Herpes Simplex Virus 1 & 2 (HSV-1 & HSV-2) Quantitative Real-time PCR
Test Code: 8500

Some specimen types for this assay are reported as qualitative results; please see our Specimen Information section below for more information.

Clinical and Procedure

Clinical Utility
HSV-1 and HSV-2 are well known etiologic agents of gingivostomatitis, conjunctivitis, keratitis, herpetic whitlow, and genital infections as well as encephalitis, aseptic meningitis, atypical pneumonias and a wide variety of other clinical conditions. Quantitative HSV DNA PCR is the ideal diagnostic tool for CNS specimens, since HSV will rarely grow from CSF in cell culture. Quantitative PCR can be used to detect the presence of the virus as well as track the course of infections and response to treatment.

Procedure
Extraction of Herpes Simplex viral DNA from specimen followed by amplification and detection using real-time, quantitative PCR. An internal control is added to ensure the extraction was performed correctly and the PCR reaction was not inhibited. This test has not been cleared or approved for diagnostic use by the U.S. Food and Drug Administration.

Specificity
The HSV-1 and HSV-2 primers and probes used in this assay are specific for HSV-1 & 2 only and detect known HSV-1 & 2 strains based on similarity search algorithms. The individual primers and probes for HSV-1 and HSV-2 are unique and specific, with no cross reactivity between the HSV-1 and HSV-2 primers. Additionally, no cross reactivity was detected when tested against adenoviruses, BKV, CMV, EBV, HHV-6 variant A, HHV-6 variant B, HHV-7, HHV-8, JCV, parvovirus B19, SV-40, and VZV.

Turnaround Time
Same day (within 8 - 12 hours from receipt of specimen), Monday through Saturday.

Specimen Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Order Code</th>
<th>CPT Code</th>
<th>NY Approved</th>
<th>Volume</th>
<th>Assay Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>aqueous fluid</td>
<td>8545</td>
<td>87799</td>
<td>Yes</td>
<td>1 mL (min. 0.05 mL)</td>
<td>HSV 1 is 2,176 copies/mL to 1x10^8 copies/mL. HSV 2 is 748 copies/mL to 1x10^8 copies/mL.</td>
</tr>
<tr>
<td>BAL</td>
<td>8509</td>
<td>87530</td>
<td>Yes</td>
<td>2 mL (min. 0.5 mL)</td>
<td>HSV 1 is 58 copies/mL to 1x10^8 copies/mL.</td>
</tr>
</tbody>
</table>

Special Instructions:
- Transfer collected amount to sterile, screw top tube for shipment.
- Do not add water, saline or other fluid media to container.
- Do not ship specimen in syringe.
- Store frozen and ship on dry ice.
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<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td>HSV 2 is 248 copies/mL to 1x10&lt;sup&gt;8&lt;/sup&gt; copies/mL.</td>
</tr>
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**Special Instructions**
- Collect in a sterile, screw top tube.
- Store frozen and ship on dry ice for overnight delivery.

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<tbody>
<tr>
<td>bronch wash</td>
<td>8526</td>
<td>87530</td>
<td>Yes</td>
<td>2 mL (min. 0.5 mL)</td>
<td></td>
</tr>
</tbody>
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**Special Instructions**
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- Store frozen and ship on dry ice for overnight delivery.

| CSF          | 8503       | 87530    | Yes         | 2 mL (min. 0.5 mL) |

**Special Instructions**
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- Store frozen and ship on dry ice for overnight delivery.

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<tbody>
<tr>
<td>eye swab</td>
<td>8527</td>
<td>87529</td>
<td>Yes</td>
<td>2 mL</td>
<td>Detected/Not Detected</td>
</tr>
</tbody>
</table>

**Special Instructions**
- Place sterile swab placed in 2 mL sterile saline, M4, or viral transport media in a sterile, screw top tube.
- Do not use calcium alginate swab or wood shafted swab.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

| genital swab | 8528       | 87529    | Yes         | 2 mL   | Detected/Not Detected |

**Special Instructions**
- Place sterile swab placed in 2 mL sterile saline, M4, or viral transport media in a sterile, screw top tube.
- Do not use calcium alginate swab or wood shafted swab.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

| mouth swab   | 8520       | 87529    | Yes         | 2 mL   | Detected/Not Detected |

