

# EBV Viral Load by Real-Time PCR

## Clinical Indication and Relevance

Aids in the diagnosis of EBV related diseases, such as immunosuppressed transplant patients at risk for EBV-driven lymphoproliferations, or AIDS patients with suspected central nervous system (CNS) lymphoma.

## Methodology

Viral DNA is isolated from plasma or cerebrospinal fluid (CSF) and amplified with specific primers and a TaqMan probe targeting the EBV BamHI W region using a quantitative real-time PCR assay. Results are reported by the WHO international unit (WHO IU) in addition to EBV copies per ml.

## Sensitivity

This assay can detect EBV load to a sensitivity of 300 copies per ml of plasma or CSF.

## Turn-around Time

Five to seven working days

## Sample Requirements

### Collect

- Peripheral blood (PB): 3 mL, in purple top (sodium EDTA) tube; yellow top (ACD) tube acceptable.
- Frozen plasma: 1-2 mL, prepared by centrifuging anticoagulated blood at 1500g for 10 minutes, and carefully transferring the plasma supernatant to a new tube without disturbing the buffy coat layer.
- Cerebrospinal fluid (CSF): 1-2 mL (0.5 mL minimum).

### Transport

Deliver PB or CSF immediately at 2-8°C (wet ice or cold packs). Do not freeze PB, but plasma or CSF samples may be frozen.

### Stability

Refrigerated - 24 hours; frozen plasma or CSF is acceptable.

**Note:** do not leave PB, CSF or plasma samples at room temperature.

### Unacceptable Samples

Frozen peripheral blood; clotted blood; severely hemolyzed samples.

### CPT Code(s)

87799: Quantification, each organism

### References

1. Gulley ML et al. J Mol Diagn. 10:279, 2008
2. Ryan JL et al. J Mol Diagn. 6:378, 2004