

Norovirus Qualitative Real-time RT-PCR



Norovirus is an RNA virus now thought to be one of the most common causes of outbreaks of nonbacterial gastroenteritis in the world. It is spread by fecal-oral routes or in food with a low infectious dose. There are five genogroups: GI, GII, GIII, GIV, GV. Pathogenesis relates to a person's blood type as the virus interacts with blood group antigens. Infection in healthy individuals typically lasts for 1-4 days with symptoms including diarrhea, vomiting, abdominal cramps, headache, fever, chills, and myalgia, but can be asymptomatic. In immunocompromised patients, norovirus infection can be more serious; immunosuppressive drugs can leave patients vulnerable to nosocomial infection and chronic disease. For all cases, treatment consists of supportive therapy, as there is no known cure for the disease. There is also no vaccine for norovirus since its capsid evolves over time, creating new strains not recognized by persons who were previously infected. 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 viral PCR¹⁻⁴. This assay detects groups GI and GII. 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 wet ice if sent >24 hours after collection

Testing Schedule:

Testing for Norovirus 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. Zuckerman A, Banatvala J, Pattison J, eds. Principles and Practice of Clinical Virology. 2nd ed. John Wiley and Sons, West Sussex, United Kingdom. 1990.
2. Logan C, O'Leary J, O'Sullivan N. Real-time reverse transcription PCR detection of Norovirus, Sapovirus, and Astrovirus as causative agents of acute viral gastroenteritis. *J Virol Methods*. 146:36-44. 2007.
3. Fankhauser R, Noel J, Monroe A, et al. Molecular epidemiology of Norwalk-like viruses in outbreaks of gastroenteritis in the United States. *J Infect Dis*. 178:1571-1578. 1998.
4. CDC, unpublished data, 1996-2000.

Sample Type	Volume Needed	Collection Container
Stool	1mL or 0.3g	Sterile Container
Rectal	n/a	Lavender Top (EDTA)
Tissue (originating from the gastrointestinal tract)**	0.3g	Sterile Container

* 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:

Noro: <https://www.testmenu.com/cincinnatichildrens/Tests/662815>