

Stool GI Pathogen Panel - PCR

Qualitative detection of 22 gastrointestinal pathogens including viruses, bacteria and protozoa directly from stool specimens

Clinical Background

The FilmArray GI Panel is capable of the simultaneous detection and identification of nucleic acids from multiple bacteria, viruses, and parasites directly from stool specimens in Cary Blair transport media obtained from individuals with signs and/or symptoms of gastrointestinal infection. Rapid detection of more GI pathogens than routine culture has been documented in multiple studies¹⁻⁵.

Test Performance

| Microorganism | SENS (95% CI) | SPEC (95% CI) |
|------------------------------------|---------------|---------------|
| Campylobacter | 85.1-99.9 | 97.7-99.0 |
| Clostridium difficile tx A/B | 95.7-99.9 | 96.0-97.9 |
| Plesiomonas shigelloides* | 94.9-100 | 96.5-100 |
| Salmonella | 88.8-100 | 99.1-99.9 |
| Vibrio spp.* | 92.6-99.5 | 94.0-100 |
| Vibrio cholerae* | 73.5-92.4 | 96.7-100 |
| Yersinia enterocolitica* | 94.5-100 | 96.7-100 |
| Enteroggregative E. coli | 93.5-100 | 97.3-98.8 |
| Enteropathogenic E. coli | 97.3-99.8 | 96.1-98.0 |
| Enterotoxigenic E. coli | 84.6-100 | 98.9-99.7 |
| Shiga-like toxin-producing E. coli | 89.4-100 | 99.2-99.9 |
| E. coli O157 serotype* | 82.4-100 | ** |
| Shigella & Enteroinvasive E. coli | 86.0-99.5 | 99.5-100 |
| Cryptosporidium | 81.5-100 | 99.2-99.9 |
| Cyclospora cayetanensis | 82.4-100 | 99.8-100 |
| Entamoeba histolytica* | 75.7-95.5 | 95.2-100 |
| Giardia lamblia | 83.2-100 | 99.1-99.8 |
| Adenovirus F 40/41 | 84.5-99.4 | 98.5-99.5 |
| Astrovirus* | 83.8-99.9 | 96.0-100 |
| Norovirus GI/GII | 84.9-98.9 | 98.1-99.3 |
| Rotavirus A* | 88.1-100 | 94.5-100 |
| Sapovirus | 92.3-100 | 98.5-99.5 |

* Archived or contrived specimens. **No non-O157 included - no specificity.

Test Limitations

- A negative test result does not rule out the presence of GI pathogens below the test sensitivity or those not included on the panel.
- Concomitant culture is necessary for organism recovery if a sensitivity is necessary.
- *Aeromonas spp.* is not detected using the BioFire GI Panel. If needed, a culture request should be ordered to supplement the GI panel.

Methodology

The FilmArray GI Panel simultaneously tests for 22 GI pathogens from stool specimens collected in Cary Blair transport medium using multiplex PCR.

Test Ordering Information

| Test Name | Test Code |
|-------------------------------------|--------------------|
| Stool GI Pathogen Panel - PCR | 5600 |
| <i>Aeromonas</i> spp. stool culture | Contact Lab |

Specimen Collection and Transport

Specimen Type: Stool in Cary Blair transport media
Optimum Specimen: 500 µL required for testing
Other Specimen Types: None

Specimen Stability

Ambient Stability: Stool in Cary-Blair (CB) media: room temperature for up to four days
Refrigerated (2-8°C): Stool in CB up to 4 days
Frozen Stability (-20°C or lower): Unknown
Local Transport: CB room temperature
Long Distance: Room temperature or under refrigeration for up to four days in CB media

CPT Code

| | |
|--------------|-------------------------------------|
| 87507 | Stool GI Pathogen Panel - PCR |
| 87046 | <i>Aeromonas</i> spp. stool culture |

References

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