes for distribution partners. A list of products and the corresponding prices will be sent to you on request. The prices in our pricelist are in Euros and are exclusive of the VAT tariff as decreed by law. Prices can be subject to changes during the year. In case of changes in price you will be notified in time. If there are any changes in the product package you will be informed thereof. Deliveries are postage paid. For rush orders the postage costs will be charged on the invoice. Payment has to take place within 30 days after receipt of the invoice.

ordering and deliveries

To avoid wrong deliveries we ask you to order in writing, either by letter or by fax. However, if you want to order by phone then we want you to give us an order or reference number. In case of telephone orders we cannot be held responsible for possible misunderstandings when writing down your order. After receipt of your order the products will be sent to you within two working days. If a delivery is delayed we will inform you as soon as possible. Our products are sent by Sanquin courier and as the courier does not work during the weekend, these shipments will only be given for delivery from Monday to Thursday. Deliveries are made during working hours.

storage conditions

Storage conditions and expiry date are stated on the vial label.

complaints and returns

Complaints about deliveries have to be made within one week after delivery. Return shipments can only be accepted after previous consultation. We ask you to clearly state the sender as well as to include a copy of the invoice or packer's number.

NOTE: in general delivered products will not be taken back.

customer satisfaction

Sanquin Reagents strives to offer the best quality products and services to our customers. We therefore appreciate active customer feedback when your demands are not met. There are several ways to report a problem or file a complaint:

- If you are located outside the Benelux, please contact your local distributor

- If you are located in Belgium, Luxemburg or The Netherlands: Call: +31 20 5123599 or send an e-mail to Reagents@sanquin.nl

Information to have at hand in case of a problem or complaint:

- laboratory name, address and telephone number
- date of problem/complaint
- name of complainant
- delivery note (number) / invoice number

In case the problem or complaint concerns a product we will need the product code number (REF on the product label), lot number (LOT on the product label) and the expiry date. It may be also necessary to supply us with additional data on the performance of our product. Sanquin Reagents will provide you a reference number, within one working day after receipt of the complaint with the name of the contact person, who will handle your problem. We will reply within 30 days, notify of results and/or any further action.

Ordering information

Sanquin Reagents
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 +31 20 512 3189 Export
 fax: +31 20 512 3570
 e-mail: reagentsorders@sanquin.nl

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 1006 AD Amsterdam

Technical information

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 e-mail reagents@sanquin.nl
 website www.sanquinreagents.com

Our website will give you an overview of the product range and package inserts can be downloaded in up to 13 languages for IVD products.

human IgG subclasses

Immunoglobulin G (IgG) is a major effector molecule of the humoral immune response in man and it accounts for about 75% of the total amount of immunoglobulins in plasma of healthy individuals. Four distinct subgroups of human IgG exist and are designated IgG1, IgG2, IgG3 and IgG4, respectively. Quantitatively, the relative serum concentrations of the human IgG subclasses are as follows: IgG1>IgG2>IgG3~IgG4. The four IgG subclasses show more than 95% homology in the amino acid sequences of the constant domains of the heavy chains and have their most conspicuous differences in the amino acid composition and structure of the 'hinge region'. This region, between the Fab arms and the two carboxy-terminal domains (CH2 and CH3) of both heavy chains determines the flexibility of the molecule. In particular, the length and flexibility of the hinge region are different. These differences in structure and flexibility are related to differences in effector functions: activation of complement and opsonisation (i.e. the induction of phagocytosis). These effector functions, mediated via the (constant) Fc fragment, are induced as a result of interaction of the antibody with its antigen via the (variable) Fab moiety.

clinical relevance

Deficiencies of IgG subclasses are an indication of a disturbed immune response. Several disease states are associated with decreased or increased levels of IgG subclasses. The most conspicuous consequence of a deficiency in one of the IgG subclasses is a defect of humoral immunity, although this does not necessarily lead to clinical manifestations. Since a decreased level of one IgG subclass may be accompanied by increased levels of one or more of the other IgG subclasses, the total IgG level may well be normal. Consequently, determination of IgG subclass levels is important, even when the total IgG level is within or slightly below the reference range of healthy individuals. Several studies indicate that (selective) IgG subclass deficiencies are associated with disease. Specific examples are: bronchiectasis and severe, recurrent stages of otitis media, sinusitis, pneumonia and bronchitis. The association between IgG2 deficiency and recurrent infections of the respiratory tract in young children, caused by encapsulated bacteria such as Haemophilus influenzae type b (Hib) and Streptococcus pneumoniae have led to an increasing demand for the determination of IgG subclasses in sera from children. The major clinical indication for measuring IgG subclasses is the occurrence of abnormally frequent and/or prolonged or severe infections that cannot be explained by the usual clinical and laboratory data. In general, when immunodeficiency is suspected on clinical grounds, IgG subclasses should always be measured.

kits and reagents for determination of human IgG subclass levels

Different methods are in use for the quantitative determination of IgG subclasses. Sanquin manufactures kits and reagents for the most frequently used assays: RID, ELISA and nephelometry.

It has always been one of Sanquin's principles that a value obtained for the IgG subclass level in a given serum sample should be the same, regardless of the technique used. Sanquin's kits for the different IgG subclass assays therefore exhibit a very good correlation.

Sanquin Quality Survey Service for IgG subclass assays

As a service, Sanquin Reagents organizes a free, regular Quality Survey for in-house assessment of assays for human IgG subclasses. Any laboratory in the world may participate free-of-charge. Twice a year, 3 encoded samples (sera from healthy individuals, as well as patients) are distributed among participating laboratories. Each laboratory will determine the levels of IgG1, IgG2, IgG3 and IgG4 in these samples. The techniques used are RID, ELISA, nephelometry or other techniques with kits or reagents supplied by Sanquin or other manufacturers. All results are evaluated and statistically analysed.

IgG subclass booklet from Sanquin Reagents

Sanquin Reagents issues an information booklet: 'Human IgG subclasses: useful diagnostic markers for immunocompetence', which presents a comprehensive summary of human IgG subclasses including structure and function, role in clinical diagnosis and a summary of current assay techniques.

This booklet can be obtained free-of-charge.

The product range for determination of human IgG subclass levels consists of the following kits and reagents:

- **PeliClass™ nephelometry**
kits and reagents for nephelometric quantification
- **PeliRIDe™ immunodiffusion precipitation techniques**
kit and reagents for radial immunodiffusion and antisera for precipitation techniques
- **PeliClass™ enzyme-linked immunosorbent assay (ELISA)**
kit for 'sandwich'-type enzyme immunoassay
- **PeliClass™ monoclonal antibodies**
labelled and unlabelled monoclonal antibodies

overview of the IgG subclass products

<i>description</i>	<i>kit / set</i>	<i>anti-IgG1</i>	<i>anti-IgG2</i>	<i>anti-IgG3</i>	<i>anti-IgG4</i>	<i>standard</i>	<i>control</i>
PeliClass™ nephelometry							
Beckman Coulter PeliClass™ Array kit	M1682						
PeliClass™ antisera Array standard and control sera Array		M1683	M1684	M1685	M1686	M1687	M1688 (low) M1783 (normal)
PeliClass™ IMMAGE IMMAGE 800 kit	M1775						
PeliClass™ antisera IMMAGE IMMAGE 800 standard and control sera IMMAGE IMMAGE 800		M1771	M1772	M1773	M1774	M1776	M1777 (low) M1778 (normal)
PeliRiDe™ immunodiffusion precipitation techniques							
PeliRiDe™ kit	M1557						
PeliRiDe™ plates antisera		M1558	M1559	M1560	M1561		
standard and control sera	M1175	M1100	M1102	M1104	M1106	M1562 (IgG1 and IgG2) M1563 (IgG3 and IgG4)	M1564 M1565
PeliClass™ agglutination test							
PeliClass™ antisera	M1174	M1099	M1101	M1103	M1105		M1397
PeliClass™ enzyme-linked immunosorbent assay (ELISA)							
PeliClass™ ELISA kit	M1551						
PeliClass™ monoclonal antibodies							
PeliClass™ antibodies	M1327	M1325	M1326	M1270	M1271		
PeliClass™ HRP-labelled antibodies	M1742	M1328	M1329	M1330	M1331		
Quality Survey							
Quality Survey Samples	M1623						

PeliClass™ nephelometry

The nephelometric quantification is based upon the specific reaction of a monospecific, highly avid anti-IgG subclass antiserum with the human IgG subclass to be determined. The generated immune complexes are quantified by measuring the side-scattered light. A distinct advantage of nephelometry is the relatively short incubation time. As another advantage, nephelometry assays may readily be automated and are therefore suitable for the routine measurement of IgG subclasses in large numbers of samples.

order-
number p-code package description

For Beckman Coulter Array nephelometric analyser, CE IVD

M1682 P41 kit

PeliClass™ human IgG subclass nephelometric Array* kit

The PeliClass™ human IgG subclass kit has been designed for fast, reproducible and specific quantification of human IgG subclasses (IgG1, IgG2, IgG3 and IgG4). The fractionated sheep anti-human IgG subclass sera are made specific by absorption with isolated paraproteins of the unwanted IgG subclasses and, if necessary, by absorption with isolated serum fractions. The polyclonal reagents in this kit are specific for human IgG subclasses and have been selected for high avidity. The IgG subclass concentrations in the test samples are determined by comparison with a calibration curve, obtained with the provided IgG subclass calibrator. IgG subclass control sera (serum) are assayed to check the validity of the calibration curves and the accuracy of the IgG subclass determinations. The IgG subclass levels in the calibrator(s) were determined using a calibrator derived from the WHO 67/97 reference preparation.

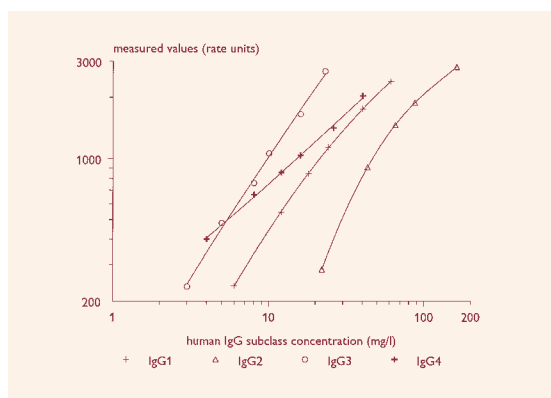
features:

	IgG1	IgG2	IgG3	IgG4
sample dilution	1:216	1:36	1:36	1:36
assay range (mg/ml)	0,86 - 16,68	0,54 - 8,93	0,062 - 0,980	0,089 - 1,411
intra-assay variation (%)	1	1	1	1
inter-assay variation (%)	2	2	1	4
incubation time (minutes)	1	1	1	1

components:

The kit contains sufficient reagents to measure each of the four human IgG subclasses in at least 50 tests.

- antisera to IgG1, IgG2, IgG3 and IgG4
- set of ready-to-use IgG subclass standard sera
- control sera
- reference values for human IgG subclasses



PeliClass™ antisera for Array*

M1683	P29	2.5 ml	anti-human IgG1 (sheep)
M1684	P31	2.5 ml	anti-human IgG2 (sheep)
M1685	P21	2.5 ml	anti-human IgG3 (sheep)
M1686	P21	2.5 ml	anti-human IgG4 (sheep)

standard and control sera for Array*

M1687	P14	set	Set of ready-to-use human standard sera
M1688	P7	1 ml	human control serum 'low'
M1783	P7	1 ml	human control serum 'normal'

Array is a trademark of Beckman Coulter Inc., Brea, California, U.S.A.

order-
number

p-code

package

description

For Beckman Coulter IMMAGE/IMMAGE 800 Immunochemistry System, CE IVD

M1775 P41 kit

PeliClass™ human IgG subclass nephelometric IMMAGE* kit

The fractionated sheep anti-human IgG subclass sera are made specific by absorption with isolated paraproteins of the unwanted IgG subclasses and, if necessary, by absorption with isolated serum fractions. The polyclonal reagents in this kit are specific for human IgG subclasses and have been selected for high avidity. The IgG subclass concentrations in the test samples are determined by comparison with a reference curve, obtained with the provided IgG subclass calibrators.

IgG subclass control sera are assayed to check the validity of the reference curves and the accuracy of the IgG subclass determinations. The IgG subclass levels in the calibrators were determined using a calibrator derived from the WHO 67/97 reference preparation as calibrator.

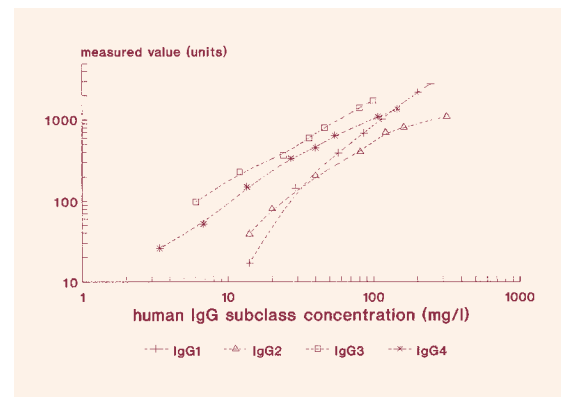
features:

	IgG1	IgG2	IgG3	IgG4
sample dilution	1:50	1:20	1:10	1:10
assay range (mg/ml)	0,92 - 14,31	0,23 - 9,77	0,063 - 1,000	0,043 - 1,416
intra-assay variation (%)	1	2	1	3
inter-assay variation (%)	4,2	6,8	5,9	4,4
incubation time (minutes)	3	3	3	3

components:

The kit contains sufficient reagents to measure each of the four human IgG subclasses in 50 tests.

- antisera to IgG1, IgG2, IgG3 and IgG4
- set of ready-to-use IgG subclass standard sera
- control sera
- reference values for human IgG subclasses



PeliClass™ antisera for IMMAGE*

M1771	P26	2,4 ml	anti-human IgG1 (sheep)
M1772	P26	2,9 ml	anti-human IgG2 (sheep)
M1773	P26	2,4 ml	anti-human IgG3 (sheep)
M1774	P26	2,4 ml	anti-human IgG4 (sheep)

Standard and control sera for the IMMAGE*

M1776	P16	set	set of ready-to-use human standard sera
M1777	P10	1 ml	human control serum 'low'
M1778	P10	1 ml	human control serum 'normal'

IMMAGE is a trademark of Beckman Coulter Inc., Brea, California, U.S.A.

