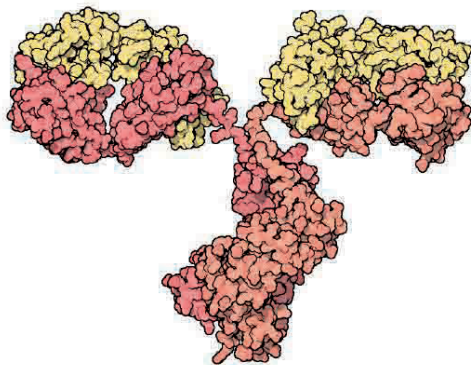


SERION ELISA *classic* Avidity Reagents

The SERION ELISA *classic* Avidity Reagents are complementary components which, in combination with the respective SERION ELISA *classic*, enables the avidity of pathogen specific IgG antibodies to be determined. The SERION ELISA *classic* Avidity Reagents are recommended to support the differentiation between acute primary infections and previous infections by Cytomegalovirus, Rubella Virus or *Toxoplasma gondii* particularly in serological investigation during pregnancy.

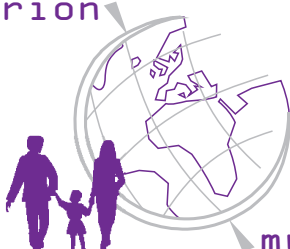


Schematic drawing of an IgG antibody
(Source: US Federal Government,
illustrated by David S. Goodsell)

Diagnostic Background

Avidity characterises the average affinity of specific polyclonal antibodies of an individual formed during the regular course of an infection. Avidity testing is based on the observation, that antibody affinities increase significantly as the immune response to pathogens progresses (affinity maturation). Therefore, highly avid IgG antibodies are an indicator of previous infection whereas IgG antibodies with low avidity are suggestive of a primary infection. Therefore, the determination of high antibody avidities in general excludes acute primary infections. Particularly during pregnancy, avidity testing of certain pathogen specific IgG antibodies is a valuable contribution in routine serology.

Cytomegalovirus infection is a major cause of connatal damage. Primary as well as reactivated infections of pregnant women may result in foetopathy. The risk of fetal damage is higher in case of primary infections than during reactivations. Determination of IgM antibodies should not be considered conclusive proof of a primary infection as CMV IgM antibodies may also arise from polyclonal stimulation or CMV reactivation. Determination of CMV IgG antibody avidity provides therefore a valuable contribution towards the differentiation between acute primary and previous infections.



For the diagnosis of rubella, considerable importance is attached to the detection of primary infections in pregnant women because of the associated risk of foetal abnormality. Determination of IgM antibodies should not be considered conclusive proof of a primary infection as Rubella Virus IgM antibodies may also arise from polyclonal stimulation or Rubella Virus re-infection. In isolated cases, Rubella Virus IgM antibodies have been found to persist for a long time after infection. Therefore, determining the avidity of Rubella Virus IgG antibodies can make an important contribution towards clarifying positive Rubella Virus IgM results.

After Toxoplasma infection, the specific IgM antibody concentration rises rapidly. Following the course of a regular infection the activity decreases but often persists on a low level over several months or even years. Specific IgM detection alone is therefore not a reliable method of diagnosing a primary infection. Again, determining the avidity of Toxoplasma gondii IgG antibodies can make an important contribution towards the differentiation between acute primary and previous infections.

SERION avidity testing

SERION Avidity testing is performed using the appropriate SERION ELISA *classic* tests. The SERION avidity reagents cause the dissociation of low affinity antibody-antigen complexes, whereas high affinity complexes are not affected.

Determination of SERION avidity indices is based on measured signal intensities taking into account the pathogen specific antibody concentration in order to compensate for the influence of antibody content on the avidity index.

A comparison of the SERION evaluation technique with quantification methods of other manufacturers, which are based on quotients of antibody concentration, showed better intra- and interserial precision profiles with lower coefficients of variation with the SERION method. Furthermore, high lot-to-lot constancies are guaranteed.

Software SERION avidity

For calculation of SERION avidity indices and determination of high or low avidity, the free-of-charge Excel-based evaluation software tool SERION *avidity* is available on request.

Order Information

SERION ELISA *classic* Cytomegalovirus IgG

SERION ELISA *classic* CMV avidity reagent

Reference serum CMV avidity

SERION ELISA *classic* Rubella Virus

SERION ELISA *classic* Rubella Virus avidity reagent

Reference serum Rubella Virus avidity

SERION ELISA *classic* Toxoplasma gondii IgG

SERION ELISA *classic* Toxoplasma gondii avidity reagent

Reference serum Toxoplasma gondii avidity

Software SERION *avidity*

Normal IgG determination in parallel with avidity testing is possible.

Avidity testing is evaluated for manual use as well as for processing on Immunomat™ TWINsystem and DYNEX DSX™.

The Excel-based Software SERION *avidity* is available on demand free of charge.

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

Order Nr.: ESR 109 G

Order Nr.: B 109 AVID

Order Nr.: BR 109 AVID

Order Nr.: ESR 129 G

Order Nr.: B 129 AVID

Order Nr.: BR 129 AVID

Order Nr.: ESR 110 G

Order Nr.: B 110 AVID

Order Nr.: BR 110 AVID

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