Herpes Simplex Virus Type 1 and 2 Real-Time PCR (Qualitative)

Test Highlights

- This test is very sensitive and specific for the direct detection of HSV-1 and HSV-2.
- The method consists of an analyte specific reagent (ASR) Real-time PCR test.

Clinical Background

Herpes simplex virus encephalitis (HSE) remains a serious illness with significant risks of morbidity and mortality. It can present as an acute or subacute illness with both general and focal signs of cerebral dysfunction. In children older than 3 months and in adults, HSV is usually localized to the temporal and frontal lobes (i.e. HSV-1). In neonates, brain involvement is generalized and the infection is often acquired at the time of delivery (e.g. HSV-2).

HSE must be distinguished from herpes simplex meningitis (e.g. Usually HSV-2). This is sometimes concurrent with herpetic genital viral infection and usually follows a benign course. HSV-2 is also detected in cases involving immunocompromised hosts. Approximately one third of the HSE cases are linked to a primary HSV infection. Other cases may be due to reactivation of a latent virus in asymptomatic individuals.

Indications for Ordering

Culture of CSF in HSE is usually negative due to low viral concentration or non-viable organisms. Real-time PCR is the standard of care for the detection of HSV in HSE. Test sensitivity ranges from 75-100%. PCR on CSF has replaced the invasive brain biopsy in most cases. PCR is indicated in suspected HSV infection involving HSE or meningitis at any age.

Limitations

This test is intended for use in the detection and differential diagnosis of HSV-1 and HSV-2 from CSF.
A negative test does not preclude herpes viral infection and should not be used as the sole basis for diagnosis, treatment or other management decisions. In patient with Herpes virus infection, the test may be negative in patients with HSV infection due to the presence of HSV DNA in concentrations below the level of detection. The result should be interpreted in conjunction with clinical presentation and patient medical history.

Methodology

Qualitative realtime PCR.

Ordering Information

Test Name	Test Code
HSV-1/2 Realtime PCR	6256

Specimen Requirements: CSF specimen

Turn-Around-Time: 1 day

Specimen Stability

Room temperature (21-27°C) for 3 days
Refrigerated (2-8°C) for up to 1 week.
Frozen for up to 1 month.

CPT Code: 87529 X2

References

Lakeman, F. D., and R. J. Whitley. 1995. J. Infect. Dis **171:**857-63.

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