



Inspired by Dedication

Product Catalogue 2022/2023

serion\immunologics

Your Partner in Raw Material Sourcing

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Your Partner in Raw Material Sourcing

Based on 40 years of experience and success in infectious disease diagnostics, the division SERION Immunologics was created in 2013 to focus on the raw material business of Virion\Serion.

The company was founded in 1978 in Germany and is an expert in manufacture and worldwide distribution of *in vitro* diagnostics (IVD) for infectious diseases. Especially in the field of ELISA systems, Virion\Serion enjoys a particularly high reputation. With a subsidiary in China as well as a global network of distributors, Virion\Serion's diagnostic products are sold in over 100 countries worldwide. All IVD products are represented by the division SERION Diagnostics.

The core of SERION Immunologics business is the product line SERION antigens, representing the in-house antigen production of Virion\Serion and including native as well as recombinant antigens. Current antigen production processes cover everything from conventional cell culture for virus propagation, cultivation of bacterial pathogens, such as *B. pertussis*,

to advanced recombinant antigen production in *E. coli*, yeast and insect cells expression systems (Baculovirus and S2 insect cells).

In order to address the needs of IVD manufacturers, SERION plasma and SERION antibodies are additional important parts of SERION Immunologics' product portfolio. These two product groups allow a quick and customer-specific choice of controls, calibrators and standards. Additionally, SERION customized also offers the possibility of special services such as ELISA plate coating and customized antigen or antibody development. Bovine serum albumin (BSA) was the first constituent of the product line SERION reagents. We are happy to continuously develop our reagents portfolio which also includes SERION beads and Rheumatoid Factor Absorbent.

Products

SERION Immunologics manufactures and provides a wide range of diagnostic raw materials and services, which are categorized in the following product groups:

Raw Materials

- SERION antigens
- SERION plasma
- SERION antibodies
- SERION reagents

High flexibility, experienced employees and competent customer support makes SERION Immunologics a strong and respected partner in the field of IVD related raw materials and components.

SERION customized

- Antigen and antibody development
- ELISA plate coating
- Buffer production
- Lyophilization