PeliRiDe™ Immunodiffusion precipitation techniques, CE IVD

RID (Mancini) is a classical diagnostic method to determine IgG subclasses. This reliable assay is widely used and easy to perform.

order-number *p-code* *package* *description*

M1557 **P39** **kit** **PeliRiDe™ human IgG subclass RID kit**

The RID (Radial immunodiffusion or Mancini) is the oldest diagnostic method to determine IgG subclasses. The assay is widely used and easy to perform. The fractionated sheep anti-human IgG subclass sera are made specific by absorption with isolated paraproteins of the unwanted IgG subclasses and, if necessary, by absorption with isolated serum fractions. There is no reactivity with allotypic or isoallotypic determinants, nor preferential reactivity with kappa or lambda chains. The Sanquin polyclonal, monospecific antisera used in the PeliRiDe™ human IgG subclass RID plates, yield sharp, single precipitation rings, specific for each subclass. The diameters of the clearly visible immunoprecipitation rings are measured after at least 64 hours, using an immunodiffusion reader or a calibrated magnifier. The IgG subclass concentrations in the test samples are determined by means of either the reference curves or the included RID reference table.

features:

	IgG1	IgG2	IgG3	IgG4
intra-assay variation (%)	4	1	1	2
inter-assay variation (%)	6	2	4	2
incubation time (minutes)	> 64 hours			

components:

The kit contains sufficient plates and reagents to measure each of the four human IgG subclasses in 19 test samples (when using the calibration curves) or 22 test samples (when using the tabular method).

- four ready-to-use (3 x 8 wells) IgG subclass specific RID plates (IgG1, IgG2, IgG3 and IgG4)
- standard and control sera
- dilution buffer
- reference values for human IgG subclasses
- RID reference table

PeliRiDe™ RID plates

Single plates to measure one human IgG subclass in 19 test samples (when using the calibration curves)

M1558	P24	plate	RID plate for quantification of human IgG1 (3 x 8 wells)
M1559	P27	plate	RID plate for quantification of human IgG2 (3 x 8 wells)
M1560	P18	plate	RID plate for quantification of human IgG3 (3 x 8 wells)
M1561	P24	plate	RID plate for quantification of human IgG4 (3 x 8 wells)

standard and control sera for RID

M1562	P6	0.5 ml	human standard serum for quantification of IgG1 en IgG2
M1563	P6	0.5 ml	human standard serum for quantification of IgG3 en IgG4
M1564	P6	0.5 ml	human control serum, as reference for quantification of IgG1 and IgG2
M1565	P6	0.5 ml	human control serum, as reference for quantification of IgG3 and IgG4

PeliClass™ enzyme-linked immunosorbent assay (ELISA), CE IVD

In the 'sandwich'-type enzyme immunoassay the IgG subclass of interest is captured by anti-human IgG subclass-specific antibody and quantified by an enzyme-labelled anti-IgG antibody.

order-number *p-code* *package* *description*

M1551	P72	kit	<p>PeliClass™ human IgG subclass ELISA kit</p> <p>The PeliClass human subclass ELISA kit is a 'sandwich'-type enzyme immunoassay. The kit contains microwell strips coated with highly avid monoclonal antibodies, each specific for one of the human IgG subclasses. Test samples, calibrator- and control sera are incubated in the respective wells. The IgG subclass to be determined will bind to the solid phase and non-bound IgG is removed by washing. Next, peroxidase-conjugated anti-human IgG antiserum is added to each well and non-bound conjugate is removed by washing. After incubation with substrate solution (ABTS) and H₂O₂, the reaction is stopped with an acid buffer. The green colored reaction product is measured by absorbance and the concentration of IgG subclass in the test sample calculated relative to the values of a reference curve. IgG subclass control serum is assayed to check the validity of the calibration curves and the accuracy of the IgG subclass determinations. The IgG subclass levels in the calibrator(s) were determined using a calibrator derived from the WHO 67/97 reference preparation</p>
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features:

	IgG1	IgG2	IgG3	IgG4
intra-assay variation (%)	4	3	4	2
inter-assay variation (%)	2	2	7	7
incubation time	2.5 hours			

components:

- The kit contains six pre-coated 8-well strips for each of the four IgG subclasses.
- two pre-coated microtiter plates with six colour-coded 8-well-strips for each IgG subclass
 - horseradish peroxidase-conjugated anti-human IgG antibodies
 - standard and control sera
 - wash, dilution, substrate and stop buffers
 - ABTS and hydrogen peroxidase substrate stock solution
 - reference values for human IgG subclasses

PeliClass™ monoclonal antibodies

The (ion)-chromatographically purified immunoglobulin fractions are available both unlabelled and as horseradish peroxidase (HRP)-conjugated. The origin of the monoclonal antibodies is mouse. The antibody concentration is approximately 1 mg/ml. M1325, M1326 and M1270 do not crossreact with IgG molecules of goat, horse, pig, rabbit and sheep. M1271 does not cross react with IgG molecules of rabbit, but does crossreact with IgG molecules of goat and sheep. M1326 does cross react with bovine IgG molecules.

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
PeliClass™ antibodies, unlabelled			
M1325	P32	1 ml	anti-human IgG1 (Fc), clone MH161-1, HP6188 (mouse)
M1326	P34	1 ml	anti-human IgG2 (Fab), clone MH162-1, HP6014 (mouse)
M1270	P20	1 ml	anti-human IgG3 (hinge), clone MH163-1, HP6095 (mouse)
M1271	P28	1 ml	anti-human IgG4 (C _H 3), clone MH164-4, HP6196 (mouse)
M1327	P42	4x1 ml	set of above mentioned monoclonal anti-human IgG subclass antisera (MH161-1, HP6014, MH163-1 and MH164-4)
PeliClass™ antibodies, HRP-labelled			
M1328	P32	1 ml	anti-human IgG1 (Fc), clone MH161-1, HP6188 (mouse)
M1329	P34	1 ml	anti-human IgG2 (Fab), clone MH162-1, HP6014 (mouse)
M1330	P20	1 ml	anti-human IgG3 (hinge), clone MH163-1, HP6095 (mouse)
M1331	P28	1 ml	anti-human IgG4 (C _H 3), clone MH164-4, HP6196 (mouse)
M1742	P42	4x1 ml	set of above mentioned HRP-labelled monoclonal anti-human IgG subclass antisera (MH161-1, HP6014, MH 163-1 and MH 164-4)

cytokines, granzymes, perforin and related proteins

The cytokines consist of a group of hormone-like proteins that are produced by a variety of cell types. Most cytokines are involved in the maintenance of cell viability, induction of proliferation, maturation of hematopoietic cells, regulation of immunity, inflammation, cellular activities and embryonic development. The quantification of human cytokines is increasingly performed in diagnostics and research. Originally, cytokines could only be detected by their biological activities, but later immunoassays were developed, based mostly on specific monoclonal antibodies. Nowadays ready-to-use cytokine ELISA and ELISPOT kits based on specific antibodies are widely used.

kits and reagents for ELISA

Under the trade name PeliKine™, Sanquin offers a broad range of ELISA kits and reagents for determination of human cytokine levels. Sanquin makes every effort to develop and manufacture high-quality, reliable reagents, to meet the requirements of customers, and to comply with strict levels of specificity and standardisation.

The antibodies included in the ELISA kits from Sanquin have been carefully selected for reactivity and specificity. To ascertain the highest possible level of specificity, each ELISA kit has been meticulously tested for (cross)reactivity with a wide range of cytokines. The ELISA kits combine high sensitivity with a wide concentration range. By using a polymer of HRP conjugated to streptavidin (Poly-HRP, proprietary technology Sanquin) as well as the application of highly reactive antibodies, assay sensitivities of 0.2 pg/ml are achieved. This corresponds to the background signal plus 3 SD. For each kit, the actual assay range is represented in the form of a quantitative standard curve.

Linearity of dose-response curves is ensured, since the tests are run in Sanquin's 'High-Performance'-ELISA buffer (HPE buffer, proprietary technology). Moreover, optimised combinations of antibodies have been selected and the assay performance is validated by spiking, diluting and recovery experiments.

The reliability of several cytokine ELISA kits has been validated by testing for any influence of rheumatoid factors in spiking and recovery experiments.

As an officially recognised International Laboratory for Biological Standards, Sanquin is experienced in reliable standardisation.

ELISA product range

• PeliKine™ human cytokine ELISA kits

Each of these ready-to-use PeliKine™ ELISA kits contains a pre-coated microwell plate (96 tests) and all reagents and solutions required for quantification of the particular human cytokine.

Optimal experimental protocols are included in each kit, so as to allow direct application using body fluids (serum, plasma, urine), as well as cell culture supernatants.

• PeliKine™-compact human cytokine ELISA kits

The PeliKine™-compact kits contain all essential reagents to prepare three ELISA plates (288 tests). Compared with kits containing pre-coated plates, the PeliKine™-compact kits offer substantial savings. One advantage as compared to setting up your own test, is that these kits include a ready-made protocol which guarantees a high-quality assay for body fluids (serum, plasma, urine), and for cell culture supernatants.

• PeliPair™ reagent sets for cytokine ELISA

The PeliPair™ reagent sets contain coating antibody and biotinylated detection antibody as well as standard to prepare nineteen ELISA-plates. Compared to the PeliKine™-compact kit, these sets contain the same antibodies and standards, in the same concentrations, but in 5 ampuls. For the quantification of cytokines in cell culture supernatants this kit is recommended.

kits, reagents and analysers for ELISPOT

The ELISPOT technique is an assay method that has demonstrated its significance in the last few years mainly in the field of anti-viral immunity and tumour-immunology.

A significant advantage compared to the ELISA technique is the increased sensitivity. Where ELISA requires at least 400 cells per well to produce sufficient cytokines to give detectable levels, in contrast in ELISPOT only 1 positive cell per well can be detected resulting in a sensitivity of 1×10^6 positive cells. Not only the high sensitivity, but also the possibility to enumerate cytokine producing T cells at the single cell level, is an enormous advantage.

ELISPOT principle; Cells are incubated overnight with a stimulator in a well coated with a high affinity anti cytokine monoclonal antibody. Secreted cytokine will bind in situ to the coat antibody. Subsequently cells and unbound components are washed away and a biotin labelled anti cytokine antibody is added. Via streptavidin-poly-HRP and a precipitating substrate the presence of the secreted component is visualised as a blue/purple coloured spot.

Nowadays analysing spots has become a lot more accurate and, in particular, a lot more uncomplicated and faster, thanks to the use of automated readers. Sanquin Reagents is the exclusive distributor of the A.EL.VIS (Automated Elispot Video analysis System) reader. The system consists of a reader, a computer and specially developed, user-friendly software. The entire process of measuring, analysing and printing is done in less than 10 minutes per plate.

ELISPOT product range

- **PeliSPOT™ human ELISPOT kits**

The PeliSPOT™ kits contain all reagents to prepare 375 ELISPOT tests. The kits include a ready-made protocol which guarantees a high-quality and easy to perform assay.

- **PeliSPOT™ Pairs for human and mouse ELISPOT assays**

The PeliSPOT™ Pairs contain pre-diluted coating and detection antibodies to prepare three ELISPOT plates. The Pairs include a ready-made protocol which also describes the use of our supplementary reagents.

- **PeliSPOT™ Supplementary reagents**

Reagents to combine with our PeliSPOT™ Pairs or to enhance the performance and sensitivity of any commercial or home-brewed ELISPOT assay.

A.EL.VIS ELISPOT analysers

- **Eli.Expert**

4 plate high throughput reader capable of measuring all types of microtiter plates.

Suitable for Expert labs running high numbers of plates.

- **Eli.Scan**

High-quality CCD scan unit.

Highly recommended for research labs because of its low-price, simplicity, robustness and ease of maintenance.

- **Counting service**

The ELISPOT counting service at Sanquin is initiated to support customers who start the ELISPOT assay or when the technique is only required incidentally.

overview of ELISA products

cytokine order p-code sensitivity standard range
number

PeliKine™ human cytokine ELISA kits, 96 tests (1 plate)

All ELISA kits can be used with serum, plasma and cell culture supernatants

IL-4	M1904	P37	0,2 pg/ml	0,7 - 180	pg/ml
IL-6	M1906	P37	0,3 pg/ml	0,3 - 80	pg/ml
TNF-α	M1920	P37	1,0 pg/ml	1 - 1000	pg/ml
IFN-γ	M1921	P37	1,0 pg/ml	2 - 450	pg/ml

PeliKine™-compact human cytokine ELISA kits, 288 tests (3 plates)

IL-1β	M1934	P33	0,4 pg/ml	0,4 - 300	pg/ml	plasma, serum, supernatant
IL-4	M1914	P33	0,2 pg/ml	0,6 - 450	pg/ml	plasma, serum, urine, supernatant
IL-6	M1916	P33	0,2 pg/ml	0,6 - 450	pg/ml	plasma, serum, urine, supernatant
sIL-6r	M1926	P33	3,0 pg/ml	10 - 2500	pg/ml	plasma, serum, supernatant
IL-8	M1918	P33	1,0 pg/ml	1 - 240	pg/ml	plasma, serum, urine, supernatant
IL-10	M1910	P33	1,0 pg/ml	1 - 300	pg/ml	plasma, serum, supernatant
IL-13	M1913	P33	0,5 pg/ml	0,5 - 125	pg/ml	plasma, serum, supernatant
TNF-α	M1923	P33	1,0 pg/ml	1 - 1000	pg/ml	plasma, serum, supernatant
IFN-γ	M1933	P33	1,0 pg/ml	2 - 500	pg/ml	plasma, serum, supernatant
sCD-27	M1960	P33	1,5 U/ml	1 - 100	U/ml	plasma, serum, urine, CSF, supernatant
Granzyme-A	M1935	P55	<20,0 U/ml	1,6 - 1200	U/ml	plasma, serum, supernatant
Granzyme-B	M1936	P55	<10,0 U/ml	1,3 - 960	U/ml	plasma, serum, supernatant

