MagChipR™

POC LOC MDx Platform

Infectious Disease POCT

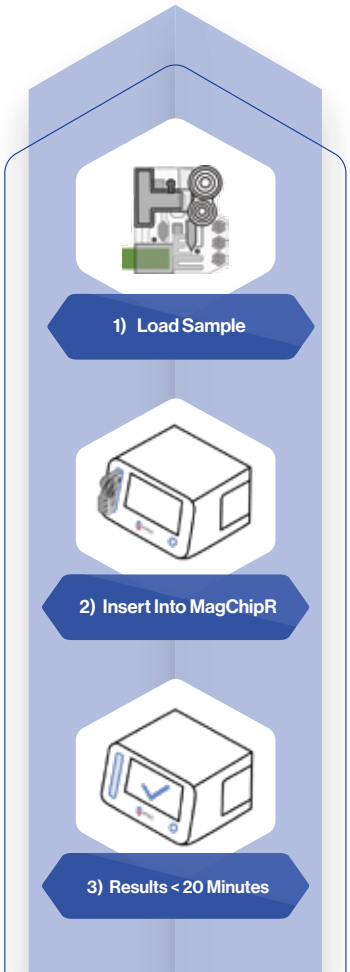
The MagChipR is the First-of-its-Kind Point-of-Care (POC) Lab-On-Chip (LOC) Molecular Diagnostic (MDx) Analyzer

Ultra-fast PCR combined with DNA detection on a single giant magnetoresistance (GMR) biosensor chip provides simultaneous results for pathogens and antimicrobial susceptibility within 20 minutes (assay dependent), enabling definitive and susceptibility-guided therapy. leading to better outcomes.

Advancing diagnostics by enabling definitive and susceptibility-guided therapy during the initial clinic visit.

- Detect multiple pathogens and analyze genetic markers associated with susceptibility.
- No laborious phenotypic determination of antimicrobial susceptibilities in microbiology labs.

* The MagIC MagChipR and MagChip have not been approved or cleared by the U.S. Food and Drug Administration or any other regulatory authority. The performance characteristics of these devices have not been established.



Clean, Simple, Minimalistic Sample-to-Results Workflow

Benefits:

- Ease of use (intuitive + guided prompts)
- Touchscreen (18cm; 7”)
- Built-in barcode scanner
- Affordable (low-cost analyzer and cartridges)
- Fully integrated and automated sample-to-results
- Fast time to results (< 20 minutes – assay dependent)
- Lab quality sensitivity and specificity
- Ultra-fast PCR amplification
- High multiplexing capability (up to 64 targets in a single sample)
- Compact design (small footprint; scalable vertically)
- No calibration required
- No specialized training required
- Network connection capabilities
- Data management (via USB + network connectivity)

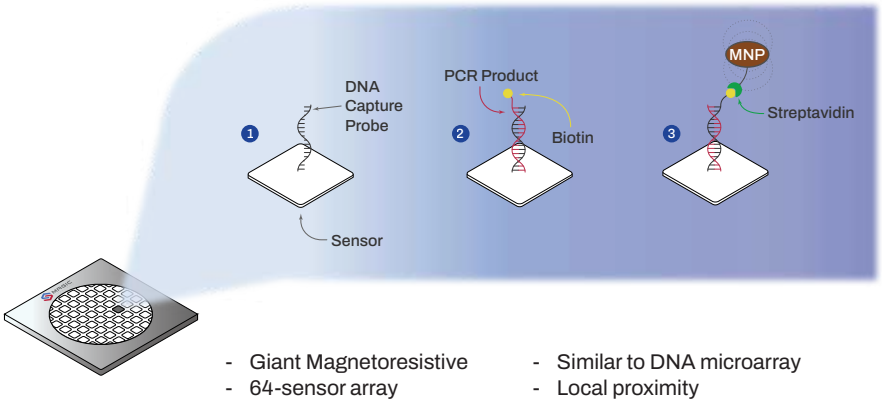
MAGIC LIFESCIENCE

MagChip™

CT/NG$^{S\text{-}CRO}$/TV/MG$^{S\text{-}AZM}$ Cartridge
Pathogen + Antimicrobial Susceptibility

The first MagChip cartridge is for CT/NG$^{S\text{-}CRO}$/TV/MG$^{S\text{-}AZM}$ detection, addressing the undervalued sexually transmitted infection (STI) epidemic. Providing simultaneous STI + antimicrobial susceptibility actionable results in < 20 minutes for the four pathogens, ceftriaxone-susceptible *Neisseria gonorrhoeae*, and azithromycin-susceptible *Mycoplasma genitalium*, enables earlier and more informed triage that lead to definitive and susceptibility-guided therapy, which reduces transmission, reinfection, and adverse reproductive health complications.

Novel Detection Method: GMR Biosensors



- Giant Magnetoresistive
- 64-sensor array
- Substrate for multiplex DNA hybridization
- Similar to DNA microarray
- Local proximity magnetic sensor

Specifications

Weight	2 kg; 4 lb
Dimensions	15 cm H x 30 cm W x 24 cm D; 6” H x 12” W x 9.5” D
Power Supply Input	110-220 VAC, 50-60 Hz with battery backup
Display	Touchscreen 18 cm (7”), 1024 x 600 pixel resolution, 15 º viewing angle
Operating Environment	10-35 ºC; up to 90% humidity, up to 2500 meters
Ports	USB, printer port, and bi-directional interface network connection

“This first-of-its-kind GMR technology enables an all-in-one workflow of performing multiplexed PCR and DNA detection on a single GMR sensor chip.”

— Elaine Ng, PhD,
CSO MagIC Lifescience

Ultra-Fast Detection and Differentiation of DNA from:

- *Chlamydia trachomatis* (CT)
- *Neisseria gonorrhoeae* (NG)
- *Trichomonas vaginalis* (TV)
- *Mycoplasma genitalium* (MG)
- Ceftriaxone-susceptible NG (NG$^{S\text{-}CRO}$)
- Azithromycin-susceptible MG (MG$^{S\text{-}AZM}$)

MagChip

- Single-use, disposable cartridge
- Cartridge contains all reagents, including internal control
- Room temperature storage
- Self-contained
- Minimizes cross-contamination

MagChipR Platform Provides

- Sample lysis
- PCR amplification
- Nucleic acid hybridization
- Detection of target sequences
- A simple, clean, and minimalistic user workflow

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