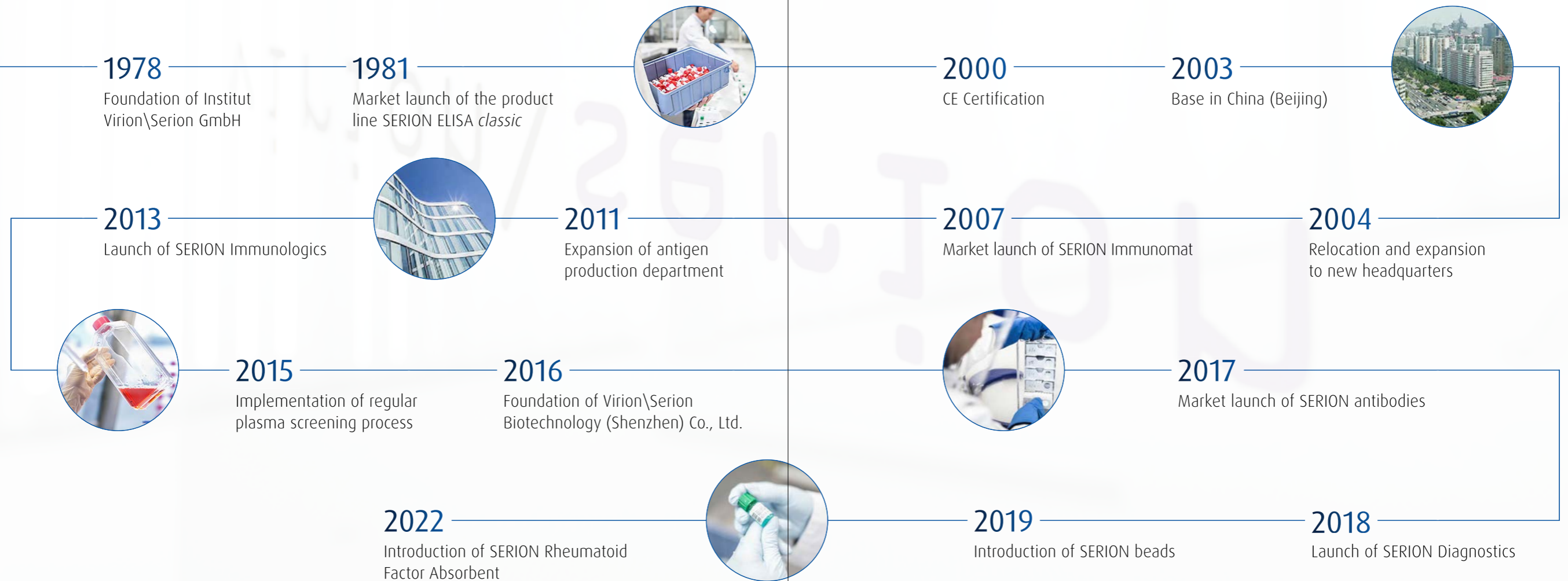
Quality is our standard

Institut Virion\Serion GmbH is a certified IVD manufacturer according to European IVD directive 98/79/EC. All diagnostic medical devices are CE marked. The quality management system is certified according to DIN EN ISO 13485.



virion\serion

Company History



SERION antigens

Critical raw materials, such as antigens, are key factors for establishing reproducible and robust immunodiagnostic test systems. SERION Immunologics produces a variety of high-class infectious disease antigens for ELISA, lateral flow diagnostics (LFD), bead based assays (e.g. CLIA), as well as non-IVD applications.

Currently, SERION Immunologics has the capacity to produce antigens such as VZV, CMV or *Toxoplasma* in a multi-gram scale. The antigen production facilities are certified up to biosafety level 3 (BSL3) and are DIN EN ISO 13485 controlled, ensuring highest quality standards. This guarantees that industrial requirements can be fulfilled at any time. The product portfolio includes antigens isolated from pathogen cultivation, e.g. Measles, Mumps, *B. pertussis* (native antigens), or recombinant antigens (e.g. Rubella, SARS-CoV-2), altogether covering a range of more than 80 individual antigens that are produced on a routine basis. All antigens are purified

using a range of techniques to ensure optimal performance in diagnostic applications. This includes extraction, ultra-centrifugation, filtration and different types of state of the art chromatography processes. Native antigens are known for their high sensitivity in diagnostics applications, especially in IgM detection, and recombinant antigens are well known for their specificity, especially in IgG assays. SERION antigens covers a broad range of infectious diseases including viral, bacterial, fungal or parasitic diseases such as toxoplasmosis and are an ideal basis for the development and production of infectious disease kits and reagents.

Features and benefits:

- ✓ Large selection of antigens
- ✓ Scale up production
- ✓ DIN EN ISO 13485 quality management system
- ✓ Biosafety level 3 (BSL3) production
- ✓ Highest flexibility in customized antigen projects

Native Antigens

Antigen	Packaging	Order No.
Adenovirus Type 2 Hexon	1 mg	BA128VS
Aspergillus fumigatus	1 mL	BA132F01
Bordetella pertussis Filamentous Hemagglutinin (FHA)	1 mg	BA120VS3
Bordetella pertussis Toxin	1 mg	BA120VS4
Bordetella pertussis whole-cell Antigen	1 mg	BA120VS8
Borrelia afzelii	1 mg	BA121VS
Borrelia garinii	1 mg	BA121GVS
Brucella abortus	1 mg	BA116VS

Antigen	Packaging	Order No.
Campylobacter jejuni	1 mg	BA139VS
Candida albicans	1 mg	BA117VS
Chlamydia abortus	1 mg	BA1373VSER
Chlamydia pneumoniae	1 mg	BA1371VSER
Chlamydia pneumoniae - Premium	1 mg	BA1371VS
Chlamydia trachomatis	1 mg	BA1372VSER
Cytomegalovirus (CMV)	1 mg	BA109VS
Diphtheria Toxoid	1 mg	BA130VS
Echinococcus granulosus	1 mg	BA107VS
Helicobacter pylori	1 mg	BA118VS
Herpes Simplex Virus 1 (HSV-1)	1 mg	BA1051VS
Herpes Simplex Virus 2 (HSV-2)	1 mg	BA1052VS
Legionella pneumophila	1 mg	BA106VS
Leptospira biflexa	1 mg	BA125VS
Measles Virus - Premium	1 mg	BA102VS-S
Mumps Virus	1 mg	BA103VS
Mycoplasma pneumoniae	1 mg	BA127VS
Parainfluenza Virus Type 1	1 mg	BA1261VS
Parainfluenza Virus Type 2	1 mg	BA1262VS
Parainfluenza Virus Type 3	1 mg	BA1263VS
Respiratory Syncytial Virus (RSV)	1 mg	BA113VS
Rotavirus	1 mg	BA1193VS
Tetanus Toxoid	1 mg	BA108VS
Tick-borne encephalitis (TBE) Virus	1 mg	BA112VSL
Tick-borne encephalitis (TBE) Virus - Premium	1 mg	BA112VS
Toxoplasma gondii	1 mg	BA110VS
Varicella Zoster Virus (VZV)	1 mg	BA104VS
Varicella Zoster Virus (VZV) Glycoprotein	1 mg	BA104VSG
Yersinia enterocolitica 0:3 YOP	1 mg	BA138VS
Yersinia enterocolitica 0:8 YOP	1 mg	BA13808VS
Yersinia enterocolitica 0:9 YOP	1 mg	BA13809VS

