

Enterovirus Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) Testing FAQ

Clinical and Diagnostic Utility

- Enteroviruses are the most common cause of aseptic meningitis in both children and adults
- Molecular testing is the most sensitive method, a reverse transcription polymerase chain reaction (RT-PCR) is used to detect enterovirus (EV) RNA in cerebrospinal fluid (CSF) specimens.
- Sensitivity and specificity of the assay nears 100%
- A positive EV test is an actionable result, which may warrant patient discharge and/or discontinuation of antibiotic therapy and acyclovir.
- Peak incidence of enterovirus infections occurs in summer and early autumn.

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ENTEROVIRUS RT-PCR

New test code/test name: EVP, Enterovirus PCR (old test code/test name: PCREV, Enterovirus PCR)

Specimens/Stability: All specimens must be labeled with patient's name and collection date.

- Cerebrospinal Fluid (CSF): 350ul to 3 ml collected in a sterile tube.
- Do not place in Universal Transport Media (UTM).
- Transport to the laboratory at 2-8°C (room temperature, 15-25°C, is acceptable <24 hours). Stable for 3 days refrigerated at 2-8°C or ≥ 2 weeks at ≤ -80°C.
- Keep CSF specimens at 2-8°C until testing or freeze specimens at -80°C if test will not be performed within 72 hours of collection. Do not freeze and thaw the specimens more than two times. Centrifugation is not recommended.
- Minimum volume = 350 µl CSF

Limitations

- Extremely high white blood cell counts, protein, whole blood, and hemoglobin in the CSF may interfere with the assay.

Unacceptable Conditions:

- Specimens other than CSF or samples outside the required parameters for specimen stability.