

SERION ELISA *classic* Adenovirus IgA / IgG

SERION ELISA *classic* Adenovirus IgA and IgG tests are quantitative and qualitative immunoassays for the detection of human antibodies, directed against all pathogenic human adenovirus serotypes, in serum or plasma. SERION ELISA *classic* Adenovirus IgA and IgG tests are recommended for detection of acute infections and for differential diagnosis of respiratory tract infections.



Pathogen

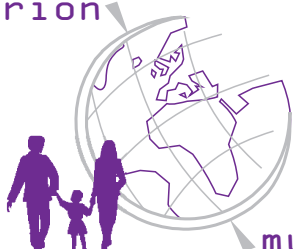
Adenoviruses belong to the family of *Adenoviridae* affecting a wide range of species (mammals, birds, reptiles and fish). Approximately 50 subtypes have been identified as human pathogens, with subtypes 1 to 8, 40 and 41, occurring most frequently. High prevalence of seropositivity, reaching over 50 %, reflects repeated infection with different subtypes in early childhood.

Disease

Adenoviruses may cause disease in a wide range of organs but particularly in the respiratory tract, gastrointestinal and urogenital tract and in the eye. Ocular infections (particularly keratoconjunctivitis) are often associated with hospital settings and nosocomial infections.

In adults infection with adenoviruses typically takes a mild or subclinical course and results in lifelong immunity to the infecting serotype so that, in the absence of immunosuppression, reinfection is rare.

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Diagnosis

Direct antigen detection methods such as cell culture, electron microscopy and immunofluorescence are important aspects of adenovirus infection diagnosis. It should be recognised however that adenoviruses may behave like commensals and their presence is not always indicative of disease causation. Serological investigations are routinely employed for diagnosis of adenovirus infections and, while the CFT is a long established method, the ELISA methodology has the advantage of differentiating between immunoglobulin classes.

Validation of SERION ELISA *classic* Adenovirus

For the evaluation of the SERION ELISA *classic* Adenovirus IgG 170 serum samples, 156 serum pairs of persons with a respiratory infection as well as 61 serum samples from blood donors were analysed. The SERION ELISA *classic* Adenovirus IgA was validated by the analysis of 170 serum samples, 155 in process serum samples of a routine laboratory and 75 samples from blood donors. The complement fixation test (CFT) was used as a reference. Sera classified as borderline were not included in the calculation. Since the CFT does not detect IgA antibodies, the performance characteristics were calculated presuming that the humoral IgA antibody response sets on simultaneously with the production of complement binding antibodies.

SERION ELISA <i>classic</i>	Sensitivity	Specificity
Adenovirus IgA	80,0 % *	90,1 %
Adenovirus IgG	96,7 %	97,8 %

*Constraint information because comparison with CFT

The slightly lower sensitivity of the ELISA compared to the CFT is mainly due to serum samples which are evaluated as weakly positive by the CFT (one titer step above borderline titer). Such weak titers may be the result of post infections. The SERION ELISA *classic* Adenovirus assesses those samples in general as negative to get a clear separation between current acute and elder infections. The SERION ELISA *classic* Adenovirus IgG and IgA have been developed for Adenovirus diagnosis so as to exclude the high background seroprevalence.

Precision

The intra- and interserial precisions were determined by the analysis of serum samples of different reactivities.

SERION ELISA *classic* Adenovirus IgA

Sample	Mean-Value OD	Intraassay CV (%) (n=20)	Mean-Value OD	Interassay CV (%) (n=10)
negative	0,292	8,6	0,354	9,2
weak pos.	0,733	4,7	0,818	4,1
positive	1,119	2,3	1,198	5,2

SERION ELISA *classic* Adenovirus IgG

Sample	Mean-Value OD	Intraassay CV (%) (n=20)	Mean-Value OD	Interassay CV (%) (n=10)
negative	0,392	5,4	0,406	7,2
borderline	0,547	4,7	0,541	9,3
positive	1,188	4,8	1,209	8,3

Order Information

SERION ELISA *classic* Adenovirus IgA

SERION ELISA *classic* Adenovirus IgG

Reference serum Adenovirus IgA

Reference serum Adenovirus IgG

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

Order Nr.: ESR 128 A

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