All native antigens are verified to be pathogen inactivated and certified as non-infectious. Please let us know if you are interested in 0.25 mg test samples. Antigens are routinely packaged in units of 1 mg. 5 mg and 10 mg packaging sizes are also available. Upon request, bulk quantities can be filled individually.

Recombinant Antigens

Antigen	Packaging	Order No.
Borrelia afzelii Pko DbpA	1 mg	BA121R01
Borrelia afzelii Pko OspC	1 mg	BA121R02
Chikungunya Glycoprotein E1	1 mg	BA148R2
Chikungunya Glycoprotein E1 (A226V)	1 mg	BA148R3
Chikungunya Glycoprotein E2	1 mg	BA148R1
Chlamydia trachomatis MOMP	1 mg	BA1372VSR2
Coxsackievirus	1 mg	BA134VS01
Cytomegalovirus (CMV) pp52 (UL44)	1 mg	BA109R01
Cytomegalovirus (CMV) gB (UL445)	1 mg	BA109R02
Cytomegalovirus (CMV) pp150 (UL32)	1 mg	BA109R03
Cytomegalovirus (CMV) pp130 (UL57)	1 mg	BA109R04
Cytomegalovirus (CMV) pp28 (UL99)	1 mg	BA109R05
Cytomegalovirus (CMV) pp65 (UL83)	1 mg	BA109R06
Cytomegalovirus (CMV) IE1 (UL123)	1 mg	BA109R07
Echovirus	1 mg	BA135VS01
Enterovirus	1 mg	BA133VS01
Epstein-Barr Virus (EBV) Capsid Antigen P18	1 mg	BA1361VSR22
Epstein-Barr Virus (EBV) Capsid Antigen P23	1 mg	BA1361VSR21
Epstein-Barr Virus (EBV) Early Antigen P138	1 mg	BA1363VSR6
Epstein-Barr Virus (EBV) Early Antigen P54	1 mg	BA1363P54VS
Epstein-Barr Virus (EBV) Nuclear Antigen EBNA1, P72	1 mg	BA1362VS
Herpes Simplex Virus 1 (HSV-1) Glycoprotein G	1 mg	BA1051RVS-G
Herpes Simplex Virus 2 (HSV-2) Glycoprotein G	1 mg	BA1052RVS-G
Measles Virus Nucleoprotein	1 mg	BA102R01
Mycoplasma pneumoniae P1	1 mg	BA127VSP1
Parvovirus NS1	1 mg	BA122VSNS1
Parvovirus PepA (VP1 unique)	1 mg	BA122VSP1A
Parvovirus PepB (VP2 C-term.)	1 mg	BA122VSP1B
Parvovirus PepC (VP1 N-term.)	1 mg	BA122VSP1C
Parvovirus PepD (VP1 C-term.)	1 mg	BA122VSP1D
Parvovirus VP1	1 mg	BA122VSP1
Parvovirus VP2	1 mg	BA122VSP1E
Parvovirus VP2 VLP	1 mg	BA122VSP2
Rubella Spike Ectodomain (E1-E2)	1 mg	BA129R01
SARS-CoV-2 Nucleoprotein	1 mg	BA400R04
SARS-CoV-2 Spike Ectodomain (S1-S2)	1 mg	BA400R03
Varicella Zoster Virus (VZV) Envelope Glycoprotein E	1 mg	BA104R02
Zika Virus NS1	1 mg	BA149R01

Please let us know if you are interested in 0.25 mg test samples. Antigens are routinely packaged in units of 1 mg. 5 mg and 10 mg packaging sizes are also available. Upon request, bulk quantities can be filled individually.

