



## Table Of Centents

Introduction	4
Company History	5
SERION Diagnostics	6
SERION ELISA <i>classic/antigen</i>	8
SERION ELISA <i>classic</i> Special Applications	10
CSF Diagnostics	11
Avidity Determination	12
SERION controls	14
SERION ELISA control	15
SERION immunoCONTROL	15
SERION ELISA AI control	16
SERION ELISA Avidity Control	16
SERION Automation	18
SERION Software	19

# Our company history

**Now, after more than 45 years**, Virion\Serion has evolved from a distribution company for CFT reagents – founded in 1978 – to a well-known and respected *in-vitro* diagnostics (IVD) manufacturer with one of the largest infectious disease portfolios for diagnosis of viral, bacterial, fungal and parasitic diseases worldwide.

Foundation in Wuerzburg

Foundation of the Institut Virion\ Serion GmbH with the product line SERION CFT in Wuerzburg (Germany).

1981

1978

**Extension of the product portfolio** Introduction of a second product line SERION ELISA *classic* for the detection of antibodies against various pathogens.

1986

Founding of SERION Immundiagnostika
GmbH

Founding of SERION Immundiagnostika GmbH for the worldwide export of our *in-vitro* diagnostics.

2000

**CE** certification

CE certification for the development, production and sale of our *in-vitro* diagnostics to ensure our consistently high quality standards.

2003

**Location China** 

Founding of a representative office in Beijing and simultaneous registration of the entire ToRCH panel of the SERION ELISA *classic* product line in China.

2007 SERION Immunomat
Introduction of the labor for highly effective aut

Introduction of the laboratory device SERION Immunomat for highly effective automated processing and evaluation of SERION ELISA immunoassays.

2013

#### **Introducing SERION Immunologics**

Introduction of the SERION Immunologics division for the sale of high-quality raw materials, e.g. bulk antigens, disease state sera and monoclonal antibodies, as well as the offer of various services.

2016

## Foundation of Virion\Serion Biotechnology (Shenzhen) Co.Ltd.

Foundation of Virion\Serion Biotechnology (Shenzhen) Co., Ltd. to further intensify activities on the Chinese market.

2018

#### Introduction of SERION Diagnostics

Introduction of the SERION Diagnostics division to further focus the activities of Institut Virion\Serion GmbH in the field of *in-vitro* diagnostics.

2023

#### 45 years of Virion\Serion

For 45 years, Virion\Serion has proven to be a reliable, competent and trustworthy partner for our customers worldwide.

**Inspired by Dedication** – this has always been the credo of Virion\Serion and its employees, right from the very beginning, and we want to live this claim in the future as well. For more than four decades now, Virion\Serion has proven to be a reliable, competent and trusted partner for our customers worldwide. All processes, services and products are managed in accordance with the EU directive 98/79/EC and IVD regulation (IVDR) 2017/746, under a certified quality management system according to DIN EN ISO 13485, to ensure and maintain the highest quality of our products and services. All products are manufactured in Germany (Wurzburg) and are distributed by our own field sales force in Germany and a network of distributors and partners worldwide.

Our aim is to bring value to our customers – with every product and service!

Everything under one Roof

Over 45 years of experience and specializing in the development and manufacture of *in-vitro* diagnostics ensure the supply of high quality solutions for IVD products **made in Germany**.









#### Research & Development

- Identification of the appropriate antigen by a team of specialists
- · Definition of an optimal test set-up
- Internal and external performance evaluation studies
- → Guarantees a high diagnostic performance

#### Antigen Production

- In house production of antigens as the core component
- More than 80 native / recombinant antigens
- State of the art antigen production techniques
- → Guarantees high quality and availability of the ELISA core component antigen

# Production Process and Quality Monitoring

- Highly automated production processes
- Large scale production capacities up to 2800 microtiter plates per lot
- According to EN ISO 13485, directive 98/79/EC and IVD Regulation (IVDR) 2017/746
  - → Guarantees immunoassays of constant quality in compliance with national and international guidelines



### Product Portfolio CE

- Comprehensive ELISA portfolio for antibody detection in serum/plasma
- A range of relevant SERION ELISA parameters validated for CSF diagnostics and avidity testing
- External controls in compliance with current quality management quidelines
- Automation solutions and userfriendly software tools
  - → Guarantees assays with cost and time-efficient processing combined with precise test results

#### Storage/Availability

- Huge cooled storage space for production ahead of time
- Flexible and fast reaction to increasing demands
- → Guarantees prompt supply of products right in time

#### Customer Support/Sales

- Our Customer / Technical Support offers quick and competent help for product-specific and technical questions
- Scientific Product Management provides detailed product information
- Sales Managers offer customers competent on-site support
- → Guarantees fast and reliable technical and scientific support

# SERION ELISA classic/antigen

**SERION ELISA** *classic* tests are qualitative and quantitative immunoassays for the detection of human antibodies directed against specific antigens of bacteria, viruses, fungi and parasites in serum, plasma or, when indicated, cerebrospinal fluid, for the diagnosis of infectious diseases.





**Please scan the QR-code** to download the **test specification** of the available ELISA products



#### Highlights:

- · High diagnostic performance by the use of carefully selected antigens
- Easy handling due to standardized test procedures
- Flexible combination of all SERION ELISA *classic* immunoassays in one test run
- Easily automatable on SERION Immunomat and comparable instruments
- Fast and quantitative evaluation with a user-friendly software tool
- Precise quantification by use of the precise 4 parameter logistic function (4 PL)
- External positive controls according to current quality management guidelines
- Standardized evaluation in IU/ml with international standard preparations of the WHO, if available
- · Open in use stability: 6 months
- · Shelf life: Usually 22 months as of production

#### **SERION RF Absorbent**

For a precise pathogen-specific IgM antibody detection it is necessary to pretreat serum samples with rheumatoid factor (RF)-Absorbent. SERION RF Absorbent precipitates up to 15 mg IgG / ml from undiluted serum.

