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DIAGNOSTICS

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SERION ELISA *classic*

Test Principle

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.

SERION ELISA *classic* test components

Diagnosis of infectious diseases

Serological investigations are important in the diagnosis of infectious diseases. The immune system produces antibodies as a vital component of the response to infection and the presence of foreign bodies or antigens. The detection of these antibodies is utilised in the diagnostic process.

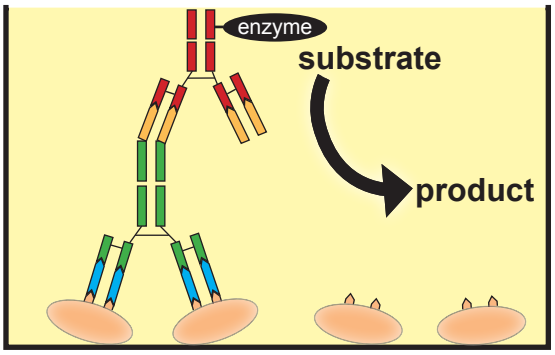
Short insight into the humoral immune response

During the normal course of an infection the cells of the human immune system manufacture different types of antibodies which are classified as e. g. IgM, IgG or IgA and are responsible for different effector functions during the immune reaction. In the course of a primary infection, IgM antibodies are produced first. Since their presence wanes after a few weeks, IgM antibodies in human serum are a marker for an acute or fresh infection. Subsequently, IgG antibodies are produced, which often persist life-long. A significant increase in the IgG antibody level in human serum is a characteristic marker for a subsequent infection.
Antibodies of the IgA class are responsible for the defence against infectious pathogens in the mucosa of e. g. the respiratory tract.

serion multianalyt™

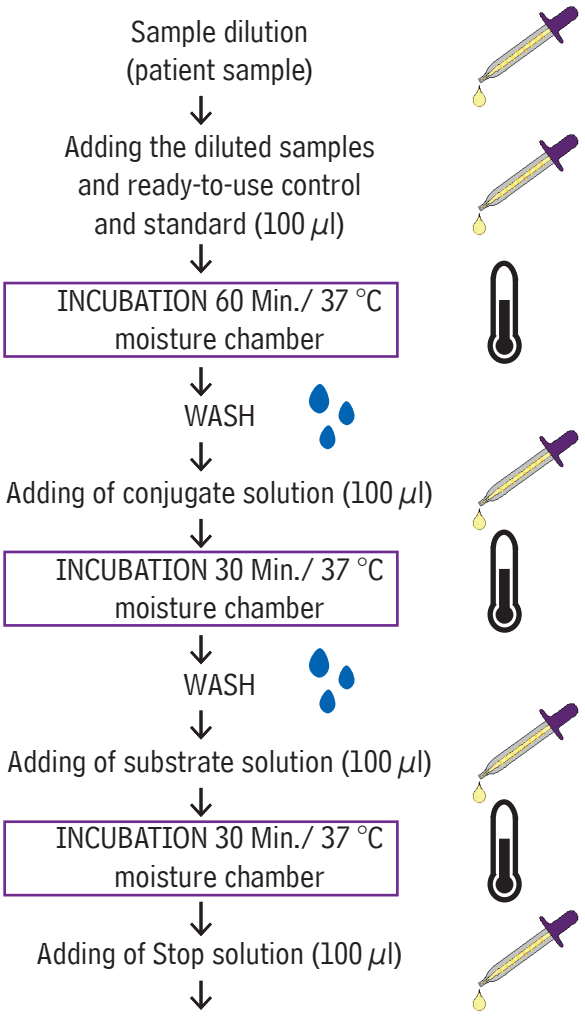
Principle of SERION ELISA *classic*

The ELISA (*Enzyme Linked Immunosorbent Assay*) is an immunoassay, which is particularily suited to the determination of antibodies in the field of infectious serology. The reaction is based on the specific interaction of antibodies with their corresponding antigen. Therefore, the test strips of the SERION ELISA *classic* microtitre plate are coated with specific antigens of the pathogen of interest. If antibodies in the patient´s serum sample are present, they bind to the fixed antigen. A secondary antibody, which has been conjugated with the enzyme alkaline phosphatase, detects the immune complex. The colourless substrate *p*-nitrophenolphosphate is then converted into the coloured product *p*-nitrophenol. The signal intensity of the reaction product is proportional to the concentration of the analyte in the sample and is measured photometrically.



Schematic design of a SERION ELISA *classic*

Schematic overview of a SERION ELISA *classic*



Advantages of SERION ELISA *classic* products

- High specificities and sensitivities by use of carefully selected antigens
- Strips of microtitre plates with individually breakable cavities
- Codes of pathogen and antibody class on the test strips to avoid mix-up
- Ready-to-use, coloured and barcoded reagents
- Consistent incubation periods for all SERION ELISAs (60 min, 30 min, 30 min)
- Combination of different tests in the frame of one plate possible
- Short incubation times unter defined conditions at 37 °C
- Standardised single-point calibration
- Compatibility with usual ELISA washer- and reader systems
- Application on Immunomat™, DYNEX DSX and comparable automates
- Fast and quantitative evaluation of measurement signals by use of the SERION *evaluate* software

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