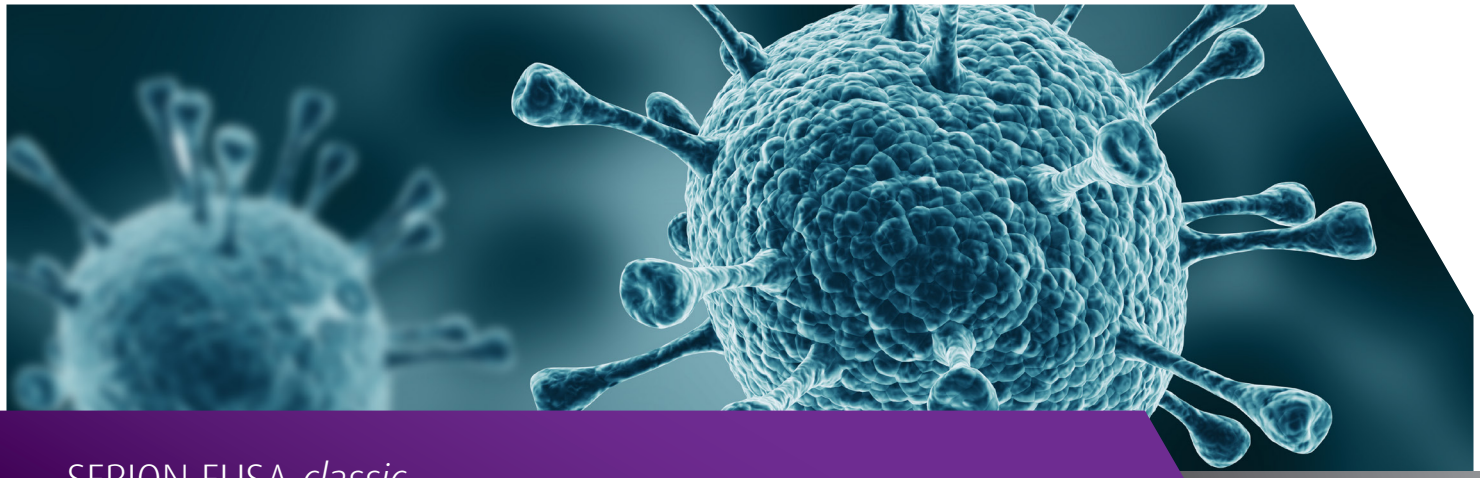

SERION ELISA *classic*

West Nile Virus IgG/IgM

Intended use

- Qualitative and quantitative detection of human IgG and IgM antibodies in serum or plasma directed against West Nile Virus
- Demonstration of IgM for the detection of acute infections
- Demonstration of IgG for the confirmation of contact with the pathogen, determination of the immune status and epidemiological studies

Diagnostic Efficiency

The SERION ELISA *classic* West Nile Virus IgG and IgM immunoassays were validated in an internal study by the analysis of more than 100 serum samples of healthy blood donors and patients with suspected West Nile fever. Two commercially available ELISA were used as reference tests.

Product	Sensitivity	Specificity
SERION ELISA *classic* West Nile Virus IgG	92.6 %	96.2 %
SERION ELISA *classic* West Nile Virus IgM	>99 %	>99 %

Precision

SERION ELISA *classic* West Nile Virus IgG

Sample	Mean value (OD)	Intraassay CV (%) (n=20)	Mean value (OD)	Interassay CV (%) (n=10)
Serum 1	0.396	3.0	0.413	8.0
Serum 2	0.611	2.2	0.626	7.6
Serum 3	1.259	6.2	1.355	3.6

SERION ELISA *classic* West Nile Virus IgM

Sample	Mean value (OD)	Intraassay CV (%) (n=20)	Mean value (OD)	Interassay CV (%) (n=10)
Serum 1	0.532	3.7	0.434	14.2
Serum 2	1.035	5.0	0.888	6.0
Serum 3	1.542	2.1	1.394	3.6

Pathogen

Besides the Dengue Virus and the TBE Virus, the West Nile Virus belongs to the human pathogenic species among the flaviviruses. In recent years, an increased number of epidemic outbreaks have occurred in Europe, Australia and Northern America. The West Nile Virus is currently the, geographically, most widely distributed mosquito borne virus.

Disease

Birds such as ravens and sparrows represent the natural reservoirs for the West Nile Virus. Mosquitos are the main vectors for transmission of the arbovirus (arthropod borne virus) to humans. Furthermore, iatrogenic transmission is possible via bone marrow, liver and heart transplantation and contaminated blood products. Approximately 80 % of infections with the West Nile Virus remain asymptomatic. In 20 % of cases flu-like symptoms such as fever, headache, myalgia and arthralgia as well as gastrointestinal symptoms may occur after an incubation period of three to 14 days (West Nile fever). The virus is able to pass the blood-brain barrier. Consequently, some 1 % of West Nile Virus infections are accompanied by encephalitis, meningitis or acute paralysis. In elderly or immunocompromized patients and in particular those with neurological involvement, West Nile Virus infections can result in permanent damage or death. The risk of developing a neurological disease form increases with advancing age.

Diagnosis

Due to the short viraemic phase, direct detection of the virus by RT-PCR, antigen detection and cultivation frequently remain unsuccessful. Thus, the serological analysis of IgM and IgG antibodies is recommended for laboratory confirmation of West Nile Virus infections. IgM antibodies occur by the end of the first week after the onset of symptoms and are generated by more than 90 % of all infected persons. IgM antibodies can be detected for several weeks or month. IgG antibodies appear not before eight days after disease onset and can persist for months or even lifelong.

Highlights

- Use of a preparation of inactivated West Nile Viruses for the sensitive detection of IgM antibodies for the demonstration of acute infections
- Use of a polypeptide derived from the pre-membrane protein M and a preparation of the envelope protein E for the detection of IgG antibodies to confirm contact with the pathogen
- Reduced cross-reactivity of IgG antibodies against other Flaviviruses
- Quantitative determination of IgG and IgM antibodies for disease stage monitoring and therapy control

Product	Order No.
SERION ELISA *classic* West Nile Virus IgG	ESR141G
SERION ELISA *classic* West Nile Virus IgM	ESR141M

SERION ELISA *control*

Please visit our website for more information.

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