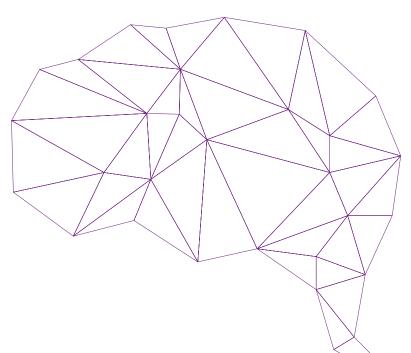
# SERION ELISA *classic* Special applications

### CSF Diagnostics

A range of SERION ELISA *classic* immunoassays are validated for the detection of intrathecally synthesized antibodies. Antibody activities against certain infectious agents in cerebrospinal fluid (CSF)/serum samples are measured in order to calculate the resulting antibody index (AI).







#### CSF Diagnostics

#### Diagnostic Relevance

The diagnosis of acute or chronic neuroborreliosis is supported by the pathogen-specific demonstration of intrathecally synthesized IgG and IgM antibodies directed against *Borrelia burgdorferi*.

Combined detection of IgG antibodies directed against Masern/Measles Virus, Röteln/Rubella Virus, Varicella Zoster Virus and Herpes Simplex Virus (MRZH reaction) is a valuable addition to Multiple Sclerosis diagnostics.

#### Highlights:

- Detection of intrathecally synthesized antibodies and calculation of the antibody index (AI) according to the scheme of Prof. Hansotto Reiber
- · SERION ELISA AI control for quality control in antibody index determination
- Fast and precise evaluation of AI with the evaluation software tool SERION easyCSF
- · Same test systems for serology and CSF Diagnostics
- Different dilutions of serum and CSF samples for calculation of the AI can be selected
- Automated processing with SERION Immunomat and comparable instruments
- Exact quantification by use of the precise 4 PL function



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please scan the QR code to download the prospectus for more information regarding CSF diagnostics



#### Avidity Determination

Avidity determinations serve to support the differentiation between acute and past infections which is of particular value within the framework of prenatal sero-logical testing. SERION Avidity Reagents are complementary components which, in combination with the corresponding SERION ELISA *classic*, enable the avidity of pathogen specific IqG antibodies to be determined.

#### Highlights:

- Easy handling of the avidity reagent
- Fast and precise determination of avidity indices with the software SERION easyANALYZE
- · Differentiation between acute primary infections and previous infections





## SERION Controls

SERION ELISA control
SERION immunoCONTROL
SERION ELISA AI control
SERION ELISA Avidity Control

Certification, competitive pressure, time constraints – laboratory diagnostics faces continuously increasing requirements. An extensive range of external positive controls allow the monitoring of immunoassays to meet current quality assurance guidelines.





#### SERION ELISA control

SERION ELISA control with target values for use with SERION ELISA classic immunoassays.

#### Highlights:

- · Easy handling due to predilution
- · Additional quality assurance by determination of methodical precision
- Laboratory internal error limits can be determined for an optimized quality control performance



#### SERION immunoCONTROL

Lyophilized positive control sera for qualitative antibody determination.

#### Highlights:

- Flexible use with SERION ELISA classic and other test systems\*
- · Convenient storage due to lyophilization
- · Easy handling, analogues to patient samples
- · Single and multi controls available

\*after validation by the user.





#### SERION ELISA AI control

Human CSF/serum control sample pairs for quality control in antibody index (AI) determination.

#### Highlights:

- Use of native human CSF and serum conforms with modern guideline requirements for patient analogue controls
- Defined target values and validity ranges enable complete control of dilution, processing and AI calculations
- Coverage of medical decision range with pathological and non-pathological control pairs conforms with modern guidelines



#### SERION ELISA Avidity Control

Lyophilized control sera for avidity determination.

#### Highlights:

- · Low avidity controls for the usage with the SERION Avidity Reagent
- · Convenient storage due to lyophilization
- · Easy handling, analogous to patient samples







SERION Immunomat

The fully automated 4-plate benchtop instrument offers a highly efficient handling and evaluation of ELISA Immunoassays due to detailed solutions and a user-friendly software.

#### Highlights:

- Extensive validation for antibody detection in serum, plasma or CSF and for avidity determination with SERION ELISA immunoassays
- Easy automated data transfer due to connection with laboratory information software
- Large selection and combination of preprogrammed assay protocols with different sample dilutions over a broad dilution spectrum for serological procedures and CSF diagnostics
- Stand-alone instrument with integrated pipetting system, plate transporter, ELISA washer and reader
- Combination of up to 16 different assays per plate



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**Please scan the QR code** to download the flyer. There you will find detailed information about **SERION Immunomat** 



#### SERION easyANALYZE

SERION easyANALYZE allows an efficient fast and clear evaluation of SERION ELISA, test systems as well as calculation of avidity indices.



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Please scan the QR code to download the flyer. There you will find detailed information about **SERION** easyANALYZE

#### SERION easyCSF

SERION easyCSF combines the results of SERION ELISA tests for CSF diagnostics with clinical chemistry and thus allows the automated determination of intrathecal antibody synthesis using CSF/serum quotients, the generation of quotient diagrams according to Reiber and a pathogen-specific antibody index calculation.



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