SERION ELISA *classic*
Chikungunya Virus IgG/IgM

Intended Use

- Qualitative and quantitative detection of human antibodies in serum or plasma directed against chikungunya viruses
- Diagnosis of acute diseases and differential diagnosis

Diagnostic Efficiency

The evaluation of SERION ELISA *classic* Chikungunya Virus IgG and IgM was performed in an internal study with serum samples including over 140 sera from patients from Middle America with suspected chikungunya virus infection as well as with over 100 samples obtained from healthy blood donors in southern Germany, against the ELISA test of a leading manufacturer. Borderline results have not been included in the calculation.

Product	Sensitivity	Specificity
SERION ELISA *classic* Chikungunya Virus IgG	>99 %	>99 %
SERION ELISA *classic* Chikungunya Virus IgM	91.7 %	>99 %

Precision

SERION ELISA *classic* Chikungunya Virus IgG

Sample	Mean value (OD)	Intraassay CV (%)	Mean value (OD)	Interassay CV (%)
Serum 1	0.798	2.3	0.889	5.9
Serum 2	0.923	5.1	0.997	5.1
Serum 3	0.520	2.0	0.592	6.1

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Your Partner in Infectious Serology

SERION ELISA *classic* Chikungunya Virus IgM

Sample	Mean value (OD)	Intraassay CV (%)	Mean value (OD)	Interassay CV (%)
Serum 1	1.352	2.3	1.128	10.0
Serum 2	2.864	1.1	2.764	4.1
Serum 3	0.499	3.1	0.503	6.9

Pathogen

The chikungunya virus is a member of the alphavirus genus. It is also classified as arbovirus due to vector-dependent transmission by mosquitos. The enveloped virus carries structural glycoproteins E1–E3 that are particular immunogenic. Within the viral capsid several non-structure proteins and a ss-(+)-RNA genome are embedded.

Disease

The virus is the causative agent of chikungunya fever that is characterized by fever, joint pain and joint swelling, rash, and unspecific flu-like symptoms. The symptoms usually appear within a period of one to two weeks but mainly appear during the first week post infection. The disease is characterized by a biphasic course with an initial stage with high virus load (5–7 days) and a convalescent stage without viremia. A chronic course of disease that goes along with severe joint pain might occur. In rare cases neurological disorders like Guillain-Barré syndrome and meningoencephalitis, also with lethal courses, were described.

Diagnosis

The diagnosis is mainly based on direct pathogen detection or serological methods. Within the early phases virus detection by RT-PCR is the method of choice. After the onset of immune responses viremia will drop leading to reduced sensitivity of direct detection methods. Achieving this stage demonstration of specific antibodies should be used for diagnosis. Due to persistence of IgG and to lesser extent IgM antibody serology allows for retrospective evaluation.

Highlights

· Use of virus like particles (VLPs) consisting of recombinant E1, E2 and capsid protein as antigen for the specific detection of IgG and IgM antibodies

· Expression in human cell system reflects native protein structure

· Excellent diagnostic efficiency with high sensitivity and specificity

Product	Order No.
SERION ELISA *classic* Chikungunya Virus IgG	ESR148G
SERION ELISA *classic* Chikungunya Virus IgM	ESR148M

SERION ELISA *control*
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