

Adenovirus Qualitative/Quantitative Real-time PCR

Adenovirus (AV) is the largest non-enveloped ds-DNA virus, which spreads by respiratory droplets or fecal route. There are seven species of human adenoviruses (A-G) with 67 types associated with various diseases, including: respiratory illness, conjunctivitis, genital lesions, cervicitis, urethritis, cystitis, meningitis, encephalitis, myocarditis, hepatitis, and gastroenteritis. Increasingly recognized as causing significant morbidity and mortality in immunocompromised patients, the ability to monitor viral load is essential. For example, quantitative monitoring of viremia in transplant patients aids in 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 PCR^{1,2}. For more information, call the lab at 513-636-9820.

Reporting Units:

Qualitative: Positive/Negative

Quantitative: Copies/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 cold packs if sent >24 hours after collection

Testing Schedule:

Testing for Adenovirus is performed Mon-Fri on first and second shift, and first shift only on Sat. For testing outside of this schedule, call the lab at 513-636-9820. **TAT:** 1-3 days

EPIC Test Codes:

Qualitative: 8004005

Quantitative: 8003904

CPT Codes:

Qualitative: 87798

Quantitative: 87799

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. Richman D, Whitley R, & Hayden F, eds. *Clinical Virology*. 3rd ed. American Society of Microbiology Press, Washington, D.C. 2009.
2. Lion T. Adenovirus infections in immunocompetent and immunocompromised patients. *Clin Microbiol Rev*. 27:441-462. 2014.

Sample Type	Qualitative	Quantitative	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 (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:

AV QL: <https://www.testmenu.com/cincinnatichildrens/Tests/775247>

AV QN: <https://www.testmenu.com/cincinnatichildrens/Tests/662798>