**Special Instructions**
- Place sterile swab placed in 2 mL sterile saline, M4, or viral transport media in a sterile, screw top tube.
- Do not use calcium alginate swab or wood shafted swab.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

| NP swab      | 8525       | 87529    | Yes         | 2 mL   | Detected/Not Detected |
### Specimen Type | Order Code | CPT Code | NY Approved | Volume | Assay Range |
|----------------|------------|----------|-------------|--------|-------------|
| plasma         | 8501       | 87530    | Yes         | 2 mL (min. 0.5 mL) | HSV 1 is 37 copies/mL to 1x10^8 copies/mL.  
HSV 2 is 73 copies/mL to 1x10^8 copies/mL. |
| rectal swab    | 8521       | 87529    | Yes         | 2 mL   | Detected/Not Detected |
| serum          | 8510       | 87530    | Yes         | 2 mL (min. 0.5 mL) | HSV 1 is 37 copies/mL to 1x10^8 copies/mL.  
HSV 2 is 73 copies/mL to 1x10^8 copies/mL. |
| skin swab      | 8529       | 87530    | Yes         | 2 mL   | Detected/Not Detected |
| tissue [Qual]  | 8506       | 87529    | Yes         | 5 mg fresh tissue (approximately ½ of a pencil eraser size) | Detected/Not Detected |
| tissue [Quant] | 8505       | 87530    | Yes         | 5 mg fresh tissue (approximately ½ of a pencil eraser size) | HSV 1 is 3 copies/mg to 1x10^7 copies/mg.  
HSV 2 is 3 copies/mg to 1x10^7 copies/mg. |

**Specimen Type**
- Place sterile swab placed in 2 mL sterile saline, M4, or viral transport media in a sterile, screw top tube.
- Do not use calcium alginate swab or wood shafted swab.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

**Special Instructions for Plasma**
- Collect 4-5 mL whole blood in EDTA or ACD tube.
- Centrifuge and transfer 2 mL plasma to sterile, screw top tube.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

**Special Instructions for Rectal Swab**
- Place sterile swab placed in 2 mL sterile saline, M4, or viral transport media in a sterile, screw top tube.
- Do not use calcium alginate swab or wood shafted swab.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

**Special Instructions for Serum**
- Collect 4-5 mL whole blood in red top tube.
- Centrifuge and transfer 2 mL serum to sterile, screw top tube.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

**Special Instructions for Skin Swab**
- Place sterile swab placed in 2 mL sterile saline, M4, or viral transport media in a sterile, screw top tube.
- Do not use calcium alginate swab or wood shafted swab.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

**Special Instructions for Tissue [Qual]**
- Place fresh tissue in a sterile, screw top container.
- The preferred handling is to not add water, saline or other fluid media to the tissue container; however, fluid media filled containers will be accepted for qualitative results.
- Store frozen and ship on dry ice for overnight delivery.
- Formalin fixed, paraffin embedded tissue will not be accepted.

**Special Instructions for Tissue [Quant]**
- Place fresh tissue in a sterile, screw top container.
- The preferred handling is to not add water, saline or other fluid media to the tissue container; however, fluid media filled containers will be accepted for qualitative results.
- Store frozen and ship on dry ice for overnight delivery.
- Formalin fixed, paraffin embedded tissue will not be accepted.
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<td>trach asp</td>
<td>8519</td>
<td>87530</td>
<td>Yes</td>
<td>2 mL (min. 0.5 mL)</td>
<td>HSV 1 is 58 copies/mL to 1x10^8 copies/mL.</td>
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<td>trach wash</td>
<td>8548</td>
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<td>vitreous fluid</td>
<td>8514</td>
<td>87530</td>
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<td>HSV 2 is 748 copies/mL to 1x10^8 copies/mL.</td>
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**Special Instructions**
- Place fresh tissue in a sterile, screw top container.
- Do not add water, saline or other fluid media to container.
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**Special Instructions**
- Collect in a sterile, screw top tube.
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**Special Instructions**
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- Do not add water, saline or other fluid media to container.
- Do not ship specimen in syringe.
- Store frozen and ship on dry ice for overnight delivery.

**Shipping**
Ship Monday through Friday. Friday shipments must be labeled for Saturday delivery. All specimens must be labeled with patient's name and collection date. A Viracor Eurofins test requisition form must accompany each specimen. Multiple tests can be run on one specimen. Ship specimens FedEx Priority Overnight® to: Viracor Eurofins, 1001 NW Technology Dr, Lee’s Summit, MO 64086

**Causes for Rejection**
Specimens beyond their acceptable length of time from collection as listed in the specimen handling, specimens received in trap containers or specimen types other than those listed.

**Disclaimer**
Specimens are approved for testing in New York only when indicated in the Specimen Information field above.

The CPT codes provided are based on Viracor Eurofins’ interpretation of the American Medical Association’s Current Procedural Terminology (CPT) codes and are provided for informational purposes only. CPT coding is the sole responsibility of the billing party.
Questions regarding coding should be addressed to your local Medicare carrier. Viracor Eurofins assumes no responsibility for billing errors due to reliance on the CPT codes illustrated in this material.