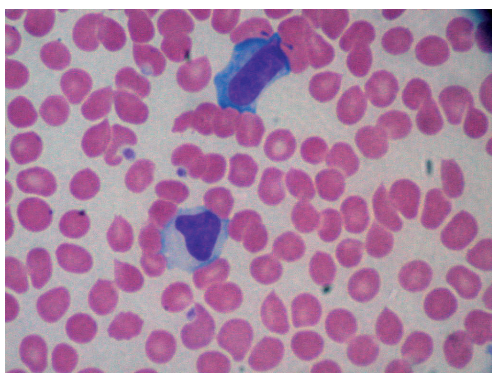


SERION ELISA *classic* Epstein-Barr Virus IgG / IgM

SERION ELISA *classic* Epstein-Barr Virus EA IgG, VCA IgG, IgM and EBNA 1 IgG tests are quantitative and qualitative immunoassays for the detection of human antibodies in serum or plasma directed against components of the Epstein-Barr Virus. The SERION ELISA *classic* Epstein-Barr Virus EA IgG and VCA IgM are recommended for the detection of acute infections or reactivations. The SERION ELISA *classic* Epstein-Barr Virus VCA IgG determines primary and recent infections. The SERION ELISA *classic* EBNA1 IgG is recommended for the determination of past infections.



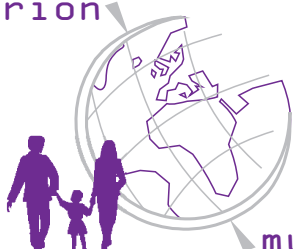
Micrograph of a blood smear with reactive lymphocytes.

Pathogen

The ubiquitous Epstein-Barr Virus (EBV) is a DNA virus and member of the Human Herpesvirus group. Seroprevalence in adults is high (90 - 95 %). In industrial countries primary infection is mainly restricted to teenagers or young adults. In contrast in non-developed countries, primary infection occurs typically much earlier in life. About 50 % of individuals infected in adulthood show clinical symptoms whereas clinical findings have been rarely observed in infections of younger children. Transmission takes place primarily via the saliva of infected individuals.

Disease

Primary infection, the cells of the salivary gland are infected first and the subsequent infection of B cells in the adjacent lymphoid tissue the virus spreads throughout the body. The disease resulting from primary infection is called infectious mononucleosis (IM) or glandular fever. In the later course of infection high fever, splenomegalia, lymphadenitis, thrombocytopenia and hepatitis may be observed. In some regions, the Epstein-Barr Virus is closely associated with nasopharyngeal carcinoma and Burkitt's lymphoma.



Diagnosis

About two weeks after infection, anti-EA IgG, anti-VCA IgM and anti-VCA IgG-antibodies can be detected in the patient's serum. Highest anti-VCA IgM antibody concentration is found about three weeks, highest anti-VCA IgG concentration about six weeks after onset of symptoms. Usually, this elevated level remains life-long. About three weeks after onset of symptoms the anti-EBNA 1 IgG antibody production starts. Anti-EBNA-1 IgG antibodies may be used to demonstrate previous infection. Following normal EBV infection the anti-EBNA-1 antibody concentration remains life-long at a high level. In most cases of reactivations, e. g. caused by immunosuppression, the anti-EA IgG antibody concentration increases sharply. Therefore high anti-EA-IgG titers are a reliable marker for reactivations.

Validation of SERION ELISA *classic* Epstein-Barr Virus

The SERION ELISA *classic* EBV EA IgG, VCA IgM, VCA IgG and EBNA-1 IgG were evaluated in comprehensive studies in comparison to assays of competitors and to the immunoblot based on recombinant antigens (Goldstandard).

SERION ELISA <i>classic</i>	Sensitivity	Specificity
EBV VCA IgG	98,1 %	98,5 %
EBV VCA IgM	97,4 %	97,3 %
EBV EA IgG	81,8 %	97,6 %
EBV EBNA 1 IgG	98,5 %	> 99 %

Precision

SERION ELISA *classic* VCA IgG

Sample	Mean Value OD	Intraassay CV (%) (n=20)	Mean Value OD	Interassay CV (%) (n=10)
weak positive	0,554	2,2	0,644	7,1
positive	1,001	2,9	1,035	6,5
strong positive	2,034	2,4	2,067	3,2

SERION ELISA *classic* VCA IgM

Sample	Mean Value OD	Intraassay CV (%) (n=20)	Mean Value OD	Interassay CV (%) (n=10)
positive	1,582	5,1	1,703	6,4
strong positive	2,249	7,9	2,311	8,7

SERION ELISA *classic* EBNA 1 IgG

Sample	Mean Value OD	Intraassay CV (%) (n=20)	Mean Value OD	Interassay CV (%) (n=10)
weak positive	0,887	3,2	0,927	4,4
positive	1,699	2,9	1,873	2,8
strong positive	2,434	2,1	2,616	2,2

SERION ELISA *classic* EA IgG

Sample	Mean Value OD	Intraassay CV (%) (n=20)	Mean Value OD	Interassay CV (%) (n=10)
weak positive	0,420	4,2	0,396	11,5
positive	1,137	3,8	1,121	4,9
strong positive	1,368	8,0	1,252	8,2

Order Information

SERION ELISA *classic* EBV VCA IgG
SERION ELISA *classic* EBV VCA IgM
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Please visit our website www.virion-serion.com for more information on our SERION ELISA *classic* products.

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