PeliPair™ reagent sets, (19 plates)

Contains coating antibody and biotinylated detection antibody and standards

IL-1β	M9334	P52
IL-4	M9314	P52
IL-6	M9316	P52
IL-6R	M9326	P52
IL-8	M9318	P52
IL-10	M9310	P52
IL-13	M9313	P52
TNF-α	M9323	P52
IFN-γ	M9333	P52

ELISA supplementary reagents

M1980	P13	kit	PeliKine™ toolset
M2051	P10	0.1 ml	poly-HRP labelled with streptavidin, 1 mg/ml
M2032	P45	1 ml	poly-HRP labelled with streptavidin, 1 mg/ml
M2052	P9	100 ml	casein colloid buffer 5% to dilute poly-HRP
M1940	P18	60 ml	HPE dilution buffer to dilute samples and poly-HRP, eliminating matrix effects

overview of ELISPOT products

cytokine

order
number

p-code

PeliSPOT™ cytokine, Granzyme kits (3 plates)

Human Granzyme B	M2536	P72
Human IFN-gamma	M2533	P33
Human IL-4	M2514	P33

PeliSPOT™ pairs (375 tests)

Human

Human Perforin	M9437	P25
Human IFN-gamma	M9433	P25
Human IL-1 beta	M9434	P25
Human IL-2	M9412	P25
Human IL-4	M9414	P25
Human IL-5	M9415	P25
Human IL-10	M9410	P25
Human IL-13	M9413	P25

Mouse

Mouse IL-5	M9515	P25
Mouse IFN-gamma	M9533	P25

PeliSPOT™ supplementary reagents

PeliSPOT™ buffer 50 ml	M2540	P7
Streptavidin poly-HRP 0.1 ml	M2051	P10
Streptavidin poly-HRP 1 ml	M2032	P45
TMB for PeliSPOT™ 18 ml	M2521	P5

AELVIS ELISPOT analyses

Eli.Expert	M7200	4 stage reader for all plates
Eli.Scan	M7202	Eli.Scan Foil Reader

AELVIS supplementary products

Eli-Foil	M7206	Special foils for Millipore plates and 96 well puncher
Eli-Punch	M7205	96 well puncher for Millipore plate
Eli-Analyse	M7210	software to analyse data (not to acquire data)

PeliKine™ human cytokine ELISA kits, 96 tests

The PeliKine™ human cytokine ELISA kits are designed for sensitive measurement of cytokines in various matrices. The use of pre-coated microwell plates (8-well strips) ensures fast and reproducible assay results. Each PeliKine™ human cytokine ELISA kit provides all components to perform 96 tests. Please inquire for availability

order-
number

p-code

package

description

standard curve

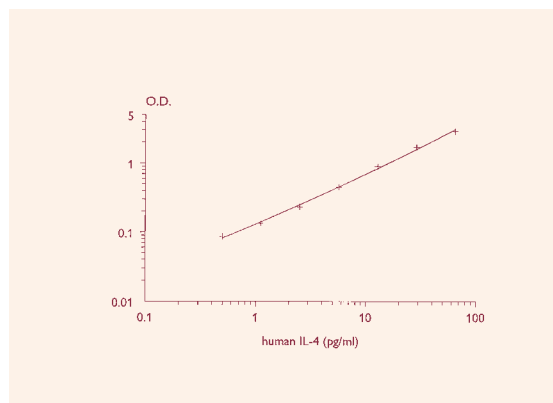
M1904 P37 kit PeliKine™ human IL-4 ELISA kit

features:

- sample type: plasma, serum, urine, culture fluid
- sensitivity: 0.2 pg/ml
- standard range: 0.7 - 180 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: 4 hours

components:

- one pre-coated microwell plate with 12 x 8 well strips
- biotin-conjugated anti-human IL-4 antibodies, streptavidin poly-HRP
- IL-4 standard
- wash, dilution, substrate and stop buffers
- TMB substrate solution



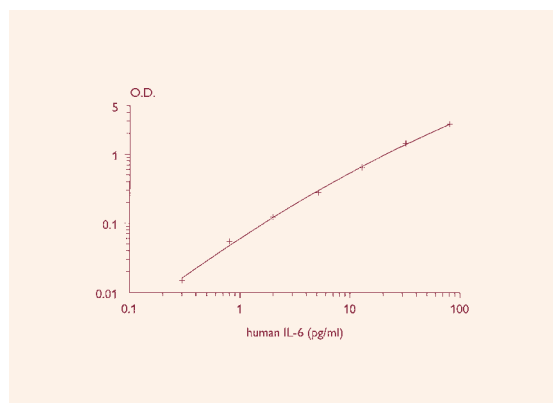
M1906 P37 kit PeliKine™ human IL-6 ELISA kit

features:

- sample type: plasma, serum, urine, culture fluid
- sensitivity: 0.3 pg/ml
- standard range: 0.3 - 80 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: 4 hours

components:

- one pre-coated microwell plate with 12 x 8 well strips
- biotin-conjugated anti-human IL-6 antibodies, streptavidin poly-HRP
- IL-6 standard
- wash, dilution, substrate and stop buffers
- TMB substrate solution



order-number	p-code	package	description
M1920	P37	kit	PeliKine™ human TNF-α ELISA kit

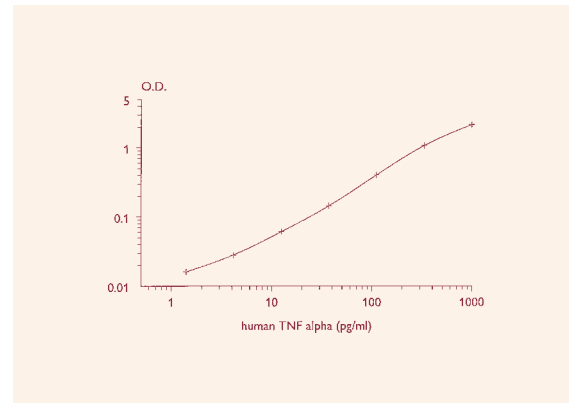
features:

- sample type: plasma, serum, culture fluid
- sensitivity: 1 pg/ml
- standard range: 1 - 1000 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: 4 hours

components:

- one pre-coated microwell plate with 12 x 8 well strips
- biotin-conjugated anti-human TNF- antibodies, streptavidin poly-HRP
- TNF- standard
- wash, dilution, substrate and stop buffers
- TMB substrate solution

typical standard curve



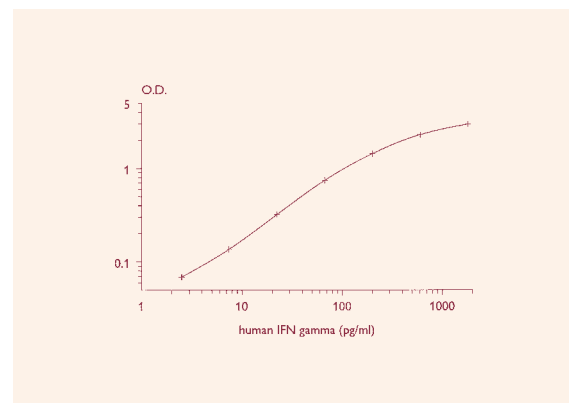
M1921	P37	kit	PeliKine™ human IFN-γ ELISA kit
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features:

- sample type: plasma, serum, culture fluid
- sensitivity: 1 pg/ml
- standard range: 2 - 1150 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: 4 hours

components:

- one pre-coated microwell plate with 12 x 8 well strips
- biotin-conjugated anti-human IFN- antibodies, streptavidin poly-HRP
- IFN- standard
- wash, dilution, substrate and stop buffers
- TMB substrate solution



PeliKine™-compact human cytokine and granzyme ELISA kits, 288 tests

Under the trade name PeliKine™-compact Sanquin offers an ever expanding range of cytokine ELISA kits of outstanding quality. The excellent properties at a low price have made these reagents a success with researchers worldwide. The PeliKine™-compact kits contain all essential reagents to prepare three ELISA plates (sufficient for 288 tests): coating antibody, blocking reagent, cytokine standard (calibrated against an international standard), High Performance ELISA (HPE) buffer (developed by Sanquin), biotin conjugate and streptavidin poly-HRP.

Compared with kits containing ready-coated microtiter plates, the PeliKine™-compact kits offer substantial savings. One advantage as compared to setting up your own test, is that these kits include a ready-made protocol and guarantee a high-quality assay. All you have to do is prepare a few buffer and substrate solutions commonly used in research labs. For even more convenience, a complete set of these buffers and substrates are available as the *'Tool Set for PeliKine™-compact ELISA Kits'*.

The High-Performance ELISA buffer and streptavidin poly-HRP are also available separately. These reagents will improve the performance of any ELISA.

components:

Each kit contains sufficient reagents for 288 samples (including calibration curves), coating antibody, blocking reagent, human cytokine standard, biotin-conjugated anti-human cytokine antibody, streptavidin poly-HRP conjugate, HPE (High Performance ELISA) dilution buffer and 3 microtiter plates.

order-
number

p-code

package

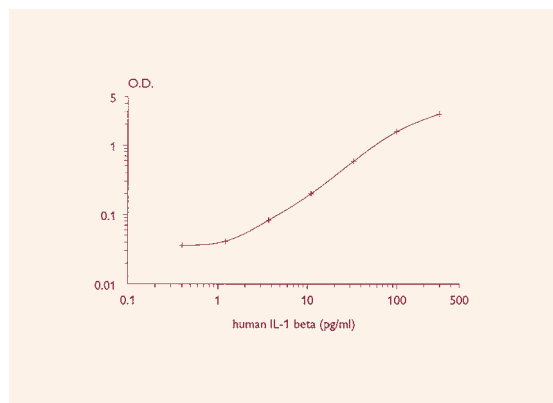
description

typical standard curve

M1934 P33 kit PeliKine™-compact human IL-1 ELISA kit

features:

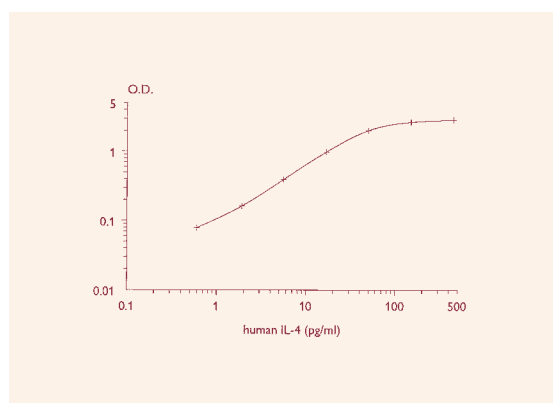
- sample type: plasma, serum, urine, culture fluid
- sensitivity: 0.4 pg/ml
- standard range: 0.4 - 300 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: overnight coat, assay completed in 4 hours



M1914 P33 kit PeliKine™-compact human IL-4 ELISA kit

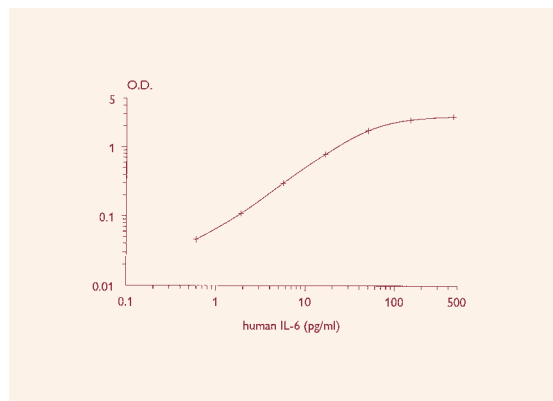
features:

- sample type: plasma, serum, culture fluid
- sensitivity: 0.2 pg/ml
- standard range: 0.6 - 450 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: overnight coat, assay completed in 4-hours

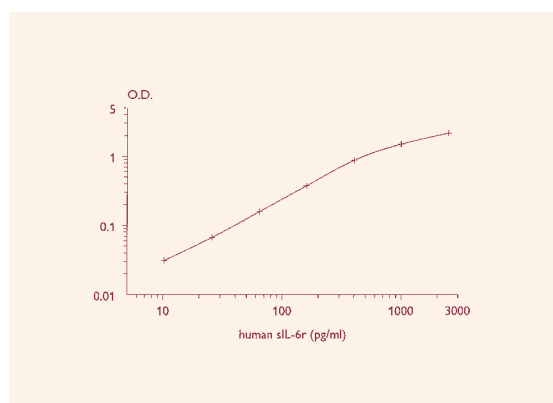


order-number	p-code	packing	description
M1916	P33	kit	<p>PeliKine™-compact human IL-6 ELISA kit</p> <p>features:</p> <ul style="list-style-type: none"> • sample type: plasma, serum, urine, culture fluid • sensitivity: 0.2 pg/ml • standard range: 0.6 - 450 pg/ml • reproducibility: intra / inter-assay < 10 % • assay time: overnight coat, assay completed in 4 hours

