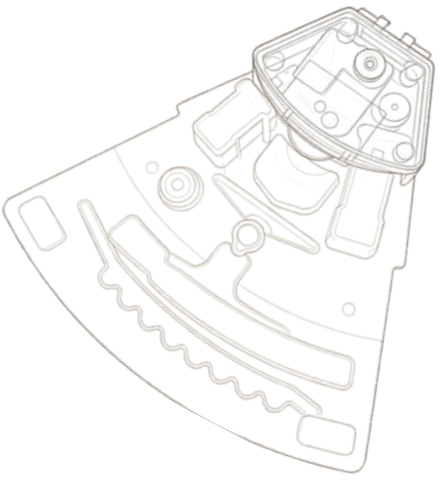
呈晖医疗
CHENGHUI MEDICAL



Blood Culture Pathogen and Antimicrobial Resistance Gene (G-&AMR) Nucleic Acid Detection Kit

Sample-to-Answer 26 Target BSI Panel | 4 Samples in 80 Minutes

Powered by Chenghui Multi-Disc (CQ-0404) Fully Automated Molecular POCT Platform



CE
IVD

Detection Targets List (26 targets in Total)

- **Gram-Negative Bacteria (14): Acinetobacter baumannii complex, Bacteroides fragilis, Enterobacterales spp., Enterobacter cloacae complex, Escherichia coli, Klebsiella aerogenes, Klebsiella pneumoniae group, Proteus spp., Serratia marcescens, Haemophilus influenzae, Neisseria meningitidis, Pseudomonas aeruginosa, Stenotrophomonas maltophilia, Klebsiella pneumoniae hypermucovirulent.**

- **Antimicrobial Resistance Genes (12): blaIMP, blaKPC, blaOXA-48, blaNDM, blaVIM, blaCTX-M, blaTEM, blaSHV, blaGES, blaVEB, blaPER, CMY-2.**

Clinical Challenges

1. **Prolonged Detection Cycle Delays Life-Saving Targeted Therapy:** After blood culture turns positive, conventional workflows require 24–72 hours for pathogen identification and antimicrobial susceptibility testing (AST). Clinicians have to rely on empiric broad-spectrum antibiotic therapy during this window, which elevates treatment failure risk, sepsis mortality and hospital length of stay.
2. **Escalating Gram-Negative Resistance Undermines Precision Treatment:** Multidrug-resistant Gram-negative pathogens (including CRE, carbapenem-resistant Acinetobacter baumannii and Pseudomonas aeruginosa) are increasingly prevalent in inpatient settings with complex resistance mechanisms. Conventional AST lags far behind clinical demand, resulting in inappropriate empiric medication and poor patient outcomes.
3. **High Testing Barriers & Fragmented Workflows Lack Integrated Rapid Solutions:** Most commercial molecular BSI assays depend on dedicated PCR labs and certified personnel, and cannot be deployed at point of care, extending total turnaround time for critical samples. Existing solutions also lack flexible targeted options aligned with Gram stain results, leaving no cohesive rapid diagnostic system for severe sepsis cases.

Core Clinical Benefits



1. **Rapid One-Stop Gram-Negative Pathogen & Resistance Profiling for Precision Sepsis Care:** The kit covers 26 total targets, including 14 clinically prevalent Gram-negative BSI pathogens and 12 core antimicrobial resistance genes (covering major carbapenemases, ESBLs and AmpC enzymes). It delivers simultaneous pathogen identification and resistance profiling in ~80 minutes with only 1 minute of hands-on operation, enabling timely adjustment of empiric regimens, reducing sepsis mortality, shortening hospital stays and optimizing antimicrobial stewardship to curb nosocomial MDR pathogen spread.
2. **High-Efficiency Batch Testing with 4 Parallel Samples:** Compatible with the Multi-Disc (CQ-0404) fully automated analyzer, 4 parallel samples per run significantly improves batch testing throughput, shortening overall reporting time for positive blood culture batches and securing critical treatment windows for sepsis patients.
3. **Complementary Workflow with G+&Fungi Panel for Complete BSI Diagnostic System:** Clinically paired with the 25-target G+&Fungi&AMR detection kit, it supports targeted rapid testing based on Gram stain results of positive blood cultures to balance diagnostic efficiency and cost. For critically ill septic patients, both panels can run in parallel on the Multi-Disc (CQ-0404) platform in a single batch, providing a comprehensive rapid etiological diagnostic framework for severe bloodstream infections.
4. **Fully Automated, Low-Threshold Workflow:** Pre-loaded nucleic acid extraction and lyophilized PCR reagents onboard the cartridge. Full automation of purification, amplification and analysis after sample loading; no manual extraction, dedicated PCR lab or specialized operator required.
5. **Onboard Single-Cartridge Quality Control:** Built-in internal control monitors the entire fluidic and PCR reaction process, effectively reducing the risk of false-negative results.
6. **Cold-Chain-Free Storage & Transportation:** Stable for 12 months at 4–28°C for storage and transport, no cold chain required, cutting logistics and inventory costs for healthcare facilities.

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