

Varicella-Zoster Virus Qualitative Real-time PCR

Varicella-Zoster Virus (VZV) is a DNA herpesvirus responsible for varicella (chickenpox), after which it establishes latency in ganglia and can subsequently reactivate to cause herpes zoster (shingles). VZV can also infect mononuclear cells, which may aid in the spread of the virus throughout the body. It is latent in over 90% of healthy adults. VZV may produce various acute, subacute, and chronic disorders of the central and peripheral nervous systems (CNS, PNS) in adults and children, including Ramsay Hunt syndrome and post herpetic neuralgia. CNS complications can follow both primary infection and reactivation of VZV, causing meningitis, encephalitis, or encephalopathy. Both immunocompetent and immunocompromised individuals may be affected, with immunocompromised individuals being more likely to suffer vasculopathy and myelitis. Real-time PCR provides a rapid and sensitive method to determine the presence of target-specific amplifiable nucleic acids in all samples intended for PCR¹⁻². For more information, call the lab at 513-636-9820.

Reporting Units:

Positive/Negative

Unacceptable Specimens:

- Frozen whole blood
- Swabs in gel or charcoal media

Shipping Conditions:

- Ambient if sent within 24 hours
- On cold packs if sent >24 hours after collection

Sample Type	Volume Needed	Collection Container
Anticoagulated Blood or Bone Marrow*	1mL	Lavender Top (EDTA)
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
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.

Testing Schedule:

Testing for Varicella-Zoster Virus is performed Mon-Fri on first shift. For testing outside of this schedule, call the lab at 513-636-9820. **TAT:** 1-3 days

CPT Codes:

87798

Contact Information:

Cincinnati Children's Division of Pathology
Molecular and Genomic Pathology Services (MGPS)

Phone: 513-636-9820

Fax: 513-517-7099

Email: pathology@cchmc.org

Website: cincinnatichildrens.org/pathology

For pricing or billing questions, call 513-636-4261.

Shipping Address:

Cincinnati Children's Hospital Medical Center
Attn: Molecular and Genomic Pathology Services (MGPS)

240 Albert Sabin Way, R2.001

Cincinnati, OH 45229

References:

1. Gilden D, Mahalingam R, Cohrs R, et al. Herpesvirus infections of the nervous system. *Nature Clin Practice*. 3:82-94. 2006.
2. Zuckerman A, Banatvala J, Pattison J, eds. *Principles and Practice of Clinical Virology*. 2nd ed. John Wiley and Sons, West Sussex, United Kingdom. 1990.