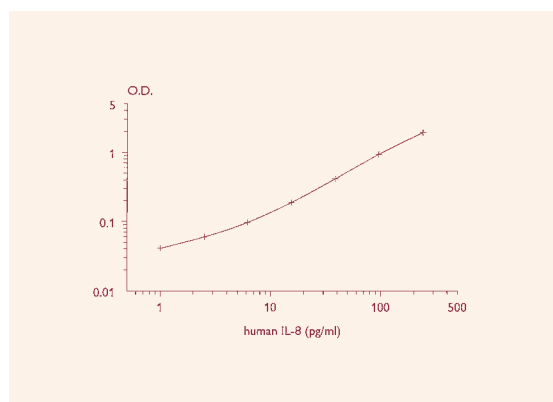
typical standard curve



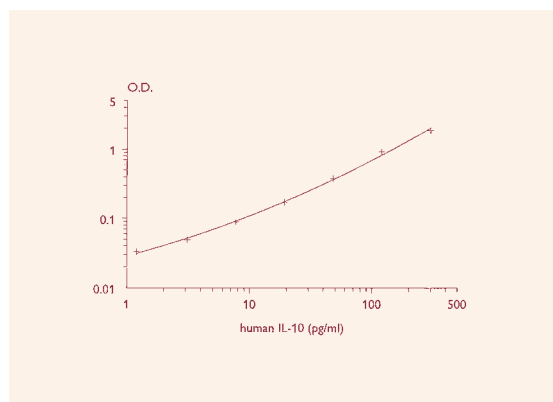
M1926	P33	kit	<p>PeliKine™-compact human soluble IL-6 receptor ELISA kit</p> <p>features:</p> <ul style="list-style-type: none"> • sample type: plasma, serum, culture fluid • sensitivity: 3 pg/ml • standard range: 10 - 2500 pg/ml • reproducibility: intra / inter-assay < 10 % • assay time: overnight coat, assay completed in 4 hours
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M1918	P33	kit	<p>PeliKine™-compact human IL-8 ELISA kit</p> <p>features:</p> <ul style="list-style-type: none"> • sample type: plasma, serum, urine, culture fluid • sensitivity: 1 pg/ml • standard range: 1 - 240 pg/ml • reproducibility: intra / inter-assay < 10 % • assay time: overnight coat, assay completed in 4 hours
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M1910	P33	kit	<p>PeliKine™-compact human IL-10 ELISA kit</p> <p>features:</p> <ul style="list-style-type: none"> • sample type: plasma, serum, culture fluid • sensitivity: 1 pg/ml • standard range: 1 - 300 pg/ml • reproducibility: intra / inter-assay < 10 % • assay time: overnight coat, assay completed in 4 hours
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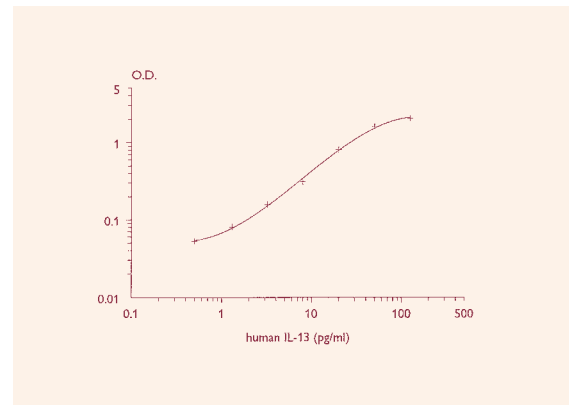


order-number	p-code	package	description
M1913	P33	kit	PeliKine™-compact human IL-13 ELISA kit

features:

- sample type: plasma, serum, culture fluid
- sensitivity: 0.5 pg/ml
- standard range: 0.5 - 125 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: overnight coat, assay completed in 4 hours

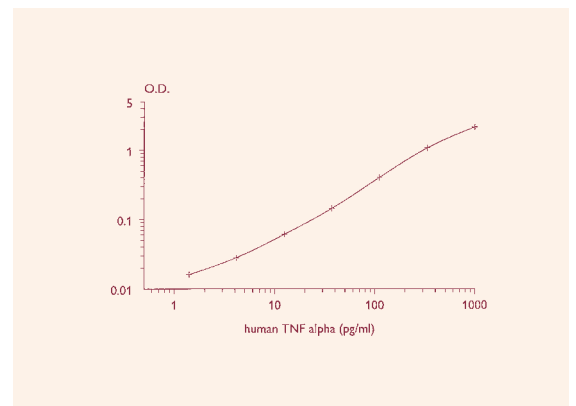
typical standard curve



M1923	P33	kit	PeliKine™-compact human TNF-α ELISA kit
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features:

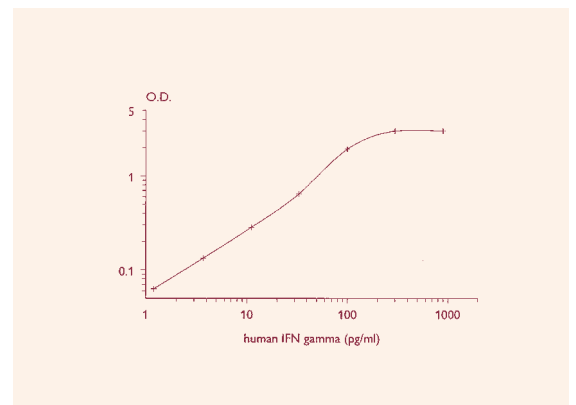
- sample type: plasma, serum, urine, culture fluid
- sensitivity: 1 pg/ml
- standard range: 1 - 1000 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: overnight coat, assay completed in 4 hours



M1933	P33	kit	PeliKine™-compact human IFN-γ ELISA kit
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features:

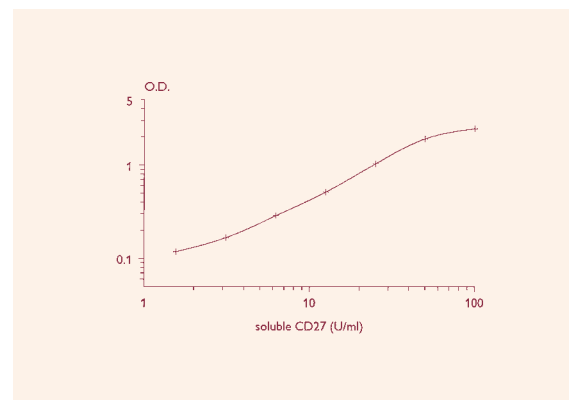
- sample type: plasma, serum, culture fluid
- sensitivity: 1 pg/ml
- standard range: 2 - 500 pg/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: overnight coat, assay completed in 4 hours



M1960	P33	kit	PeliKine™-compact human soluble CD27 ELISA kit
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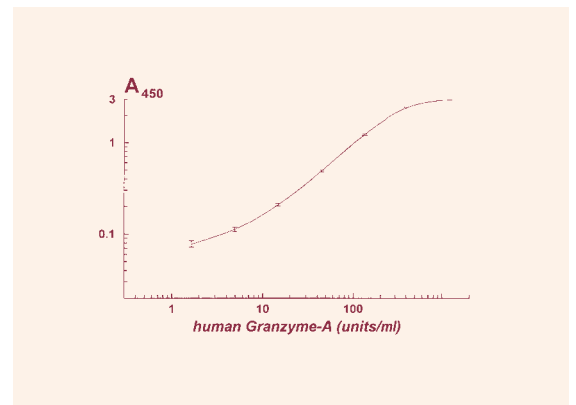
features:

- sample type: plasma, serum, urine, CSF, culture fluid
- sensitivity: 1 U/ml
- standard range: 1 - 100 U/ml
- reproducibility: intra / inter-assay < 10 %
- assay time: overnight coat, assay completed in 4 hours

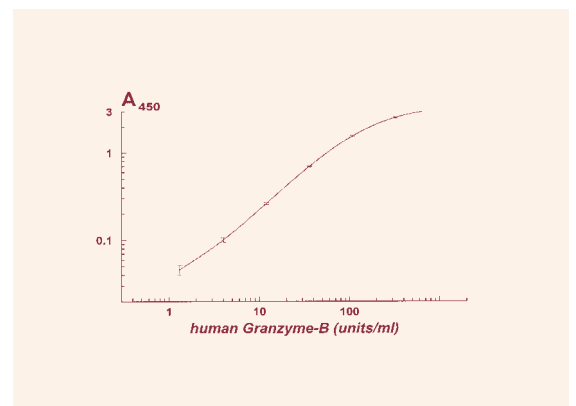


order-number	p-code	package	description
M1935	P55	kit	<p>PeliKine™-compact Granzyme A ELISA kit</p> <p>features:</p> <ul style="list-style-type: none"> • sample-type: plasma, serum, supernatant • sensitivity: < 20 U/ml • standard range: 1,6 - 1200 U/ml • assay time: overnight coat, assay completed in 4 hours

typical standard curve



M1936	P55	kit	<p>PeliKine™-compact Granzyme B ELISA kit</p> <p>features:</p> <ul style="list-style-type: none"> • sample-type: plasma, serum, supernatant • sensitivity: < 10 U/ml • standard range: 1,3 - 960 U/ml • assay time: overnight coat, assay completed in 4 hours
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PeliPair™ reagent sets, 1824 tests (19 plates)

The PeliPair™ reagent sets contain pre-titered coating antibody and biotinylated detection antibody as well as standard to prepare 19 ELISA-plates. When using streptavidin poly-HRP (M2051, M2032) and HPE dilution buffer the same sensitivities as with the compact kits can be achieved. For quantification of cytokines in serum or plasma we strongly recommend the use of the HPE-dilution buffer (M1940). For even more convenience the Toolset, a complete set of buffers and substrates is available.

components:

Each kit contains sufficient antibodies and standards for 1824 tests (19 plates): 5 vials coating antibody, 5 vials biotinylated detection antibody and 5 or 10 vials of standard (depending on cytokine stability).

Features are based upon the performance of PeliKine™-compact kits and thus depend on the use of blocking reagent, dilution buffers and streptavidin poly-HRP conjugate.

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
M9334	P52	kit	PeliPair™ human IL-1β • sensitivity: 0.8 pg/ml
M9314	P52	kit	PeliPair™ human IL-4 • sensitivity: 0.2 pg/ml
M9316	P52	kit	PeliPair™ human IL-6 • sensitivity: 0.2 pg/ml
M9326	P52	kit	PeliPair™ human IL-6R • sensitivity: 3 pg/ml
M9318	P52	kit	PeliPair™ human IL-8 • sensitivity: 1 pg/ml
M9310	P52	kit	PeliPair™ human IL-10 • sensitivity: 1 pg/ml
M9313	P52	kit	PeliPair™ human IL-13 • sensitivity: 0.5 pg/ml
M9323	P52	kit	PeliPair™ human TNF-α • sensitivity: 1 pg/ml
M9333	P52	kit	PeliPair™ human IFN-γ • sensitivity: 1 pg/ml

ELISA supplementary reagents

Technology to increase sensitivity and performance:

HPE (High Performance ELISA) dilution buffer ensures linear dose-response curves in different matrices. High sensitivities are achieved by using poly-HRP (a polymer of HRP conjugated to streptavidin).

order-number	p-code	package	description
M2051	P10	0.1 ml	poly-HRP labelled with streptavidin, 1 mg/ml
M2032	P45	1 ml	poly-HRP labelled with streptavidin, 1 mg/ml
M2052	P9	100 ml	casein colloid buffer 5% to dilute poly-HRP
M1940	P18	60 ml	HPE dilution buffer to dilute samples and poly-HRP, eliminating matrix effects
M1980	P13	kit	<p>PeliKine™ Toolset</p> <p>additional reagents for PeliKine™-compact kit and PeliPairs; contains components</p> <ul style="list-style-type: none"> • coating buffer (capsules) • PBS (tablets) • wash buffer (20x), stop buffer • TMB substrate solution <p>This kit contains sufficient reagents for one PeliKine™-compact kit (288 testsamples)</p>
M1982	P13	kit	<p>ABTS substrate set</p> <p>Substrate reagents for ELISA (utilizing HRP as enzyme), in particular suitable for the peptide-MHC ELISA as described in the publication: Generation of peptide-MHC class I complexes through UV-mediated ligand exchange, Rodenko B, et.al., Nature protocols 1120, 2006.</p> <ul style="list-style-type: none"> • ABTS solution • Substrate buffer • H₂O₂ solution • Stop buffer <p>This kit contains sufficient reagents for two ELISA plates.</p>

PeliSPOT™ human ELISPOT kits, 288 tests

The PeliSPOT™ kits contain all reagents to run three ELISPOT plates (plates not included).

The PeliSPOT™ kits offer significant advantages compared to setting up your own test, the kits include all ELISPOT reagents and a ready-made protocol and guarantee instant results and a high-quality assay.

order-number	p-code	package	description
M2536	P72	kit	<p>PeliSPOT™ Human Granzyme B kit</p> <p>features:</p> <ul style="list-style-type: none"> • Sensitivity: 1 x 10⁶ positive cells • Spot development: blue/purple coloured spot • Assay time: after coating and cell incubation the assay takes 2,5 hours • Recommended plates: Millipore multiscreen PVDF plates • Spot enumeration: Recommended parameter settings for the A.EL.VIS ELISPOT analysers <p>components</p> <ul style="list-style-type: none"> • Coating antibody • PeliSPOT™ blocking / dilution buffer • Biotinylated antibody • Streptavidin-poly-HRP • Substrate • Positive assay control
M2533	P33	kit	<p>PeliSPOT™ Human IFN-gamma kit</p> <p>features:</p> <ul style="list-style-type: none"> • Sensitivity: 1 x 10⁶ positive cells • Spot development: blue/purple coloured spot • Assay time: after coating and cell incubation the assay takes 2,5 hours • Recommended plates: Millipore multiscreen PVDF plates • Spot enumeration: Recommended parameter settings for the A.EL.VIS ELISPOT analysers <p>components</p> <ul style="list-style-type: none"> • Coating antibody • PeliSPOT™ blocking / dilution buffer • Biotinylated antibody • Streptavidin-poly-HRP • Substrate • Positive assay control
M2514	P33	kit	<p>PeliSPOT™ Human IL-4 kit</p> <p>features:</p> <ul style="list-style-type: none"> • Sensitivity: 1 x 10⁶ positive cells • Spot development: blue/purple coloured spot • Assay time: after coating and cell incubation the assay takes 2,5 hours • Recommended plates: Millipore multiscreen PVDF plates • Spot enumeration: Recommended parameter settings for the A.EL.VIS ELISPOT analysers <p>components</p> <ul style="list-style-type: none"> • Coating antibody • PeliSPOT™ blocking / dilution buffer • Biotinylated antibody • Streptavidin-poly-HRP • Substrate • Positive assay control

PeliSPOT™ Pairs for human and mouse ELISPOT assays, 375 tests

The PeliSPOT™ Pairs contain pre-diluted coating and detection antibodies to prepare 375 ELISPOT tests.

The PeliSPOT™ Pairs offer substantial savings compared to the PeliSPOT™ kits. One advantage as compared to setting up your own test, is that these Pairs include a ready-made protocol and guarantee a high-quality assay. For even more convenience a range of PeliSPOT™ Supplementary reagents are available. Recommended plates are the Millipore multiscreen PVDF plates

Components:

Pre-diluted coating antibody, pre-diluted biotinylated antibody, ready-made protocol.

