

Epstein-Barr Virus Qualitative/Quantitative Real-Time PCR



Epstein-Barr Virus (EBV), a member of the herpes virus family, is capable of remaining latent in B cells of infected individuals for life. When reactivated, the virus can be spread by various routes, particularly oral secretions. Most notably, EBV is responsible for infectious mononucleosis in older children and adults. It causes a variety of other clinical syndromes, especially in infants and immunocompromised patients, including fever, leukopenia, thrombocytopenia, pneumonitis, hepatitis, retinitis, encephalitis, meningitis, and cancers. Death may occur in these patients as a result of secondary infections. Therefore, quantitative monitoring of viremia is essential when making treatment decisions. Real-time PCR provides a rapid and sensitive method to determine the presence of target-specific amplifiable nucleic acids in all samples intended for PCR¹⁻³. For more information, call the lab at 513-636-9820.

Reporting Units:

Qualitative: Positive/Negative

Quantitative: International Units/mL (or Copies/μg DNA for tissues)

Unacceptable Specimens:

- Frozen whole blood
- Swabs in gel or charcoal media

Shipping Conditions:

- Ambient if sent within 24 hours
- On wet ice if sent >24 hours after collection

Testing Schedule:

Testing for Epstein-Barr Virus is performed Mon-Fri on first and second shift and first shift on Sun. For testing outside of this schedule, call the lab at 513-636-9820.

TAT: 1-3 days

CPT Codes:

Qualitative: 87798

Quantitative: 87799

Contact Information:

Cincinnati Children's Division of Pathology
Molecular and Genomic Pathology Services

Phone: 513-636-9820

Fax: 513-803-2941

Email: pathology@cchmc.org

Website: cincinnatichildrens.org/pathology

For pricing or billing questions, call 513-636-9264.

Shipping Address:

Cincinnati Children's Hospital Medical Center
Lab Processing, B4.127

Attn: Molecular and Genomic Pathology Services (MGPS)
3333 Burnet Ave.

Cincinnati, OH 45229

References:

1. Chiu Y and Sugden B. Epstein-Barr virus: the path from latent to productive infection. *Annu Rev Virol*. Epub. 2016.
2. Gildea D, Mahalingam R, Cohrs R, et al. Herpesvirus infections of the nervous system. *Nature Clin Practice*. 3:82-94. 2006.
3. Murray P, Baron E, Pfaller F, et al, eds. Manual of Clinical Microbiology. 7th ed. American Society of Microbiology Press, Washington D.C. 1999.

| Sample Type | Qualitative | Quantitative | Volume Needed | Collection Container |
|---|-------------|--------------|---|------------------------------|
| Anticoagulated Blood or Bone Marrow* | √ | √ | 1mL | Lavender Top (EDTA) |
| Sorted cells (B, T, NK, Myeloid) | √ | √ | See https://www.testmenu.com/cincinnatichildrens/Tests/769501 | |
| Aspirate: endotracheal tube, tracheal | √ | | 1mL | Sterile Container |
| Body Fluids (i.e. amniotic, pericardial, pleural, vitreous) | √ | | 1mL | Sterile Container |
| Bronchoalveolar Lavage (BAL) fluid | √ | | 1mL | Sterile Container |
| Cerebrospinal Fluid (CSF) | √ | √ | 1mL | Sterile Container |
| Plasma* | √ | √ | 1mL | Lavender Top (EDTA) |
| Serum | √ | √ | 1mL | Gold Top (SST) |
| Stool | √ | | 1mL or 0.3 g | Sterile Container |
| Swab**: conjunctival, labial, lesion, mouth, nasal, nasopharyngeal, rectal, skin, throat, vaginal, vesicle, wound | √ | | n/a | Red or Green Culturette Swab |
| Tissue*** | √ | √ | 0.3 g | Sterile Container |
| Urine | √ | | 1mL | Sterile Container |

* EDTA is preferred, sodium heparin is acceptable.

** Red or green top culturette swabs preferred; viral transport media acceptable.

*** Wrap tissue in gauze wetted slightly with sterile saline to keep moist during transport.

Clinical Lab Index:

EBV QL: <https://www.testmenu.com/cincinnatichildrens/Tests/662807>

EBV QN: <https://www.testmenu.com/cincinnatichildrens/Tests/662808>