

QUAN Dx[®]

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.



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