Each kit contains sufficient antibodies for 375 tests and recommended parameter settings for the A.EL.VIS ELISPOT analysers

order-number	p-code	package	description
human			
M9433	P25	kit	PeliSPOT™ human IFN-gamma
M9434	P25	kit	PeliSPOT™ human IL-1 beta
M9412	P25	kit	PeliSPOT™ human IL-2
M9414	P25	kit	PeliSPOT™ human IL-4
M9415	P25	kit	PeliSPOT™ human IL-5
M9410	P25	kit	PeliSPOT™ human IL-10
M9413	P25	kit	PeliSPOT™ human IL-13
M9437	P25	kit	PeliSPOT™ human Perforin*

* Cytoplasmic granules of cytotoxic lymphocytes (CTLs) and Natural Killer cells release granzymes and perforin upon antigen specific activation. Perforin plays a pivotal role in granzyme B (GrB) mediated apoptosis. Release of these proteins in CTLs correlates with the cytolytic potential of cytotoxic lymphocytes. The ELISPOT method is typically used with blood cells, and is a helpful tool in studying the human immune system and various treatments for disease (e.g. vaccines)

mouse			
M9515	P25	kit	PeliSPOT™ mouse IL-5
M9533	P25	kit	PeliSPOT™ mouse IFN-gamma

PeliSPOT™ Supplementary reagents

Reagents to combine with our PeliSPOT™ Pairs or to enhance the performance and sensitivity of any commercial or home-brewed ELISPOT assay.

M2540	P7	50 ml	PeliSPOT™ buffer
M2051	P10	0.1 ml	poly-HRP, labelled with streptavidin, 1 mg/ml
M2032	P45	1 ml	poly-HRP, labelled with streptavidin, 1 mg/ml
M2521	P5	18 ml	TMB for PeliSPOT™, ready for use

A.EL.VIS ELISPOT analysers

The A.EL.VIS (Automated ELispot Video-analysis System) concept was developed by Prof. Heinfried Radeke of the Medizinische Hochschule Hannover, in collaboration with the Technical University of Hannover in Germany. For many years Professor Radeke's Pharmacology Department used the ELISPOT technique for their own research. The development of the reader sprung from a need for a quick, reliable and automated method of analysis. In the year 2000, Sanquin and the then established company AELVIS GmbH agreed to take the reader, which is now called the Eli.Expert, into production and to put it on offer world-wide through the channels of Sanquin Reagents. The first "customers" for the AELVIS reader were Sanquin's department of research and Sanquin Reagents for the development of ELISPOT kits. Since then Sanquin and other new customers have suggested a lot of improvements in hardware and software. Most of these customer ideas and requirements were implemented within a few weeks after request. This resulted in a versatile reader and software, capable of running all types of 96 well plates, independent of their colour or transparency. Even counting bacterial colonies has now been realised and an option to count plaques is in the making.

In 2002 Sanquin and AELVIS initiated a project to develop a simple, low-cost, yet superior reader.

This resulted in 2003 in the introduction of the Eli.Scan. A highly developed but low-priced device, which nevertheless offers the same resolution and analysis options as the Eli.Expert. The combination of the development of the Sanquin PeliSPOT™ kits and the use of the AELVIS analysis-software enables us to advise spot-parameter settings circumventing trial and error for accurate spot counting.

<i>order-number</i>	<i>products</i>	<i>description</i>
M7200	Eli.Expert	<p>4 stage reader for all plate types</p> <p>4 plate high throughput reader capable of measuring all types of microtiter plates. Suitable for Expert labs running high numbers of plates.</p> <p>A 3-chip colour CCD camera automatically captures each well after a software controlled positioning system did the accurate and automatic placement (real auto centring, no plate calibration necessary!).</p> <p>A specially developed object stage is capable of holding four 96 well microtiter plates, making a total of 384 measurements per run with an acquisition time of 20 minutes, which allows a high system throughput.</p> <p>An optical system, which consists of a camera, a special macro lens and a reflection-free object light, was designed to deal with different types of commercially available microtiter plates, e.g. white, opaque or transparent, membrane or plastic bottom, from manufacturers like Millipore, Nunc, Whatman Polyfiltronics or Greiner. Pictures are transferred to the connected PC, stored on hard drive, network volume or CD-ROM and are analysed by Eli.Analyse, the powerful A.EL.VIS ELISPOT Analysis Software.</p> <p>Configuration:</p> <p>The instrument comes as a complete system, including:Reader unit, PC with Windows, AELVIS ELISPOT Analysis Software, TFT screen, Colour printer, On-line support and a two year warranty.</p>
M7202	Eli.Scan	<p>Foil Reader</p> <p>High-quality CCD scan unit.</p> <p>Highly recommended for research labs because of its low-price, simplicity, robustness and ease of maintenance. Analysis of 96 wells takes 5 minutes. When scanning a 96 well membrane or foil the plate image is transferred to the connected PC using intelligent image analysis algorithms to separate the single wells. The extracted well images are individually stored and subsequently analysed by Eli.Analyse.</p> <p>Configuration:</p> <p>The Eli.Scan is a complete ready-to-use system, consisting of a dedicated computer configuration, including a high-quality CCD scan unit, colour printer, TFT screen and AELVIS ELISPOT analysis software, fully installed and tested with a 2 year warranty!</p> <p>*For easy handling we developed a 96-channel puncher, the Eli.Punch with dedicated adhesives, to prepare the plate for reading within 10 seconds.</p>

A.EL.VIS Supplementary products

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
M7210		Eli.Analyse	<p>Software to analyse data (not to acquire data)</p> <p>Eli.Analyse powers A.EL.VIS instruments. In addition the software package is available as a stand-alone version for offline analysis. This offers the opportunity to share an instrument with other users while analysis at the personal office PC may be continued.</p> <p>The software is theoretically divided in two parts. Firstly the acquisition mode which is different for the Eli.Expert and the Eli.Scan. It enables definition of data storage. Secondly the analysis mode which is the same in both systems and available as Eli.Analyse for stand-alone use. During the development of Eli.Analyse the emphasis was set on user friendliness as well as on productivity and flexibility. Based on the means of image analysis algorithms the software makes powerful strategies of dealing with biologically variable spots available.</p> <p>The main software features are:</p> <ul style="list-style-type: none"> • Real auto centring on Eli.Expert • Spot finding based on edge detection algorithms • Automatic background correction • Separation of connected spots • Calculation of spot size, spot intensity, spot shape and spot colour • Dual-Colour Analysis • Identification of overdeveloped areas and pollution • Re-analyses of stored plates • Batch mode i.e. for overnight processing • Individual plate maps including replicates • Statistical evaluation of replicates • Calculation of spot size an intensity distribution • Data export to external programs • Integrated file management system • User profiles to store and reload test protocols • Colony count module available
M7205	P97	Eli-Punch	<p>Puncher for 96 well Millipore plate</p> <p>The advantage of punching is not only that it offers the possibility to use the inexpensive Eli.Scan, but also that the foils can be stored easily, using minimal space (they can even be included in the lab journal). Preferably use specially designed Eli.Foil for neat sticking of the membrane bottoms</p>
M7206	P10	Eli-Foil	<p>Special foils for Millipore plates and 96 well puncher (25)</p> <p>Specially designed adhesive foil for punching out the membrane bottoms. Use in combination with Eli.Punch. The foil contains glue only at the locations where the bottoms will be stuck. No more sticking between the bottoms, no sticking on the scanner or in your lab journal. Eli.Foil has been designed for Millipore Multiscreen plates (types MAIP/MAHA/MHAB). One pack contains 25 foils.</p>

Reagents for flow cytometry

Sanquin Reagents, your source for complete cell analysis: MHC-Multimers, antibodies to CDs, granzymes and others as well as dedicated activating antibodies.

PeliMers: MHC-Multimers

MHC-multimers have revolutionised immunological research, as they are the first reagents that identify antigen-specific T-cells in FACS analysis. MHC-multimer technology is increasingly recognised as the golden standard for the quantification of specific T-cell immune response, illustrated by the more than 500 citations of the original publication: Phenotypic Analysis of Antigen-Specific T-Lymphocytes; Altman, John et. al. Science 1996 274: 94-96. In 1999, Sanquin Reagents / Research in Amsterdam and the Netherlands Cancer Institute (NKI) in Amsterdam launched an MHC-multimer core facility at Sanquin's premises. Our goal to combine knowledge in order to optimise the synthesis of HLA class I and II multimers has been achieved and since 2000 we offer Class I PeliMers, custom synthesis and peptides.

Background

Antigen presenting cells present part of their proteinaceous content to the immune system via the proteolytic generation of peptides, which are transported to the lumen of the endoplasmic reticulum, where they meet HLA class I molecules. Antigenic peptides bind with different affinities to the peptide binding pockets of the different HLA alleles. When they bind with a sufficient binding affinity, the HLA-peptide complexes are transported to the cell surface. Here, they can be recognised by antigen-specific cytotoxic CD8⁺ T-cells. This recognition leads to activation and proliferation of the responsive T-cells and results in the lysis and removal of cells presenting the specific HLA-peptide complexes. T-cells recognise determinants that are present on the HLA allele itself as well as on the peptide. Because of this property, T-cell activation by HLA class I molecules can occur in response to a type of HLA allele that does not match with the T-cells (for instance because it is present on a donor-organ) or an antigenic peptide that is derived from an abnormal cellular protein

(for instance in tumours), or a pathogen (for instance viruses or bacteria). Besides the cytolytic CD8⁺ T-cell response the cellular immune response consists of another component, the CD4⁺ T-helper response. The T-helper response supports the proliferation and activity of CD8⁺ T-cells by producing the necessary growth factors and cytokines and therefore plays a pivotal role in the regulation of the immune system. CD4⁺ T-cells recognise antigen in the context of a Class II HLA molecules. These HLA Class II molecules are present on specific antigen-presenting cells and bind to peptides derived from proteolysis of extracellular proteins that have been endocytosed by these cells. Hereto, the HLA Class II molecules are targeted to the endocytic pathway by binding to an invariant polypeptide. This polypeptide is subsequently proteolysed and replaced by peptides from endocytosed extracellular proteins before the HLA molecules reach the cell surface. To optimise antigen presentation and T-cell recognition, each individual possesses several types of HLA Class I and II molecules, which are distinguished by subunit composition. HLA class I molecules consist of an invariant small beta-2-microglobulin subunit and a variable larger alpha subunit that contains the antigen binding site. The overall structure of HLA Class I and II molecules is similar, but class II molecules are composed of two equally sized alpha and beta subunits, that both contribute to the antigen binding site and HLA type. In vitro synthesised soluble HLA-peptide complexes are used as multimeric complexes to detect antigen-specific T-cells in FACS analysis.

Applications

MHC class I multimers have been used in a wide array of experimental and clinical settings to detect T-cells directed against viral, tumour and transplantation antigens. More recently, MHC-multimers have successfully been used for the isolation of antigen-specific cytotoxic T-cells for use in adoptive T-cell therapies.

PeliMers product range

• PeliMers, MHC-multimers

Under the trade name PeliMers, Sanquin offers a fast expanding range of PE and APC labelled MHC-Multimers for human and mouse MHC Class I.

• Custom made PeliMers

In addition to our products from stock, we offer custom production of MHC-multimers.

• Separate Peptides

Separate peptides can be ordered together with your order for MHC-multimers

antibodies to CD's, granzymes and others as well as dedicated activating antibodies

A background of many years of outstanding research into human leukocytes and cellular immunology, together with high-quality diagnostic laboratory services and extensive experience in the production of immunological reagents, have made Sanquin an expert on CD markers of human leukocytes. Sanquin is offering an extensive, up-to-date range of clustered monoclonal antibodies. We make every effort to meet the requirements of our customers: reliable, economical reagents for the measurement of human leukocytes and for studying their functions. All our products meet the highest quality standards and are manufactured under the strictest specifications.

From the early 80's, Sanquin has been active in the development of monoclonal antibodies and has participated in the International Workshops on Human Leukocyte Antigens. Most of Sanquin's monoclonal antibodies against human leukocytes have been characterised in these Workshops.

To ensure high quality and consistency of its monoclonal antibodies, Sanquin maintains a rigorous quality assurance programme, requiring extensive testing at all stages of production. A major asset of Sanquin is the opportunity to test the performance of its antibodies within the setting of its own clinical-immunological diagnostic laboratories.

Product range of cell-specific monoclonal antibodies

- **PeliCluster™ monoclonal antibodies**

Under the trade name PeliCluster™, Sanquin offers an ever expanding range of unlabelled and labelled cell-specific monoclonal antibodies. Monoclonal antibodies are available with fluorescein (FITC), phycoerythrin (PE) and phycoerythrin-Cy5 (PE-Cy5) labels. The fluorescein, phycoerythrin and phycoerythrin-Cy5 labelled monoclonal antibodies are for use in flow cytometry.

- **Non clustered monoclonal antibodies**

Next to the clustered monoclonal (CD) antibodies, Sanquin sells a number of unlabelled and labelled cell-specific monoclonal antibodies which are not (yet) clustered. These can be supplied, labelled with fluorescein (FITC) or phycoerythrin (PE).

- **PeliDuo™ monoclonal antibody sets**

The dual colour-labelled sets of monoclonal antibodies are suitable for use in flow cytometry. In each PeliDuo™ monoclonal antibody set one of the antibodies is fluorescein-labelled, the other is phycoerythrin-labelled.

- **PeliTrio™ monoclonal antibody sets**

The triple colour-labelled sets of monoclonal antibodies are suitable for use in flow cytometry. In each PeliTrio™ monoclonal antibody set one antibody is fluorescein labelled, one antibody is phycoerythrin labelled and one antibody is phycoerythrin-Cy5 labelled.

- **PeliCluster™ cell-stimulating antibodies**

T cell-stimulating antibodies designed to study proliferation and functional activities of T cells.

PeliMers, human MHC-multimers

Routinely made MHC-multimers, conjugated to PE or APC, are offered as 50 tests. For availability of Pelimers in your country, please inquire. Test samples containing a small aliquote of the PeliMer for 10 tests are available at a very low price.

