

Urinary Tract Infection Pathogens

Our urinary tract infection 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 urinary tract infections

Urinary tract infections are one of the most commonly diagnosed illnesses in older adults and one of the leading reasons antibiotics are prescribed in long term care facilities. Historically a super majority of UTIs are caused by enteric microbes, a group prone to multiple drug resistance. Development of multi-drug resistant organisms has complicated clinical diagnosis and the ease of just following prior evidence-based guidelines for diagnosis and treatment no longer exists.¹

Molecular pathogen detection 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 culture²

Helps improve clinical confidence and decrease patient risks

- Detects polymicrobial infections
- Unaffected by concurrent antibiotic use
- Identifies potential antibiotic resistance
- Aids in quick clinical decision-making
- Reduces false negatives results
- Aids in antibiotic stewardship
- Reduces potential unnecessary drug exposure and adverse events

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Acinetobacter baumannii	Mycoplasma genitalium, hominis
Candida albicans, glabrata, parapsilosis, tropicalis	Proteus mirabilis
Chlamydia trachomatis	Pseudomonas aeruginosa
Citrobacter freundii	Serratia marcescens
Cytomegalovirus (CMV, Human Herpes Virus 5)	Staphylococcus aureus
E. coli	Staphylococcus (coagulase negative: epidermidis, haemolyticus, lugdunensis, saprophyticus)
Enterobacter aerogenes, cloacae	Streptococcus agalactiae (group B strep (GBS))
Enterococcus faecalis, faecium	Streptococcus pyogenes
Herpes simplex virus 1 and 2 (HSV-1, HSV-2)	Trichomonas vaginalis
Klebsiella pneumoniae	Ureaplasma urealyticum, parvum
Mycobacterium tuberculosis and avium/intracellulare, kansasii groups	

Antibiotic Resistance

VanA, VanB (Vancomycin Resistance genes)	IMP, NDM, VIM Groups (Class B metallo beta lactamase)
mecA (Methicillin resistance gene)	ACT, MIR, FOX, ACC Groups (AmpC beta lactamase)
ermB, C; mefA (Macrolide Lincosamide Streptogramin Resistance)	OXA-48, -51 (Class D oxacillinase)
qnrA2 (Fluoroquinolone resistance genes)	PER-1/VEB-1/GES-1 Groups (Minor Extended Spectrum beta lactamases)
tet M (Tetracycline resistance genes)	dfr (A1, A5), sul (1, 2) probes (Trimethoprim/Sulfamethoxazole resistance)
SHV, KPC Groups (Class A beta lactamase)	
CTX-M1 (15), M2 (2), M9 (9), M8/25 Groups (Class A beta lactamase)	

1. Behzadi, P., Behzadi, E., Yazdanbod, H., Aghapour, R., Akbari Cheshmeh, M., & Salehian Omran D. (2010). A survey on urinary tract infections associated with the three most common uropathogenic bacteria. *Mædica*, 5(2), 111–115.
2. van der Zee A, Roorda L, Bosman G, Ossewaarde JM (2016) Molecular Diagnosis of Urinary Tract Infections by Semi-Quantitative Detection of Uropathogens in a Routine Clinical Hospital Setting. *PLoS ONE* 11(3): e0150755. doi:10.1371/journal.pone.0150755