

Influenza A and B and RSV Qualitative Real-time PCR

Influenza A and B (Flu A & B) are RNA viruses responsible for a range of symptoms, including croup and pharyngitis in uncomplicated infections. In infants, vomiting and convulsions can also be seen. Complications can arise in a small proportion of cases and usually consist of respiratory difficulties, such as rales, rhonchi, productive cough, chest tightness, substernal soreness, and pneumonia (usually due to secondary bacterial infection). In chronic pulmonary disease, fatal bronchitis can result from Influenza A or B infection. Reye's syndrome is another rare complication that can follow influenza infection.

Respiratory Syncytial Virus (RSV) is an RNA virus classified into two major subgroups, A and B. Highly contagious, it is estimated that nearly half of all infants will acquire an RSV infection during their first year of life. Of those, approximately one third will develop lower respiratory tract disease. Initial symptoms include fever and upper respiratory tract infection. As the infection progresses, it may involve the lower respiratory tract to cause cough, tachypnoea, dyspnoea, wheezing, crackles, hypoxemia, and cyanosis. The most frequent complication that arises from RSV infection is chronic lung disease due to prolonged alterations in pulmonary function during infection. Real-time RT-PCR provides a rapid and sensitive method to determine the presence of target-specific amplifiable nucleic acids in all samples intended for PCR¹⁴. 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

Testing Schedule:

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

CPT Codes:

Influenza viruses A & B: 87798 x2
RSV: 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. Watzinger F, Suda M, Preuner S, et al. Real-time quantitative PCR assays for detection and monitoring of pathogenic human viruses in immunocompromised pediatric patients. *J Clin Microbiol.* 42:5189-5198. 2004.
2. Kuypers J, Wright N, Morrow R. Evaluation of quantitative and type-specific real-time RT-PCR assays for detection of respiratory syncytial virus in respiratory specimens from children. *J Clin Virol.* 31:123-129. 2004.
3. Zuckerman A, Banatvala J, Griffiths P, et al, eds. Principles and Practice of Clinical Virology. 2nd ed. John Wiley and Sons, New York, 1990.
4. Crooks B, Taylor C, Turner A, et al. Respiratory viral infections in primary immune deficiencies: significance and relevance to clinical outcome in a single BMT unit. *Bone Marrow Transplantation* 26:1097-1102. 2000.

Sample Type	Volume Needed	Collection Container
Aspirate: endotracheal tube, tracheal	1mL	Sterile Container
Bronchoalveolar Lavage (BAL) fluid	1mL	Sterile Container
Body Fluids (i.e. pericardial, pleural)*	1mL	Sterile Container
Swab**: nasal, nasopharyngeal, throat	n/a	Red or Green Culturette Swab
Tissue (lung)***	0.3 g	Sterile Container

* Not preferred specimen types for analyzing respiratory viral agents.

** 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:

Infl A/B: <https://www.testmenu.com/cincinnatichildrens/Tests/662814>

RSV: <https://www.testmenu.com/cincinnatichildrens/Tests/662818>