

# QUAN Dx<sup>®</sup>

MOLECULAR DIAGNOSTICS INNOVATOR

## MYCOBACTERIUM TUBERCULOSIS DRUG-RESISTANT MUTATION TEST KITS

### HIGH MUTATION COVERAGE RATE

Although there is a wide arsenal of drugs available to treat tuberculosis (TB), the rise of multidrug-resistant strains over the last few decades has made TB care and control much more challenging. Conventional methods for identifying multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant TB (XDR-TB) are based on drug sensitivity testing, which takes time (up to a month) and is technically complex. Therefore, the development of rapid, accurate diagnostic methods is critical for determining an effective treatment strategy against TB.

The Mycobacterium tuberculosis drug-resistant Mutation Test Kits (drugs: Rifampin, Isoniazid, Ethambutol, Streptomycin and Fluoroquinolones) use probe-based melting curve analysis to determine whether a sample has a mutation (conferring drug-resistant) or not. These kits provide rapid qualitative detection of drug-resistance mutations in Mycobacterium tuberculosis.



### KEY FEATURES

- **Accurate:** Clinical trial data indicated that the total concordance rate was above 93%.
- **Sensitive:** The detection sensitivity is 103-105 bacterial copies /mL.
- **Rapid:** After DNA extraction, test results are obtained in 2.5 hours.
- **Comprehensive:** This kit covers all known drug resistant tuberculosis mutation types to date.
- **Reliable:** The  $T_m$  value is automatically processed by the instrument, avoiding human subjectivity, reducing error, and providing ease of use. Closed PCR system avoids aerosol contamination.

### EFFECTIVE DETECTION REGIONS

Kits	Effective detection regions	Mutation coverage rate
Rifampin	Mutations in rpoB codons 507 to 533 (81 bp)	95%
Isoniazid	Mutations in ahpC promoter region (positions -44 to -30 and -15 to 3), inhA codon 94, inhA promoter region (positions -17 to -8) and katG codon 315	50% - 90%
Ethambutol	Mutations in embB codons 306, 368, 378, 380, 406, 497	75% - 95%
Streptomycin	Mutations in rpsL codon 43 and codon 88, rrs positions 513 to 517 and positions 905 to 908	70% - 90%
Fluoroquinolones	Mutations in gyrA codons 88 to 94	70% - 90%

## ORDERING INFORMATION

### MYCOBACTERIUM TUBERCULOSIS DRUG-RESISTANT MUTATION TEST KITS

Cat. No.	Description	Size
2-300-10048	M. Tuberculosis drug-resistance mutation detection: Rifampin	48 reactions
2-300-20048	M. Tuberculosis drug-resistance mutation detection: Isoniazid	48 reactions
2-300-30048	M. Tuberculosis drug-resistance mutation detection: Ethambutol	48 reactions
2-300-40048	M. Tuberculosis drug-resistance mutation detection: Streptomycin	48 reactions
2-300-50048	M. Tuberculosis drug-resistance mutation detection: Fluoroquinolones	48 reactions

For Research Use Only. Not for use in diagnostic procedures.



Learn More at  
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