NexGen Testing

Gastrointestinal Pathogens

Our gastrointestinal pathogen testing utilizes quantitative Real-Time PCR to rapidly analyze your patient's sample in 24 hours. RT-PCR technology precisely detects the correct pathogen(s) and identifies antibiotic drug resistance. This allows providers the ability to prescribe timely and effective treatment.

Rapid and accurate solution eliminates guesswork in diagnosing and treating gastrointestinal infections

Infectious diarrhea is a common complaint among patients seeking medical advice and, despite progress in both diagnosis and treatment, still remains one of the leading causes of morbidity and mortality worldwide. The spectrum of pathogens responsible for such infections varies with age and geographical location. Viral and bacterial pathogens are the main cause of diarrhea in industrialized countries.[1] These pathogens may routinely be underestimated as a cause of diarrhea due to underrepresentation of requests and difficulty recognizing these pathogens in the laboratory.

Molecular diagnostic testing quickly identifies pathogens and detects potential antibiotic resistance, so effective treatment can begin sooner.

Accurate diagnosis within 24 hours with real-time PCR for pathogen identification and antibiotic resistance detection

- PCR, a molecular technique, can be used to precisely analyze the genetic material of pathogens
- Provides a more definitive diagnosis than POC antigen assays
- 24-hour turn-around from specimen receipt
- Higher accuracy than conventional culture[1]

Helps improve clinical confidence and decrease patient risks

- Detects polymicrobial infections
- Unaffected by concurrent antibiotic use
- Reduces potential unnecessary drug exposure and adverse events

1. Pritt, MD, B. (2017 Nov 6). Syndromic testing for infectious diseases, part 2: gastrointestinal infections. Mayo Clinic. Retrieved from https://news.mayomedicallaboratories.com/2017/11/06/syndromic-testing-infectious-diseases-part-2-gastrointestinal-infections

Gastrointestinal Pathogens

Adenovirus GI - HAdV-F and HAdV-G

Bacteroides fragilis

Campylobacter jejuni

Citrobacter freundii

Clostridium difficile (toxins A, B genes)

Clostridium perfringens, septicum

E. coli (EHEC) O157 Enterohemorrhagic, enteropathogenic, Shiga-like toxin 1

E. coli (EIEC) enteroinvasive/Shigella spp

E. coli (ETEC) Enterotoxigenic

Enterovirus A + B

Enterovirus C + D

Hepatitis A Virus

Listeria monocytogenes

Norovirus (Genogroup 1, 2)

Pseudomonas aeruginosa

Rotavirus A + B

Salmonella enterica

Sapovirus G1, G2 (sapporo virus)

Staphylococcal enterotoxins A, B

Staphylococcus aureus

Vibrio (parahaemolyticus, vulnificus and cholerae)

Yersinia enterocolitica

Antibiotic Resistance

VanA, VanB (Vancomycin Resistance genes)

mecA (Methicillin resistance gene)

ermB, C; mefA (Macrolide Lincosamide Streptogramin Resistance)

qnrA2 (Fluoroquinolone resistance genes)

tet M (Tetracycline resistance genes)

SHV, KPC Groups (Class A beta lactamase)

CTX-M1 (15), M2 (2), M9 (9), M8/25 Groups (Class A beta lactamase)

IMP, NDM, VIM Groups (Class B metallo beta lactamase)

ACT, MIR, FOX, ACC Groups (AmpC beta lactamase)

OXA-48,-51 (Class D oxacillinase)

PER-1/VEB-1/GES-1 Groups (Minor Extended Spectrum beta lactamases)

dfr (A1, A5), sul (1, 2) probes (Trimethoprim/ Sulfamethoxazole resistance)