

Herpes virus

General:

HSV has a linear, double-stranded DNA genome, with a size of 152 kilobases. Type Herpes simplex-I (Herpes labialis, HSV-1) and Herpes simplex-II (Herpes genitalis, HSV-2) show 50% homologous sequences. Endemic infections in adulthood are approx. 95%. HSV-2 viruses are sexually transmitted. HSV-1 infections with resulting IgG levels do not protect against HSV-2 infections and vice versa.

Incubation period is approx. 3-7 days; duration in uncomplicated course is approx. 1-2 weeks. First infections usually occur in the orofacial area, but may affect other areas as well. Clinical manifestation is not always present. Various mechanisms are considered as triggers for reactivation, e.g. UV light, mechanical skin irritation, stress, immune suppression, tumors, etc.

Pregnancy: Increased spontaneous abortion rate or premature delivery is possible, however no embryopathies are known. Primary infections with HSV-2 accumulate in the last trimester. The infection of the baby occurs predominantly during birth.

HSV-1 (herpes labialis): mucocutaneous infections, eczema herpeticum, zoster oticum, perhaps with facial paralysis, gingivostomatitis, Herpes simplex ceratoconjunctivitis, Herpes corneae, inoculation herpes, Herpes encephalitis;

HSV-2 (herpes genitalis): mucocutaneous infections, vulvovaginitis, herpes genitalis, herpetic proctitis, inoculation herpes, eczema herpeticum, meningoencephalitis, herpes neonatorum;

HHV-6: exanthema subitum (phlebotomus fever, roseola infantum). The infection usually occurs in infancy and persists latently. HHV6 can cause meningitis with febrile convulsions in children. It is assumed that HHV6 was the cause of CFS epidemic (chronic fatigue syndrome) in Lake Tahoe, USA. After primary infection the virus persists despite antibody formation;

HHV 8: endemic infection level among the normal population is 5-20%; association with Kaposi's sarcoma has been described. The following tests are available:

- **Herpes simplex type I, DNA**

Indication: Suspicion of acute herpes type 1 infection, exclusion VZV

Material: dry swab

Preanalytics: dry sterile cotton swab. Collect vesicle content.

TAT: 5-7 days*

Method: real time PCR

- **Herpes simplex type I, DNA in CSF**

Material: 1 ml CSF

Preanalytics: in sterile tube without additives

TAT: 5-7 days*

Method: real time PCR

- **Herpes simplex type II, DNA**

Indication: Suspicion of acute herpes type 2 infection, exclusion VZV

Material: swab

Preanalytics: dry sterile cotton swab. Collect vesicle content.

TAT: 5-7 days*

Method: real time PCR

- **Herpes simplex type II, DNA in CSF**

Material: 1 ml CSF

Preanalytics: in sterile tube without additives

TAT: 5-7 days*

Method: real time PCR

- **Herpes simplex type I, IgM antibodies**

Indication: Suspicion of acute herpes type 2 infection, exclusion VZV

Material: 1 ml serum

Stability: 14 days at 2 to 8°C

TAT: 3 days, FML

Method: ELISA

Units: ratio

Ref. range: <0.8 borderline 0.8 – 1.1

- **Herpes simplex type I, IgG antibodies**

Material: 1 ml serum

Stability: 14 days at 2 to 8°C

TAT: 3 days, FML

Method: ELISA

Units: ratio

Ref. range: <0.8 borderline 0.8 – 1.1

- **Herpes simplex type II, IgM antibodies**

Indication: Suspicion of acute herpes type II infection

Material: 1 ml serum

Stability: 7 days at 2 to 8°C

TAT: 3 days, FML

Method: CLIA

Units: Index

Ref. range: <0.9 borderline 0.9 – 1.1

- **Herpes simplex type II, IgG antibodies**

Material: 1 ml serum

Stability: 14 days at 2 to 8°C

TAT: 3 days, FML

Method: EIA

Units: ratio

Ref. range: <0.8 borderline 0.8 – 1.1

- **Human herpes virus type 6, DNA**

Indication: Suspicion of acute herpes type 6 infection

Material: 3 ml EDTA blood

Preanalytics: for dispatch please do not freeze EDTA blood! Debris of erythrocytes will disturb the measurement. Please use additional vials for other requested tests, as opening of the vial and splitting the samples can lead to contaminations and therefore to false positive results.

TAT: 7-10 days*

Method: PCR

Ref. range: see report

- **Human herpes virus type 6, IgM antibodies**

Indication: Clarification of exanthema subitum (three day fever)

Material: 1 ml serum

TAT: 7-10 days*

Units: Titer

Method: IFT

Ref. range: <1:10

- **Human herpes virus type 6, IgG antibodies**

Indication: Clarification of exanthema subitum (three day fever), immunity status

Material: 1 ml serum

TAT: 7-10 days*

Units: Titer

Method: IFT

Ref. range: <1:10

- **Human herpes virus type 8, DNA**

Indication: Human herpes virus type 8, DNA

Material: 3 ml EDTA blood

Preanalytics: for dispatch please do not freeze EDTA blood! Debris of erythrocytes will disturb the measurement. Please use additional vials for other requested tests, as opening of the vial and splitting the samples can lead to contaminations and therefore to false positive results.

TAT: 7-10 days*

Method: PCR

Ref. range: see report

- **Human herpes virus type 8, IgG antibodies**

Indication: Identification of serostatus in HIV patients and before organ transplants.

Material: 1 ml serum

TAT: 7-10 days*

Method: IFT

Units: Titer

Ref. range: <1:100

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit

<http://www.fml-dubai.com/parameter-listings/>