SERION plasma

Human sera and plasma are essential reagents in serological diagnostic tests. Infectious disease state plasma/sera are used as manufacturing standards or as positive and negative controls or calibrators in most diagnostic test systems. SERION Immunologics offers numerous disease state sera, which are collected following applicable ethical guidelines.

Plasma is collected from single donors within a wide collection network. Based on continuous routine screening capacities, SERION Immunologics ensures constant plasma availability, even of rare disease state sera.

All plasma materials are obtained from qualified and registered donors by approved blood centers in the U.S. or Europe. All materials are tested and certified to comply with regulatory requirements (e.g. donor traceability through the blood bank, virus testing, etc.). The materials are offered as plasma or converted plasma (serum) depending on the customer's needs. The conversion of plasma into serum is performed by a well-established conversion process (re-calcification) to optimize stability and performance of the plasma materials. Since the pathogen specificity for plasma and serum articles is almost identical, only the serum articles are listed below. Please contact us if you are interested in plasma articles.

SERION Immunologics routinely performs screenings on the parameters listed in the following tables for specific antibody positive as well as single or multiple negative plasma/sera. Please contact us to check current availability or if you are explicitly interested in further specificities not listed below.

Features and benefits:

- ✓ Bulk quantities
- ✓ Broad portfolio
- ✓ Improved stability by plasma conversion
- ✓ Fast screening capacities



Specific Antibody Positive

Pathogen Specificity	Order No. IgA	Order No. IgG	Order No. IgM
Adenovirus	PLS128A	PLS128G	PLS128M
Aspergillus fumigatus	PLS132A	PLS132G	PLS132M
Bordetella pertussis	PLS120A	PLS120G	PLS120M
Bordetella pertussis Toxin	PLS1201A	PLS1201G	
Borrelia burgdorferi		PLS121G	PLS121M
Brucella abortus	PLS116A	PLS116G	PLS116M
Campylobacter jejuni	PLS139A	PLS139G	PLS139M
Candida albicans	PLS117A	PLS117G	PLS117M
Chlamydia pneumoniae	PLS1371A	PLS1371G	PLS1371M
Chlamydia trachomatis	PLS1372A	PLS1372G	PLS1372M
Cytomegalovirus (CMV)		PLS109G	PLS109M
Dengue Virus		PLS114G	PLS114M
Echinococcus granulosus		PLS107G	
Enterovirus	PLS133A	PLS133G	PLS133M
Epstein-Barr Virus (EBV) VCA		PLS1361G	PLS1361M
Francisella tularensis		PLS142G	PLS142M
Hantavirus Puumala		PLS145G	PLS145M
Helicobacter pylori	PLS118A	PLS118G	PLS118M
Herpes Simplex Virus 1 (HSV-1)		PLS1051G	PLS1051M
Herpes Simplex Virus 1/2 (HSV-1/2)	PLS105A	PLS105G	PLS105M
Herpes Simplex Virus 2 (HSV-2)		PLS1052G	PLS1052M
Influenza A Virus		PLS1231G	PLS1231M
Influenza B Virus		PLS1232G	PLS1232M
Legionella pneumophila		PLS106G	PLS106M
Leishmania		PLS147G	
Leptospira biflexa		PLS125G	PLS125M
Measles Virus		PLS102G	PLS102M
Mumps Virus		PLS103G	PLS103M
Mycoplasma pneumoniae	PLS127A	PLS127G	PLS127M
Parainfluenza Virus 1/2/3	PLS126A	PLS126G	PLS126M
Parvovirus B19		PLS122G	PLS122M
Respiratory Syncytial Virus (RSV)	PLS113A	PLS113G	
Rheumatoid Factor (RF)			PLS000RF
Rubella Virus		PLS129G	PLS129M
SARS-CoV-2	PLS400A	PLS400G	PLS400M
Tick-borne encephalitis (TBE) Virus		PLS112G	PLS112M
Toxoplasma gondii	PLS110A	PLS110G	PLS110M