PeliMers are a rapidly expanding product group. The products listed in this catalogue reflect the situation at present. Please check our website for the up-to-date situation.

<i>epitope</i>	<i>allele</i>	<i>description</i>	<i>order code PE</i>	<i>order code APC</i>
HUMAN				
Virus antigens				
FLU				
CTELKLSDY	A*0101	PeliMer A1/FLU	M2425CTELK	M2426CTELK
VSDGGPNLY	A*0101	PeliMer A1/FLU	M2425VSDGG	
GILGFVFTL	A*0201	PeliMer A2/FLU	M2427GILGF	M2428GILGF
HIV				
SLYNTVATL	A*0201	PeliMer A2/HIV-gag	M2427SLYNT	M2428SLYNT
ILKEPVHGV	A*0201	PeliMer A2/HIV-pol	M2427ILKEP	
RLRPGGKKK	A*0301	PeliMer A3/HIV-gag	M2429RLRPG	M2430RLRPG
KRKGGIGGY	B*2705	PeliMer B27/HIV-pol	M2441KRKGG	M2442KRKGG
KRWIILGLNK	B*2705	PeliMer B27/HIV-p24	M2441KRWII	M2442KRWII
IVLPEKDSW	B*5701	PeliMer B57/HIV-pol	M2439IVLPE	
IATESIWIW	B*5701	PeliMer B57/HIV-pol	M2439IATES	M2440IATES
KAFSPEVIPMF	B*5701	PeliMer B57/HIV-gag	M2439KAFSP	
CMV				
NLVPMVATV	A*0201	PeliMer A2/CMV (pp65)	M2427NLVPM	M2428NLVPM
EBV				
GLCTLVAML	A*0201	PeliMer A2/EBV		M2428GLCTL
RLRAEAQVK	A*0301	PeliMer A3/EBV	M2429RLRAE	
KIRLRPGGK	A*0301	PeliMer A3/EBV		M2430KIRLR
IVTDFSVIK	A*1101	PeliMer A11/EBV	M2431IVTDF	
AVFDRKSDAK	A*1101	PeliMer A11/EBV	M2431AVFDR	M2432AVFDR
RPPIFIRRL	B*0702	PeliMer B7/EBV	M2433RPPIF	M2434RPPIF
RAKFKQLL	B*0801	PeliMer B8/EBV	M2435RAKFK	M2436RAKFK
FLRGRAYGL	B*0801	PeliMer B8/EBV		M2436FLRGR
EPLPQGQLTAY	B*3501	PeliMer B35/BZLF1	M2437EPLPQ	
HPVGEADYFEY	B*3501	PeliMer B35/EBNA1	M2437HPVGE	
RSV				
TPKGP SLRV	B*0702	PeliMer B7/RSV		M2434TPKGP
NPKASLLSL	B*0702	PeliMer B7/RSV		M2434NPKAS
HBV				
FLLSLGIHL	A*0201	PeliMer A2/HBV-pol	M2427FLLSL	
FLPSDFFPVS	A*0201	PeliMer A2/HBV-core	M2427FLPSD	
WLSLLWPFV	A*0201	PeliMer A2/HBV-env	M2427WLSLL	

<i>epitope</i>	<i>allele</i>	<i>description</i>	<i>order code PE</i>	<i>order code AP</i>
HPV				
KLPQLCTEL	A*0201	PeliMer A2/HPV	M2427KLPQL	
DLLLGTLNI	A*0201	PeliMer A2/HPV-11E7	M2427DLLLG	
LLLGTLNIV	A*0201	PeliMer A2/HPV-11E7	M2427LLLG	
LQPPDPVGL	A*0201	PeliMer A2/HPV-11E7	M2427LQPPD	
PLTQHYQIL	A*0201	PeliMer A2/HPV-11E7	M2427PLTQH	
TLKDIVLDL	A*0201	PeliMer A2/HPV-11E7	M2427TLKDIV	

Tumour antigens

TUMOUR				
EADPTGHSY	A*0101	PeliMer A1/MAGE-1	M2425EADPT	
SLFRAVITK	A*0301	PeliMer A3/MAGE-1	M2429SLFRA	
ALKDVEERV	A*0101	PeliMer A1/MAGE-C2	M2425ALKDV	
YLSGANLNL	A*0201	PeliMer A2/CEA	M2427YLSGA	
ELAGIGILTV	A*0201	PeliMer A2/MART-1	M2427ELAGI	
IMDQVPFSV	A*0201	PeliMer A2/gp100	M2427IMDQV	
KTWGQYWQV	A*0201	PeliMer A2/gp100	M2427KTWQG	M2428KTWQG
YLEPGPVTA	A*0201	PeliMer A2/gp100	M2427YLEPG	
LIYRRRLMK	A*0301	PeliMer A3/gp100	M2429LIYRR	
SLGVGFVNI	A*0201	PeliMer A2/HuD	M2427SLGVG	
VLVHPQWVL	A*0201	PeliMer A2/PSA	M2427VLVHP	
ALFDIESKV	A*0201	PeliMer A2/PSMA		M2428ALFDI
LLHETDSAV	A*0201	PeliMer A2/PSMA	M2427LLHET	
KVFRGNKVK	A*0301	PeliMer A2/PSMA	M2429KVFRG	
YMDGTMSQV	A*0201	PeliMer A2/Tyrosinase	M2427YMDGT	M2428YMDGT
RMFPNAPYL	A*0201	PeliMer A2/WT-1	M2427RMFPN	
SLLMWITQC	A*0201	PeliMer A2 / NY-ESO	M2427SLLMW	
VLDGLDVLL	A*0201	PeliMer A2 / PRAME	M2427VLDGL	

Murine**Virus antigens**

FLU				
ASNENMDAM	H2-Db	PeliMer H2-Db/F5	M2712ASNEN	M2713ASNEN
ASNENMETM	H2-Db	PeliMer H2-Db/F5	M2712AS-TM	
ASNENMEVM	H2-Db	PeliMer H2-Db/F5		M2713AS-VM

SIV				
AAVKNWMTQTC	H2-Db	PeliMer H2-Db/SIV-gag		M2713AAVKN

HPV				
RAHYNIVTF	H2-Db	PeliMer H2-Db/E7	M2712RAHYN	

Tumour antigens

TUMOUR				
SIINFEKL	H2-Kb	PeliMer H2-Kb/OVA		M2711SIINF
SVYDFVWL	H2-Kb	PeliMer H2-Kb/TRP-2		M2711SVYDF

Minor antigens

KCSRNRQYL	H2-Db	PeliMer H2-Db/HY	M2712KCSRN	M2713KCSRN
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Stability

The product should be stored at -18°C to -32°C, in the dark. The reagent is stable until the expiry date stated on the label. Unlike other MHC-multimers, Sanquin PeliMers can be stored frozen. This way the shelf life can be extended and it is recommended to prepare aliquots and store these at -18 to -32°C. Do not freeze-thaw these aliquots more than once

PeliMers, custom made

Custom Synthesis of MHC-multimers and monomers.

On request we manufacture MHC-multimers or monomers with the peptides of your choice.

Custom MHC Class I multimers can be produced in 4 to 6 weeks and are available with the following alleles:

Human alleles

HLA-A*0101

HLA-A*0201

HLA-A*0301

HLA-A*1101

HLA-B*0702

HLA-B*0801

HLA-B*2705

HLA-B*3501

HLA-B*5701

Murine alleles

Kb

Db

Our range of alleles is continuously expanding; if the required allele is not listed please contact us.

Separate peptides and monomers

All our custom-made MHC-multimers and PeliMers from stock are made with in-house synthesised peptides with a purity of >90%

These separate peptides can be ordered together with your order for MHC-multimers and are delivered lyophilised.

Monomers are available on request.

PeliCluster™ monoclonal antibodies

The purified (Neat) monoclonal antibodies (1 ml, 0.2 mg) are sufficient for at least 200 tests with e.g. fluorescence microscopy. Fluorescein-labelled (FITC) monoclonal antibodies, phycoerythrin-labelled (PE) monoclonal antibodies and phycoerythrin-Cy5-labelled antibodies (1 ml) are sufficient for at least 100 tests in flow cytometry. All purified, neat, antibodies are for Research Use Only (RUO). All labelled monoclonal antibodies as well as PeliDuo and PeliTrio pairs are CE marked (unless marked as RUO) and can be used for diagnostic purposes.

CD	-- order number and p-code --				iso-type	clone name	synonym(s) and major reactivity
	Neat	FITC	PE	PE-Cy5			
CD2	M1314 P35	M1465 P35			IgG1	CLB-T11/1, 6G4	T11; E-receptor, Tp50; all T cells, most NK cells; 3 antigenic epitopes known, one of which is SRBC-binding site.
CD3	M1306 P35	M1466 P35	M1741 P36	M2292 P50	IgG2a IgG1	CLB-T3/2, 16A9 UCHT-1	T3; CD3 complex; mature T cells (membrane), immature T cells (cytoplasmic).
CD4	M1308 P35	M1467 P35	M1648 P36	M1753 P50	IgG2a IgG1 IgG2a	CLB-T4/1, 10A12 CLB-T4/2, 6D10 S3.5	T4; helper/inducer T cells, subpopulation of cortical thymocytes, subpopulation of monocytes and macrophages, some AML.
CD5	M1310 P35	M1602 P35	M1649 P36		IgG1	CLB-T1/1, 1C12	T1, p67; thymocytes and mature T cells, subset of B cells, B-CLL.
CD6	M1681 P35				IgG1	CLB-B6	T12; pan-T cell, thymocytes and mature T cells, subset of B-cells, B-CLL.
CD7	M1339 P35	M1567 P35			IgG2a	CLB-T-3A1/1, 7F3	T16, p41; almost all T cells, NK cells, subset of immature myeloid cells, some AML.
CD8	M1312 P35	M1468 P35	M1629 P36	M1744 P50	IgG2b IgG2a	CLB-T8/4, 4H8 3B5	T8; cytotoxic/suppressor T cells, subset of cortical thymocytes, subpopulation of NK cells.
CD9	M1362 P35	M1666 P35			IgG2a	CLB-thromb/8, 4E1	p24; platelets, subset of B cells (follicular center cells), subset of precursor B cells, monocytes, megakaryocytes, eosinophils, basophils, endothelial cells.
CD10	M1337 P35	M1603 P35	M1692 P36		IgG2a	CLB-CALLA/1, 4F9	CALLA, gp100; subset of precursor B cells, subset of B cells (follicular center cells), subset of cortical thymocytes, common acute leukemia, granulocytes.
CD11a	M1385 P35	M1667 P35			IgG2a	CLB-LFA-1/2, TB 133	LFA-1, L subunit; majority of lymphoid and myeloid cells, absent in LAD-1 patients.
CD11b	M1386 P35	M1668 P35			IgM	CLB-mon-gran/1, B2	C3bi receptor, CR3, M subunit; monocytes, macrophages, granulocytes, NK cells, absent in LAD-1 patients.
CD13	M1387 P35	M1568 P35	M1726 P36		IgG2a	CLB-mon-gran/2, Q20	aminopeptidase N; almost all myeloid cells, dendritic cells in skin, endothelial cells.

CD	-- order number and p-code --			iso- type	clone name	synonym(s) and major reactivity	
	Neat	FITC	PE				
CD14	M1388 P35	M1430 P35	M1661 P36		CLB-mon/1, 8G3	gp55, LPS/LBP receptor; monocytic cells, macrophages, granulocytes, absent in PNH patients.	
				M1745 P50	IgG2a		TUK4
CD15	M1336 P35	M1435 P35			IgM	CLB-gran/2, B4	Lewis ^x ; cells of the granulocytic lineage, monocytes (weak), Reed Sternberg cells.
CD16	M1389 P35	M1604 P35	M1690 P36		IgG2a	CLB-FcR gran/1, 5D2	FcγRIIIA; neutrophil granulocytes, monocytes (weak), macrophages (weak), γNK cells, absent in patients with PNH.
CD16b	M1390 P35				IgG2a	CLB-gran/11, 5D7	FcγRIIIB; only expressed on neutrophil granulocytes, two allelic variants, NA1 and NA2. This clone reacts with NA1, absent in patients with PNH.
CD18	M1344 P35	M1669 P35			IgG1	CLB-LFA-1/1, 54	integrin β2 chain; majority of lymphoid and myeloid cells (see CD11a, b and c), absent in patients with LAD-1.
CD19	M1345 P35	M1436 P35	M1588 P36 M2285 P49		IgG1	CLB-B4/1, 11G1	B4, Bgp 95; precursor B cells, B cells.
					IgG1	J4.119	
				M1746 P50	IgG1	5J25-C1	
CD20	M1644 P35	M1646 P35			IgG1	NKI-IH4	B1, Bg383,10; all B cells, subset of precursor B cells, follicular dendritic cells.
CD21	M1723 P35	M1834 P35			IgG1	CLB-5D1	B2, C3d-/EBV-receptor, gp140; subsets of B cells (e.g. follicular mantle cells), follicular dendritic cells, subset of thymocytes, T cells.
CD22	M1391 P35	M1437 P35	M1727 P36		IgG1	CLB-B-ly/1, 6B11	Bgp135; precursor B cells (cytoplasmic), subset of mature B cells (membrane).
CD23		M2108 P47			IgG3	Tü1	FcεRII, gp50-45; membrane glycoprotein; FcεRIIA is expressed on a subset of B cells (e.g. follicular mantle cells) and B-CLL cells, FcεRIIB is expressed by a subset of B cells and by monocytes, eosinophils, dendritic cells.
CD24	M1361 P35	M1605 P35			IgG1	CLB-gran-B-ly/1, IB5	subset of precursor B cells, neutrophils and eosinophils; absent in patients with PNH.
CD25	M1335 P35	M1680 P35	M1728 P36		IgG2b	CLB-IL2R/1, TB 30	Tac, IL-2-receptor; activated T cells, activated B cells, activated macrophages, hairy cell leukemia.
CD26	M1696 P35				IgG1	CLB-22C3	dipeptidylpeptidase IV; activated T cells, activated B cells, macrophages.
CD27	M1455 P35	M1764 P47			IgG2a	CLB-CD27/1, 9F4	T14; mature T cells, activated T cells, subset of B cells (e.g. cytoplasmic expression in plasma cells).
CD28	M1456 P35 M2241 P47	M2180 P47			IgG1	CLB-CD28/1,15E8	Tp44; subset of T cells (especially cytotoxic/suppressor T cells).
				IgG1	KOLT-2		

