

# Beta 2 glycoprotein antibodies

## General:

Anti-Cardiolipin autoantibodies (ACA) are described for various autoimmune diseases. The presence of anti-cardiolipin antibodies in systemic lupus erythematosus (SLE) can be related to the development of thrombocytopenia, in gynecology they are supposed to cause intrauterine death or recurrent abortion. Furthermore, anti-cardiolipin antibodies have been found in some non-thrombotic neurological disorders like cerebrovascular insufficiency, cerebral ischemia or chorea and in myocardial infarction.

Recent studies have shown that a 50kD serum cofactor is required for anti-cardiolipin antibodies, to bind to cardiolipin which has been coated onto plastic plates. The cofactor has been identified as beta2-glycoprotein 1 also termed apolipoprotein H.  $\beta$ 2GP1 has been known as an in vitro inhibitor of the intrinsic blood coagulation pathway, ADP-dependent aggregation, and prothrombinase activity of activated platelets. It has become apparent that anticardiolipin antibody from patients with anti-phospholipid syndrome (APS) recognize a modified  $\beta$ 2GP1 structure and not cardiolipin, native  $\beta$ 2GP1 or an epitope structurally defined by both cardiolipin and  $\beta$ 2GP1.

Anti- $\beta$ 2GP1 autoantibodies are found in the immunoglobulin classes IgG, IgM and IgA. The determination of IgM antibodies is a valuable indicator in the diagnosis of beginning autoimmune disease, whereas IgG and/or IgA antibodies will be found in progressive stages of manifested autoimmune disorders. IgA antibodies are often associated with IgG antibodies. The determination of IgA antibodies seems to have a greater validity in thrombosis and fetal loss. Indications for determination of anti  $\beta$ 2GP1 antibodies are: SLE, thrombosis, thrombocytopenia, cerebral ischemia, chorea, epilepsy, re-current abortion and intrauterine death.

The following tests are available:

- **Beta-2-glycoprotein IgA antibodies**

Material: 1 ml serum

TAT: 7-10 days\*

Method: EIA

Units: U/ml

Ref.- range: see report

- **Beta-2-glycoprotein IgG antibodies**

Material: 1 ml serum

TAT: 7-10 days\*

Method: EIA

Units: U/ml

Ref.- range: see report

- **Beta-2-glycoprotein IgM antibodies**

Material: 1 ml serum

TAT: 7-10 days\*

Method: EIA

Units: U/ml

Ref.- range: see report

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit  
<http://www.fml-dubai.com/parameter-listings/>