Pathogen Specificity	Order No. IgA	Order No. IgG	Order No. IgM
Varicella Zoster Virus (VZV)	PLS104A	PLS104G	PLS104M
West Nile Virus		PLS141G	PLS141M
Yersinia enterocolitica	PLS138A	PLS138G	PLS138M

Specific Antibody Negative

Pathogen Specificity	Order No.
Borrelia burgdorferi IgG negative	PLS121GN
Cytomegalovirus (CMV) IgG negative	PLS109GN
Epstein-Barr Virus (EBV) VCA and EBNA1 IgG negative	PLS136GN
Herpes Simplex Virus 1/2 (HSV-1/2) IgG negative	PLS105GN
Measles Virus IgG negative	PLS102GN
Mumps Virus IgG negative	PLS103GN
Measles/ Mumps/ Rubella/ VZV IgG negative	PLS_MMRZ_GN
Measles/ Mumps/ VZV/ EBV IgG & IgM negative	PLS_MMZE_N
Respiratory Parameter IgA, IgG & IgM negative	PLS_RESP_N
Adenovirus/ Chlamydia pneumoniae/ Mycoplasma pneumoniae/ Parainfluenza Virus 1/2/3/ Parvovirus B19/ Respiratory Syncytial Virus (RSV)	
Rubella Virus IgG negative	PLS129GN
Toxoplasma gondii IgG negative	PLS110GN
Toxoplasma/ Rubella/ CMV/ HSV-1/2 IgG & IgM negative	PLS_ToRCH_N
Vaccine Parameter IgG negative	PLS_VAC_GN
Measles/ Mumps/ Rubella/ VZV/ Diphtheria/ Tetanus/ Tick-borne encephalitis (TBE)	
Varicella Zoster Virus (VZV) IgG negative	PLS104GN

Available packaging sizes are 1 mL, 50 mL, 100 mL, 250 mL, and 500 mL.
1 mL test samples can be offered free of charge.

For further availabilities of human specimen samples, please also refer to Central BioHub (www.centralbiohub.com).

SERION antibodies

As a highly reliable and readily available alternative to human serum, SERION Immunologics also offers humanized monoclonal antibodies.

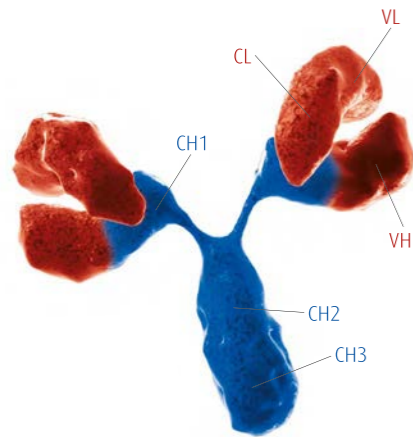


Figure 1:
 VH/VL/CL = Mouse constant and variable regions of heavy and light chain
 CH1/CH2/CH3 = Human region of heavy chain

The performance of these monoclonal antibodies, in comparison to human disease state sera, has been tested extensively, showing that the antibodies behave similar to sera. Therefore, they can be optimally and alternatively used for preparation of calibrators, controls and standards.

SERION antibodies are produced in transgenic mice by replacing the mouse sequence of the heavy chain constant region (IgM, IgG or IgA loci) with the corresponding human sequence. After immunization with the antigen of interest, generated antibody clones are cultivated by standard hybridoma techniques. These consist of the human constant region of the heavy chain, mouse variable region of the heavy chain and mouse light chain. The human constant region of the heavy chain can be directly recognized by the anti-human conjugate, which is used in numerous *in vitro* diagnostic assays.

The monoclonal antibodies are offered in two different matrices. The original product line is provided as a cell culture supernatant packaged in 1 mL up to 1 L quantities. The new generation of antibodies is available in IgG depleted and delipidized human serum matrix with 100 µg up to 25 mg packaging sizes. Production lots are usually offered with a concentration between 100 µg/mL and 150 µg/mL.