CD	-- order number and p-code --			iso- type	clone name	synonym(s) and major reactivity	
	Neat	FITC	PE				
CD29	M2129 P47	M2233 P47			IgG1	2A4	Integrin β 1 subunit; platelet GPIIa, resting and activated leucocytes, high expression on CD45RO+ T cells (broad tissue distribution).
CD30	M2283 P35				IgG1	HSR-4	Ki-1; subpopulation of activated lymphoid cells, Reed-Sternberg cells.
CD31	M1536 P35	M1670 P35			IgG1	CLB-HEC-75	platelet GPIIa, PECAM-1; platelets, monocytes, granulocytes, subset of T cells, NK cells, B cells, endothelial cells.
CD32	M2202 P47				IgG1	ClKm5	Fc γ RII; monocytes, subpopulation of macrophages, granulocytes, eosinophils, B cells.
CD33	M1585 P35	M1606 P35	M1662 P36		IgG1	CLB-MD33.6	My9; majority of myeloid and monocytic cells (except for granulocytes).
CD34	M1636 P35				IgG1	CLB-MD34.2	My10; all haematopoietic progenitors and stem cells, endothelial cells.
		M2110 P48	M2281 P49		IgG1	QBEnd10	
			M2284 P49		IgG1	581	
CD35	M2122 P47	M2136 P47			IgG1	E11	CR1 (C3b receptor); B cells, granulocytes, monocytes, erythrocytes, follicular dendritic cells, some T cells, NK cells.
CD36	M1537 P35	M1613 P35			IgG1	CLB-IVC7	platelet GPIV; monocytes, macrophages, early erythroid cells, megakaryocytes, platelets, B cells.
CD37		M2139 P47			IgG2a	NMN46	gp40-45; B cells, weak expression on T cells, monocytes and granulocytes.
CD38	M1642 P35				IgM	CLB-ID5	T10, gp45; activated T and B cells, precursor cells (e.g. thymocytes), subsets of B cells (e.g. follicular center cells), plasma cells.
			M2286 P36		IgG1	HIT2	
CD40	M1691 P35				IgM	CLB-14G7	BB20; mature B cells, monocytes (weak), follicular dendritic cells.
CD41	M1538 P35	M1674 P35			IgG1	CLB-tromb/7, 6C9	platelet GPIIb α , integrin IIb; megakaryocytes, platelets, absent or reduced in patients with Glanzmann's thrombasthenia.
			M2280 P36		IgG1	M148	
CD42b	M1539 P35	M1638 P35	M1729 P36		IgG1	CLB-MB45	platelet GPIIb α ; megakaryocytes, platelets, absent or reduced in patients with Bernard-Soulier syndrome.
	M1851 P35	<i>M1852 biotin labelled</i> <i>P51</i>			IgG1	CLB-MB15	
CD42d	M1637 P35				IgG1	CLB-SW16	platelet GPV; megakaryocytes, platelets, absent or reduced in patients with Bernard-Soulier syndrome.
CD43	M2242 P47	M2183 P47			IgG1	DFT1	leucosialin; all leucocytes, except resting B cells.
CD44	M1676 P47	M1678 P47			IgG1	NKI-P2	Pgp-1; leucocytes and erythrocytes (broad tissue distribution).

CD	-- order number and p-code --			PE-Cy5	iso-type	clone name	synonym(s) and major reactivity
	Neat	FITC	PE				
CD45	M1343 P35	M1491 P35	M1596 P36		IgG1	CLB-T200/1, 15D9	T200; LCA; all leucocytes.
				M1747 P50	IgG1	HI30	
CD45R0	M2232 P35	M2113 P47			IgG2a	UCHL1	restricted T200, gp180; thymocytes, activated T cells, preferentially memory T cells, weak expression on monocytes and granulocytes.
CD45RA	M2111 P35	M2146 P47	M2112 P49		IgG1	F8-11-13	restricted T200, gp220; naive T cells, B cells, granulocytes, monocytes.
CD46	M2148 P47				IgG1	122-2	MCP, gp45-70; leucocytes (broad tissue distribution).
CD47	M2149 P47				IgG2b	BRIC 126	IAP, OA3; leucocytes and erythrocytes (broad tissue distribution).
CD48	M2150 P47				IgG1	MEM 102	BLAST-1, gp41; all lymphocytes, NK cells, monocytes, activated neutrophils, weak on eosinophils.
CD49b	M1540 P35	M1671 P35			IgG1	CLB-tromb/4, 10G11	VLA-2, integrin α 2 chain, platelet GPIa; platelets, activated T cells, cultured T cells, weak expression on monocytes.
CD49c	M2151 P47				IgG1	11G5	VLA-3, integrin α 3 chain; cultured T cells, adherent cell lines (non haematopoietic cells).
CD49d	M2152 P47				IgG1	15A8	VLA-4, integrin α 4 chain; thymocytes, T and B cells, monocytes, eosinophils (neural crest cells), α 4 β 7, lymphocytes homing to mucosa-associated lymphoid tissue.
CD49e	M1586 P35				IgG2b	NKI-SAM-1	VLA-5, integrin α 5 chain, platelet GPIc; neutrophils, monocytes, platelets, weak expression on T cells.
CD49f	M1566 P35	M1672 P35			IgG2a	NKI-GoH3 (rat)	VLA-6, integrin α 6 chain, platelet GPIc; megakaryocytes, platelets, thymocytes, subpopulation of T cells, monocytes.
CD51	M1541 P35				IgG1	NKI-M9	VNR, integrin α v; megakaryocytes, platelets, some B cells, monocytes/macrophages.
CD53	M2114 P47				IgG1	MEM 53	all leucocytes
CD54	M2115 P47	M2154 P47			IgG1	15.2	ICAM-1; monocytes, lymphocytes (broad tissue distribution), increased expression upon activation.
CD55		M2192 P47			IgG1	143-30	DAF; leucocytes, platelets, erythrocytes, broad tissue distribution; absent in PNH patients.
CD56	M1645 P35				IgG1	NKI-nbl-1	N-CAM; NK cells, some T cells, neuro-ectodermal cells.
			M2277 P49		IgG1	B159	

CD	-- order number and p-code --			iso-type	clone name	synonym(s) and major reactivity
	Neat	FITC	PE			
CD57	M2204 P47	M2272 P49		IgM	NC1	HNK1, gp110; NK cells, T cells, B cell subset.
CD58	M2157 P47			IgG2a	BRIC 5	LFA-3; leucocytes, erythrocytes, epithelial cells (broad tissue distribution), absent in patients with PNH.
CD59	M2121 P47	M2191 P47		IgG2a	MEM 43	MIRL, gp18-20, Ly6; nearly all cell types, member of Ly6 family (see CD87); absent in patients with PNH.
CD61	M1355 P35	M1592 P35		IgG1	CLB-tromb/1, C17	platelet GPIIIa , integrin β 3 subunit; together with GPIIb (CD41) on megakaryocytes, platelets, with CD51 VNR- α (CD51) on endothelial cells, some B cells, monocytes, platelets.
CD62P	M1543 P35		M1706 P36	IgG1	CLB-tromb/6, C2	P-selectin, GMP-140; megakaryocytes, activated platelets, endothelial cells, increased membrane expression upon activation.
		M2187 P47		IgG1	AK6	
CD63	M1544 P35		M1698 P36	IgG1	CLB-gran/12, 435	LIMP, ME491; activated platelets, monocytes, lymphocytes (weak), granulocytes (weak).
CD64	M2159 P47			IgG1	10.1	Fc γ RI (high affinity); monocytes, activated granulocytes.
CD65	M1719 P35	M1720 P35		IgM	88H7	ceramide-dodecasaccharide 40, majority of myeloid and monocytic cells, negative on normal CD34+ cells;
CD66b	M1546 P35	M1594 P35		IgG1	CLB-B13.9	CGM6 (previous CD67); granulocytes, increased expression upon activation, absent in PNH patients.
CD66 acde	M1545 P35	M1643 P35	M1693 P36	IgG1	CLB-gran/10, IH4Fc	CEA, granulocytes; increased expression upon activation; tumour cells.
CD69			M2282 P36	IgG2b	TP1.55.3	early activated B and T cells
CD70	M1705 P35			IgG1	CLB-2F2	Ki-24; subpopulation of activated B and T cells, Reed-Sternberg cells and anaplastic large cell lymphoma.
CD71	M2160 P47	M2162 P47	M2119 P49	IgG1	RVS10	T antigen, OKT9; proliferating cells, activated T and B cells, macrophages.
CD74	M2163 P47			IgG1	LN2	MHC-class-II-associated invariant chain; B cells, monocytes and macrophages.
CD80	M1708 P35			IgG1	CLB-DAL1	B7, BB1; subpopulation of B cells, activated B cells, subpopulation of T cells, subpopulation of monocytes, dendritic cells.
CD95	M1714 P35			IgG2a	FAS18	APO-1, FAS; subpopulation of thymocytes, activated T cells, subpopulation of B cells, NK cells.
	M1715 P35	M1735 P35		IgG1	FAS19	

CD	-- order number and p-code --				iso- type	clone name	synonym(s) and major reactivity
	Neat	FITC	PE	PE-Cy5			
CD103	M1721 P48	M1722 P48			IgG2a	2G5	HML-1, integrin α E subunit; mucosa-associated T cells (especially intra-epithelial CD8+T cells), < 2% of resting blood lymphocytes (increased upon activation) part of mucosal T-NHL; most HCL.
CD105	M1765 P35				IgG1	CLB-HEC-19	Endoglin: endothelial cells, syncytiotrophoblasts and activated monocytes. umbilical vein endothelial cells (HUVECs)
CD122	M2172 P48	M2189 P48			IgG2a	MIK- 1	IL-2R β ; activated T cells, NK cells, monocytes.
CD138	M1663 P35		M2287 P36		IgG1	CLB-1D4	syndecan 1; plasma cells
CD235a	M1365 P35	M1593 P35	M1732 P36		IgG1	CLB-AME-1	erythrocytes, glycophorin A.

Controls

controls	-- order number and p-code --				iso- type
	Neat	FITC	PE	PE-Cy5	
IgG1	M1451 P46	M1453 P46	M1628 P19		IgG1
IgG2a	M1452 P46	M1454 P46	M1697 P19	M1748 P19	IgG2a
IgG2b	M2173 P46	M2190 P46	M2230 P19		IgG2b

Non clustered antibodies / granzyme antibodies

antibody	-- order number and p-code --			PE-Cy5	biotin	iso-type	clone name	synonym(s) and major reactivity
	Neat	FITC	PE					
Ery-H/1	M1392 P35					IgM	CLB-7C11	erythrocytes, and platelets (weak), H antigen.
MPO	M1464 P35	M1703 P35				IgG1	CLB-MPO-1/1, 7.17	pan myeloid (AML marker), myeloperoxidase, gp55-15.
LTF	M1700 P35		M1731 P36			IgG1	CLB-13.17	myeloid range from myelocyte on, lactoferrin, gp82
HLA-DR	M1338 P35	M1607 P35				IgG1	CLB-HLA-Dr, 1E5	HLA-class II.
ANCA	M1574 P35					IgG1	CLB-12.8	myeloid lysosomal serine protease (PR3).
GA6	M1791 P51					IgG1	GA6	Granzyme A
GA28	M1766 P51			M1798 P51		IgG1	GA28	Granzyme A
GA29	M1767 P51					IgG1	GA29	Granzyme A
GB7	M1754 P51					Ig2A	GB7	Granzyme B
GB10	M1755 P51			M1793 P51		IgG1	GB10	Granzyme B
GB11	M1756 P51		M2289 P51	M1794 P51		IgG1	GB11	Granzyme B
GB12	M1757 P51			M1795 P51		IgG1	GB12	Granzyme B

PeliDuo™ monoclonal antibody sets

Dual colour-labelled (fluorescein and phycoerythrin) sets of monoclonal antibodies (1ml) sufficient for at least 50 tests in flow cytometry

<i>CD</i>	<i>order number p-code</i>	<i>Isotype</i>	<i>application</i>
CD2 F / CD19 PE	M1624 P36	IgG1 / IgG1	T / B lymphocytes
CD3 F / CD4 PE	M2247 P36	IgG2a / IgG1	T / T helper-inducer lymphocytes
CD3 F / CD8 PE	M1598 P36	IgG2a / IgG2b	T / T cytotoxic-suppressor lymphocytes
CD3 F / CD16 PE	M1724 P36	IgG2a / IgG2b	T lymphocytes / granulocytes, NK cells
CD3 F / CD19 PE	M1699 P36	IgG2a / IgG1	T / B lymphocytes
CD4 F / CD8 PE	M1599 P36	IgG1 / IgG2b	T helper-inducer / T cytotoxic-suppressor lymphocytes
CD14 F / CD45 PE	M1626 P36	IgG2a / IgG1	monocytes / pan-leucocytes
CD45 F / CD14 PE	M2248 P36	IgG1 / IgG1	pan-leucocytes / monocytes

Controls

<i>controls</i>	<i>order number p-code</i>	<i>Isotype</i>
IgG1 F / IgG1 PE	M1627 P19	IgG1 / IgG1
IgG2a F / IgG1 PE	M2251 P19	IgG2a / IgG1

PeliTrio™ monoclonal antibody sets

Triple colour-labelled sets of monoclonal antibodies (1ml, 100 tests), in which one antibody is fluorescein-(FITC) labelled, one antibody is phycoerythrin-(PE) labelled and one antibody is phycoerythrin-Cy5 labelled. Suitable for Becton Dickinson, Coulter and Ortho flowcytometers. The below mentioned products include a no-wash-lysing solution.

