Anti-HSV-2 (gG2) ELISA (IgG)

- Type-specific quantitative determination of IgG antibodies against HSV-2
- Based on purified glycoprotein G2 (gG2)
- Fully automated processing and evaluation

Technical data

- **Antigen**: Purified glycoprotein G2 (gG2) of herpes simplex virus 2
- **Calibration**: Quantitative, in relative units per millilitre (RU/ml)
  - Calibration serum 1: 200 RU/ml
  - Calibration serum 2: 20 RU/ml
  - Calibration serum 3: 2 RU/ml
  - Recommended upper threshold of the reference range for non-infected individuals (cut-off): 20 RU/ml
- **Sample dilution**: Serum or plasma, 1:101 in sample buffer
- **Reagents**: Ready for use, with the exception of the wash buffer (10x); colour-coded solutions, in most cases exchangeable with those in other EUROIMMUN ELISA kits
- **Test procedure**: 30 min / 30 min / 15 min, room temperature; fully automatable
- **Measurement**: 450 nm, reference wavelength between 620 nm and 650 nm
- **Test kit format**: 96 break-off wells; kit includes all necessary reagents
- **Order number**: EI 2532-9601-2 G

Clinical significance

Herpes simplex viruses type 1 (HSV-1) and type 2 (HSV-2) cause local skin and mucous membrane infections predominantly in the mouth and nose area and the genital regions. Initially, blisters occur on a reddened area, which burst and develop into painful ulcerous lesions. Primary infection with HSV-2 generally occurs in or after adolescence, the virus being transmitted via sexual intercourse. Antibodies against HSV-2 can be found in 7% to 20% of general population and in more than 20% of adults with frequently changing sexual partners. Primary infection and reinfection with HSV may lead to severe illness in pregnant women. The virus is transmitted transplacentally or perinatally to the child and can cause infection in the foetus or newborn. Infection of the unborn child can lead to intrauterine death, malformations and premature birth. Newborns are prone to developing systemic HSV-2 infections, with a fatality rate of around 80% in untreated disseminated HSV-2 infections. Surviving infants frequently show neurological, motor or cognitive deficits. In rare cases HSV-2 can cause severe cerebral infections, which are fatal in 70% of cases if left untreated.

Diagnostic application

The use of HSV-2 glycoprotein G2 (gG2) as the antigen in the EUROIMMUN Anti-HSV-2 (gG2) ELISA (IgG), allows type-specific detection of IgG antibodies against HSV-2. A positive test result indicates contact with the virus. When acute processes are suspected, e.g. genital herpes, especially during pregnancy, or HSV encephalitis, direct detection should be performed.
The levels of anti-HSV-2 antibodies (IgG) were analysed with the EUROIMMUN Anti-HSV-2 (gG2) ELISA (IgG) in a panel of 500 healthy blood donors. With a cut-off value of 20 IU/ml, 9.6% of the blood donors were anti-HSV-2 positive (IgG). This reflects the known prevalence in adults.

**Reproducibility**

The reproducibility was investigated by determining the intra- and inter-assay coefficients of variation using three sera. The intra-assay CVs are based on 20 determinations and the inter-assay CVs on four determinations performed in six different test runs.

<table>
<thead>
<tr>
<th>Serum</th>
<th>Intra-assay variation, n = 20</th>
<th>Inter-assay variation, n = 4 x 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean value (RU/ml)</td>
<td>CV (%)</td>
</tr>
<tr>
<td>1</td>
<td>23</td>
<td>5.1</td>
</tr>
<tr>
<td>2</td>
<td>47</td>
<td>4.8</td>
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<tr>
<td>3</td>
<td>76</td>
<td>3.9</td>
</tr>
</tbody>
</table>

**Quality assessment results**

168 serologically and/or clinically characterised patient samples (quality assessment schemes by INSTAND, Germany; Labquality, Finland and IQS, Germany) were analysed using the EUROIMMUN Anti-HSV-2 (gG2) ELISA (IgG). The agreement of the qualitative ELISA results with the specifications of the quality assessment institutes was 100% (excluding borderline sera).

**Cross reactivity**

48 sera from patients with other herpes virus infections and 144 sera from patients with different infectious diseases (positive IgG results) were investigated using the EUROIMMUN Anti-HSV-2 (gG2) ELISA (IgG). No cross reactions (CR) were found.

**Literature**