Features and benefits:

- ✓ High affinity
- ✓ High specificity
- ✓ Industrial batch sizes
- ✓ Constant availability
- ✓ Constant quality and performance

SERION antibodies in cell culture supernatant

Pathogen Specificity	Antibody Class	Clone	Order No.
Anti-Herpes Simplex Virus 1/2 (HSV-1/2)	IgM	K11A12D11	MAB105.001
Anti-Measles Virus	IgM	P5H6	MAB102.001
Anti-Mumps Virus	IgM	F11E4A7	MAB103.001
Anti-Rubella Virus	IgM	B16B11F8	MAB129.001
Anti-Toxoplasma gondii	IgM	A13H1E4	MAB110.001
Anti-Varicella Zoster Virus (VZV)	IgM	D30B3D1	MAB104.001

SERION antibodies in human matrix

Pathogen Specificity	Antibody Class	Clone	Order No.
Anti-Herpes Simplex Virus 1/2 (HSV-1/2) in human matrix	IgM	K11A12D11	MAB105.001H
Anti-Measles Virus in human matrix	IgM	P5H6	MAB102.001H
Anti-Mumps Virus in human matrix	IgM	F11E4A7	MAB103.001H
Anti-Rubella Virus in human matrix	IgM	B16B11F8	MAB129.001H
Anti-Toxoplasma gondii in human matrix	IgM	A13H1E4	MAB110.001H
Anti-Varicella Zoster Virus (VZV) in human matrix	IgM	D30B3D1	MAB104.001H

Test samples can be offered free of charge.

Further antibodies are under development. If you need another monoclonal antibody, please contact us. Customer-specific development is possible as well.

A cooperation with



SERION beads

Superparamagnetic microspheres for use in automated bead assays.

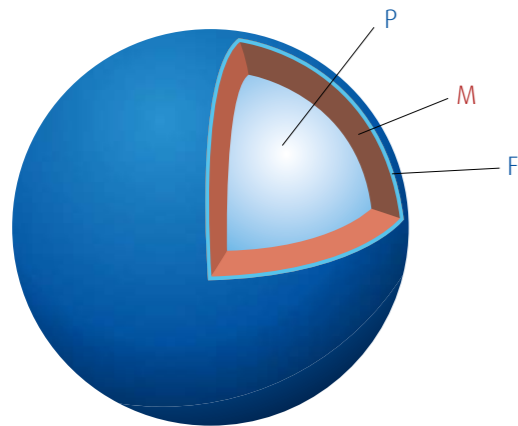


Figure 2:
 P = Polymer core
 M = Magnetic layer
 F = Functional polymer

The new product line SERION beads was developed for automated bead assays, e.g. CLIA. We offer two different kinds of functionalized magnetic beads – MagSERION carboxy beads and MagSERION amine beads. Their small size of approximately 3 µm provides a large surface area for biomolecule coupling and their superparamagnetic properties allow a fast magnetic separation. SERION beads can be activated using standard coupling methods for carboxy or amine surfaces or SERION coupling reagents and SERION proBind for efficient binding of your target biomolecule.

Features and benefits:

- ✓ Functional surface groups
- ✓ Fast magnetic separation
- ✓ Large surface area
- ✓ Suitable for automation

Products

SERION beads	Functionalization	Size (Size Range)	Concentration	Packaging	Order No.
MagSERION carboxy beads	Carboxy groups	3 µm (2.40 µm - 3.70 µm with 10 % CV)	100 mg/mL	100 mg	031MP-C
MagSERION amine beads	Amine groups	3 µm (2.40 µm - 3.70 µm with 10 % CV)	100 mg/mL	100 mg	031MPSS

Rheumatoid Factor Absorbent Bulk

Efficient removal of Rheumatoid Factor (RF) from serum and plasma samples prior to pathogen-specific IgM detection.

RFs are predominantly anti-IgG directed IgM class auto-antibodies which can be detected not only in patients with autoimmune diseases but also in serum of approximately 5% of healthy individuals. These IgM RFs preferably bind to IgG immune complexes. Therefore, false-positive results may appear during pathogen-specific IgM detection. In samples with a high concentration of pathogen-specific IgG antibodies, weakly binding IgM antibodies may be displaced by stronger binding IgG antibodies. In such cases, IgM detection without RF absorption can lead to false-negative results. Therefore, it is recommended to pretreat serum samples with RF Absorbent before the detection of pathogen-specific IgM.

SERION Immunologics Rheumatoid Factor Absorbent Bulk contains goat antibodies specifically directed against the Fc part of human IgG. Thus, the RF Absorbent precipitates human IgG together with potentially attached rheumatoid factors without cross-reactivity to other immunoglobulin isotypes. It is specified by a titer of minimum 15 mg/mL and can usually be diluted 3 to 4-fold to the final application concentration.