<i>CD</i>	<i>order number</i>	<i>clones</i>
CD4 F / CD8 PE / CD3 PE-Cy5	M1825.S P39	CLB-T4/2 - CLB-T8/4 - UCHT-1
CD16 F / CD19 PE / CD3 PE-Cy5	M1799.S P39	3G8 - 467 - UCHT-1
IgG2aF / IgG2a PE / IgG2a PE-Cy5	M1826.S P39	

Lysing solution

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
M7101.6	P23	6x10ml	PeliLyse buffer A1, no-wash-lysing solution, stock for 300 tests

PeliCluster™ cell-stimulating antibodies

Among the more than 240 CD markers on the membrane of human leucocytes known today, those directly involved in functional activities are of particular interest, since these are the target molecules to study the immune system at a cellular level. Some monoclonal antibodies can stimulate T cells into proliferation spontaneously or in the presence of a 'second signal'. The Sanquin T cell-stimulating antibodies have applications in research as well as in clinical diagnostics, e.g. to study immunocompetence in immunocompromised patients.

T cell-stimulating monoclonal antibodies

monoclonal antibody solutions (200 µg/0,1 ml), 0.22 µm filtered

<i>CD</i>	<i>order number p-code</i>	<i>Iso- type</i>	<i>clone name</i>
CD2	M1651 P35	IgG1	CLB-T11.1/1, 6G4
CD2	M1652 P35	IgG1	CLB-T11.2/1, 4B2
CD2	M1653 P35	IgG1	CLB-HIK27
CD3	M1654 P35	IgE	CLB-T3/4.E, 1XE
CD3	M1655 P35	IgG2A	CLB-T3/2, 16A9
CD28	M1650 P35	IgG1	CLB-CD28/1, 15E8

other reagents and kits

Mannose Binding Lectin kit (ELISA), CE IVD

Mannose binding lectin (MBL) is an important factor in the innate immunity. MBL recognizes carbohydrate patterns, found on the surface of a large number of pathogenic micro-organisms, including bacteria, viruses, protozoa and fungi. The incidence of MBL deficiency is relatively high, compared to other deficiencies of the complement system, in about 20-25% of total population. MBL deficiency is associated with increased susceptibility to infections, such as otitis media, pneumonitis, gastro-enteritis, meningitis, osteomyelitis and sepsis.

order-number	p-code	package	description
M1990	P54	kit	<p>Mannose Binding Lectin ELISA kit</p> <p>The MBL assay is an ELISA format, performed in microwells coated with mannan. MBL present in a measured volume of sample or calibrator will bind to the coated mannan on the microtitre plate. Non-bound material is removed by washing. Subsequently, a horseradish peroxidase (HRP) conjugated antibody to MBL (anti-human-MBL/1-HRP) is added. After removal of non-bound HRP conjugate by washing, substrate solution is added to the wells. The colour that develops is proportional to the amount of MBL present in sample or calibrator. The enzymatic reaction is stopped chemically and the colour intensity is read at 450nm in an ELISA reader. From the absorbance of the samples and those of a calibration curve, the concentration of MBL can be determined by interpolation.</p>

components:

- three microtitre plates
- coat for microtitre plates (mannan)
- calibrator and control sera
- wash and dilution buffers (concentrated)
- anti-human MBL-HRP (100-fold concentrated)
- reference values for human MBL

anti-prion monoclonal antibody (clone 1E4)

Monoclonal antibody 1E4 binds to PrP^{Sc} with high affinity, whereas it has low affinity for non-digested PrP^{Sc}. This makes McAb 1E4 a highly interesting antibody in current prion research.

order-number	p-code	package	description
M1839	P35	0.25 ml	neat antibody, concentration 0.5 mg/ml
M1840	P33	0.25 ml	biotinylated antibody, concentration 0.5 mg/ml
M1841	P33	0.25 ml	HRP conjugated antibody, concentration 0.5 mg/ml

monoclonal antibodies to serum proteins (human)

Sanquin monoclonal antibodies are of mouse origin. The antibodies are purified by means of (ion)chromatography; the concentration of antibody is approximately 1 mg/ml.

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
M1265	P15	1 ml	anti-human IgA (MoHu 14)
M1267	P15	1 ml	anti-human IgM (MoHu 15)
M1268	P15	1 ml	anti-human IgG (MoHu 16)
M1294	P20	1 ml	anti-human IgE (MoHu 25)
M1272	P15	1 ml	anti-human light chain, type kappa (MoHu 19)
M1302	P15	1 ml	anti-human light chain, type lambda (MoHu 29)

polyclonal antibodies to serum proteins, precipitation techniques

Sanquin reagents for precipitation techniques are developed for use in immuno-electrophoresis, Ouchterlony or Mancini. On request, information is available for other techniques.

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
			antisera
M1015	P10	2 ml	anti-human IgA (RbHu14 P)
M1019	P10	2 ml	anti-human IgM (RbHu15 P)
M1023	P9	2 ml	anti-human IgG (RbHu16 P)
M1037	P17	2 ml	anti-human IgE (RbHu25 P)
M1031	P12	2 ml	anti-human light chain, type kappa (RbHu19 P)
M1044	P12	2 ml	anti-human light chain, type lambda (RbHu29 P)
M1050	P12	2 ml	anti-human Bence-Jones protein, kappa chain (RbHu37 P)
M1051	P12	2 ml	anti-human Bence-Jones protein, lambda chain (RbHu38 P)
M1027	P10	2 ml	anti-human immunoglobulins (RbHu17 P)
M1053	P12	2 ml	anti-human C3d (α 2D) (RbHu42 P)
M1076	P7	2 ml	anti-human total serum (HoHu00 P-2)
M1079	P44	100 ml	anti-human total serum (HoHu00 P-100)
M1001	P9	2 ml	anti-human albumin (RbHu02 P)
M1258	P12	2 ml	anti-human clotting factor II (RbHu52 P)

polyclonal antibodies to serum proteins, nephelometric techniques

Sanquin reagents for nephelometric techniques are developed for research use only (RUO) in nephelometers. Specific settings are included with several products.

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
M1087	P9	2 ml	anti-human IgM (ShHu15 N)
M1221	P9	2 ml	anti-human C3c (ShHu41 N)
M1223	P13	2 ml	anti-human C1q (ShHu43 N)
M1229	P9	2 ml	anti-human albumin (ShHu02 N)
M1323	P11	2 ml	anti-human α 1-antitrypsin (ShHu03 N)

Labelled polyclonal antibodies to serum proteins

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
FITC-labelled polyclonal antibodies to human serum proteins			
M1017	P10	1 ml	anti-human IgA (RbHu14 F)
M1021	P10	1 ml	anti-human IgM (RbHu15 F)
M1025	P10	1 ml	anti-human IgG (RbHu16 F)
M1094	P10	1 ml	anti-human total immunoglobulins (ShHu17 F)
FITC-labelled F(ab') ₂ fragments against human serum proteins			
M1022	P14	1 ml	F(ab') ₂ anti-human IgM, (Rb26Hu15 F)
M1026	P14	1 ml	F(ab') ₂ anti-human IgG, (Rb26Hu16 F)
HRP-labelled polyclonal antibodies to animal serum proteins			
M1235	P10	1 ml	(goat) anti-mouse immunoglobulins (GoMo17 E)
FITC-labelled polyclonal antibodies to animal serum proteins			
M1109	P9	1 ml	(horse) anti-rabbit immunoglobulins (HoRb17 F)
M1204	P9	1 ml	(goat) anti-mouse immunoglobulins (GoMo17 F)

IgM rheumatoid factor ELISA kit, CE IVD (English version only)

The Sanquin IgM rheumatoid factor ELISA kit is specially designed for the detection of IgM rheumatoid factor in human serum. This fast, sensitive and reliable assay is a valuable diagnostic tool showing high correlation with other tests (i.e. Waaler-Rose assay, latex assay or nephelometric assay).

With one kit, 96 tests can be performed, including standard, positive and negative controls. When tested in duplicate, 38 patient sera can be tested with one kit.

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
M1950	P20	kit	IgM rheumatoid factor ELISA kit <ul style="list-style-type: none"> • one precoated microwell plate, 12 x 8 well strips • standard serum • positive and negative control sera • HRP-conjugated anti-human IgM • dilution and washing buffers • ABTS substrate

normal animal sera

<i>order-number</i>	<i>p-code</i>	<i>package</i>	<i>description</i>
			without sodium azide
M1184	P3	10 ml	normal goat serum
M1530	P15	100 ml	normal goat serum
M1250	P2	1 ml	normal mouse serum
			with sodium azide
M1533	P15	100 ml	normal goat serum
M1478	P2	1 ml	normal mouse serum

list of order numbers

<i>order number</i>	<i>description</i>	<i>page</i>	<i>price code</i>
M1001	anti-human albumin, precipitation	45	9
M1015	anti-human IgA, precipitation	45	10
M1017	anti-human IgA, FITC-labelled	46	10
M1019	anti-human IgM, precipitation	45	10
M1021	anti-human IgM, FITC-labelled	46	10
M1022	F(ab') ₂ anti-human IgM, FITC-labelled	46	14
M1023	anti-human IgG, precipitation	45	9
M1025	anti-human IgG, FITC-labelled	46	10
M1026	F(ab') ₂ anti-human IgG, FITC-labelled	46	14
M1027	anti-human immunoglobulin, precipitation	45	10
M1031	anti-human immunoglobulin light chain, type kappa, precipitation	45	12
M1037	anti-human IgE, precipitation	45	17
M1044	anti-human immunoglobulin light chain, type lambda, precipitation	45	12
M1050	anti-human Bence-Jones protein, free kappa chain, precipitation	45	12
M1051	anti-human Bence-Jones protein, free lambda chain, precipitation	45	12
M1053	anti-human C3d, precipitation	45	12
M1076	anti-human total serum, precipitation (2ml)	45	7
M1079	anti-human total serum, precipitation (100ml)	45	44
M1087	anti-human IgM, nephelometric	45	9
M1094	anti-human immunoglobulin, FITC-labelled	46	10
M1109	anti-rabbit immunoglobulin, FITC-labelled	46	9
M1174	anti-human IgG subclasses set, agglutination	7	38
M1175	anti-human IgG subclasses set, precipitation	7	40
M1184	normal goat serum 10 ml, without sodium azide	47	3
M1204	anti-mouse immunoglobulin, FITC-labelled	46	9
M1221	anti-human C3c, nephelometric	45	9
M1223	anti-human C1q, nephelometric	45	13
M1229	anti-human albumin, nephelometric	45	9
M1235	anti-mouse immunoglobulin, HRP-labelled	46	10
M1250	normal mouse serum 1 ml, without sodium azide	47	2
M1258	anti-human coagulation factor II, precipitation	45	12
M1265	anti-human IgA, monoclonal	45	15
M1267	anti-human IgM, monoclonal	45	15
M1268	anti-human IgG, monoclonal	45	15
M1270	anti-human IgG3, monoclonal	7, 12	20
M1271	anti-human IgG4, monoclonal	7, 12	28
M1272	anti-human immunoglobulin light chain, type kappa, monoclonal	45	15
M1294	anti-human IgE, monoclonal	45	20
M1302	anti-human immunoglobulin light chain, type lambda, monoclonal	45	15
M1306	CD3, unlabelled	34	35
M1308	CD4, unlabelled	34	35
M1310	CD5, unlabelled	34	35
M1312	CD8, unlabelled	34	35
M1314	CD2, unlabelled	34	35
M1323	anti-human α -antitrypsine	45	11
M1325	anti-human IgG1, monoclonal	7, 12	32
M1326	anti-human IgG2, monoclonal	7, 12	34
M1327	anti-human IgG subclass set, monoclonal	7, 12	42
M1328	anti-human IgG1, monoclonal, HRP-labelled	7, 12	32
M1329	anti-human IgG2, monoclonal, HRP-labelled	7, 12	34
M1330	anti-human IgG3, monoclonal, HRP-labelled	7, 12	20
M1331	anti-human IgG4, monoclonal, HRP-labelled	13	28
M1335	CD25, unlabelled	35	35
M1336	CD15, unlabelled	35	35
M1337	CD10, unlabelled	34	35
M1338	HLA-DR, unlabelled	40	35

<i>order number</i>	<i>description</i>	<i>page</i>	<i>price code</i>
M1339	CD7, unlabelled	34	35
M1343	CD45, unlabelled	37	35
M1344	CD18, unlabelled	35	35
M1345	CD19, unlabelled	35	35
M1355	CD61, unlabelled	38	35
M1361	CD24, unlabelled	35	35
M1362	CD9, unlabelled	34	35
M1365	CD235a, unlabelled	39	35
M1385	CD11a, unlabelled	34	35
M1386	CD11b, unlabelled	34	35
M1387	CD13, unlabelled	34	35
M1388	CD14, unlabelled	35	35
M1389	CD16, unlabelled	35	35
M1390	CD16b, unlabelled	35	35
M1391	CD22, unlabelled	35	35
M1392	Ery-H/1, unlabelled	40	35
M1430	CD14F, FITC-labelled	35	35
M1435	CD15F, FITC-labelled	35	35
M1436	CD19F, FITC-labelled	35	35
M1437	CD22, FITC-labelled	35	35
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M1452	control mouse IgG2a, unlabelled	39	46
M1453	control mouse IgG1, FITC-labelled	39	46
M1454	control mouse IgG2a, FITC-labelled	39	46
M1455	CD27, unlabelled	35	35
M1456	CD28, unlabelled	35	35
M1464	MPO, unlabelled	40	35
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M1466	CD3F, FITC-labelled	34	35
M1467	CD4F, FITC-labelled	34	35
M1468	CD8F, FITC-labelled	34	35
M1478	normal mouse serum 1 ml, with sodium azide	47	2
M1491	CD45F, FITC-labelled	37	35
M1530	normal goat serum, without sodium azide	47	15
M1533	normal goat serum, with sodium azide	47	15
M1536	CD31, unlabelled	36	35
M1537	CD36, unlabelled	36	35
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M1541	CD51, unlabelled	37	35
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M1545	CD66acde, unlabelled	38	35
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M1557	PeliRIDe human IgG subclasses RID kit	7, 10	39
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M1561	PeliRIDe RID plate human IgG4	7, 10	24
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M1563	RID human standard IgG3 and IgG4	7, 10	6
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