

Toxoplasmosis

General:

Toxoplasma gondii is an intracellular parasite (protozoa) and is transferred by food or by domestic animals (cats, cat excrement). Diaplacental infection is possible. The incubation period is 2-3 weeks. Many persons (up to 90% in developing countries, up to 40% in developed countries) have had contact with toxoplasma (elevated IgG Abs; please note that IgM Abs might persist over years without any pathological significance). The clinical course is often asymptomatic, in weak forms headaches, sore throats and lymphadenitis (cerviconuchal lymph nodes) are observed. Severe symptoms occur in immune deficiency, immunosuppressed transplant recipients. Rare complications are myocarditis, hepatitis, pneumonia, meningoencephalitis and retinochorioiditis.

Infection during pregnancy: The primary infection in pregnancy (seronegative mother before conception!) is observed in 2-7 cases of 1000 livebirths. A diaplacental fetal infection occurs in approx. 50% of the cases. Spontaneous miscarriages, premature births or stillbirths have been described. The newborn can develop hydrocephalus, mental or psychomotor retardation, retinochorioiditis or cerebral sclerosis. Long-term damage with ophthalmological defects (chorioretinitis), mental retardation, increased mortality are described as well.

The following tests are available:

- **Toxoplasma IgM antibodies**

Indication: Suspicion of fresh toxoplasmosis infection

Material: 1 ml serum

TAT: same day, FML

Method: ECLIA

Units: COI

Ref.- range: <0.8

- **Toxoplasma IgM ISAGA**

Indication: clarification of an acute infection and unclear toxoplasma IgM-Ab ELISA

Material: 1 ml serum

TAT: 3-5 days*

Method: ISAGA

Units: Titer

Ref.- range: see report

- **Toxoplasma IgG antibodies**

Indication: Suspicion of toxoplasmosis infection or seroconversion and titer control during pregnancy

Material: 1 ml serum

TAT: same day, FML

Method: ECLIA

Units: IU/ml

Ref.- range: <1.0

- **Toxoplasma IgG antibody avidity test**

General:

Avidity describes the strength of binding of a toxoplasma IgG antibody found in serum to its corresponding antigen. Avidity increases over a period of approx. 3 months. High avidities are a sign of an earlier (past) infection. The level of avidity will indicate whether the infection is recent (acute) or took place in the past.

Indication: clarification of the time frame of infection in case of positive toxoplasma IgM-Ab ELISA test.

Material: 1 ml serum

TAT: 5-7 days*

Method: ELFA

Unit: %

Ref.- range: >30.0

Note: high avidity indicates an earlier infection (> 6 weeks - 3 months)

- **Toxoplasma IgM Western blot**

Indication: clarification of infection if there is an unclear result in the toxoplasma IgG avidity test

Material: 1 ml serum

TAT: 7-10 days*

Method: Western Blot

Ref.- range: see report

- **Toxoplasma IgG Western blot**

Indication: clarification of the moment of infection if there is an unclear result by toxoplasma IgG avidity test

Material: 1 ml serum

TAT: 7-10 days*

Method: Western Blot

Ref.- range: see report

- **Toxoplasma gondii DNA in amniotic fluid**

Indication: Suspicion of acute toxoplasmosis infection during pregnancy

Material: 1 ml amniotic fluid

TAT: 5-7 days*

Method: PCR

Ref.- range: negative

- **Toxoplasma gondii DNA in CSF**

Material: 1 ml CSF

TAT: 5-7 days*

Method: PCR

Ref.- range: negative

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