Features and benefits:

- ✓ Removal of rheumatoid factors
- ✓ Specific precipitation of human IgG
- ✓ Avoidance of false-positive results
- ✓ Continuous bulk availability



Products

Description	Packaging	Order No.
Rheumatoid Factor Absorbent Bulk	1000 mL	RF00R

Bovine Serum Albumin

Variety of BSA products especially selected to cover the needs of the diagnostic industry.

Bovine serum albumin (BSA) is a globular serum protein of approx. 66.5 kDa. Due to its high stability and its lack of interference in many biological reactions, BSA is widely used in diagnostics test systems. Typical applications include the use as protein calibrator, stabilizer or as blocking reagent.

BSA is often referred to as „Fraction V“, based on the original fractionation of human plasma developed by Edwin Cohn. Primarily developed for human albumin production, the process was later adapted to bovine serum albumin. In modern

manufacturing processes, Cohn fractionation is now replaced by a modified, more effective heat shock method, resulting in a BSA of significantly higher degree of purity (>98 %).

All bovine products are sourced from controlled abattoirs and are manufactured in the U.S. All animals receive ante- and post-mortem inspections in order to meet regulatory requirements and are classified as "free from infectious diseases and parasites".

Products

Product Description	Packaging	Order No.
Bovine Serum Albumin, Standard Grade, U.S. origin	10 g	BSA-0010SG
Bovine Serum Albumin, Standard Grade, U.S. origin	100 g	BSA-0100SG
Bovine Serum Albumin, Standard Grade, U.S. origin	1000 g	BSA-1000SG
Bovine Serum Albumin, Protease Free, U.S. origin	10 g	BSA-0010PF
Bovine Serum Albumin, Protease Free, U.S. origin	100 g	BSA-0100PF
Bovine Serum Albumin, Protease Free, U.S. origin	1000 g	BSA-1000PF
Bovine Serum Albumin, Fatty Acid Free, U.S. origin	10 g	BSA-0010FF
Bovine Serum Albumin, Fatty Acid Free, U.S. origin	100 g	BSA-0100FF
Bovine Serum Albumin, Fatty Acid Free, U.S. origin	1000 g	BSA-1000FF
Bovine Serum Albumin, Sulfhydryl Blocked, U.S. origin	10 g	BSA-0010SH
Bovine Serum Albumin, Sulfhydryl Blocked, U.S. origin	100 g	BSA-0100SH
Bovine Serum Albumin, Sulfhydryl Blocked, U.S. origin	1000 g	BSA-1000SH



SERION customized

SERION Immunologics offers a range of customized services including antigen development and production, manufacturing of coated ELISA plates as well as buffer preparation and lyophilization. If you have any project in mind, please contact us to discuss feasibility and the best possible production procedure.

Antigens and antibodies:

Due to the long-term experience of Virion\Serion as a developer and manufacturer of high performing and recognized IVD infectious disease antigens, SERION Immunologics is capable of developing and manufacturing a wide range of antigens. Based on the additional expertise of our cooperation partner ArkAb (Limoges, France), we are also the right partner for the development of new monoclonal antibodies.

ELISA plate coating:

SERION Immunologics offers a fully automated production line for ELISA coating, incubation and vacuum packaging. A modular system enables processing of up to four different lots with individual requirements in one production flow. Embedded in a DIN EN ISO 13485 certified production environment the state-of-the-art coating system is ready for your batch production.

Buffer production:

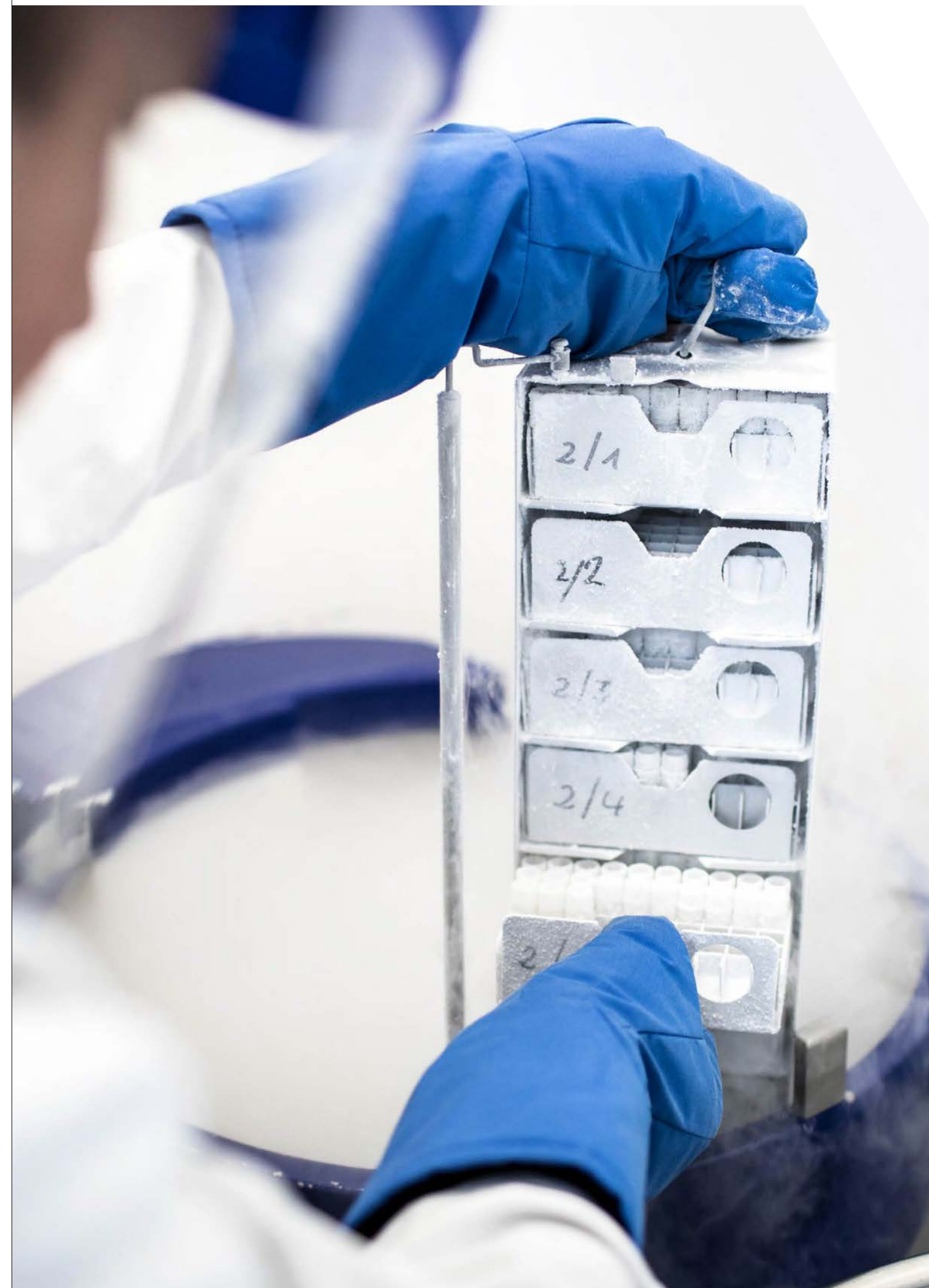
SERION customized also comprises the production of tailor-made reagents or buffer formulations, beginning from a simple bottling up to the production of complex buffer solutions. Based on Institut Virion\Serion GmbH's certification for the production of in vitro diagnostics according to DIN EN ISO 13485, all products are manufactured to the highest standards.

Lyophilization:

Freeze drying often increases the shelf-life of sensitive biological substances, such as antigens or antibodies, significantly. Therefore, this method is widely used in the manufacture of diagnostic reagents and components, such as CFT reagents or conjugates. Lyophilized products can be easily reconstituted with water or a suitable buffer and the reagent can be instantly used in a diagnostic test. Therefore, lyophilization is often the method of choice if a sensitive biological substance needs to be preserved for long-term storage or to remove the need for shipping of cooled or frozen reagents. Currently batch sizes of up to several thousand vials per lyophilization run can be freeze-dried under continuous quality conditions according to DIN EN ISO 13485.

Features and benefits – SERION customized

- ✓ Maximum flexibility
- ✓ Proven track record
- ✓ Technical customer support
- ✓ DIN EN ISO 13485 quality management system



Contact

For more information about our products and services, please write us by e-mail to immunologics@virion-serion.de or contact one of our colleagues directly. We are looking forward to your message!

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