

Illumina and GenoScreen Deeplex[®] Myc-TB Combo Kit

Culture-free detection of *Mycobacterium tuberculosis* complex (MTBC) drug resistance

Fast

Culture-free method delivers results in 24-48 hours



Sensitive

Heteroresistance detection down to 1-3%^{1*}



Extensive

Resistance to 15 anti-tuberculosis drugs assessed

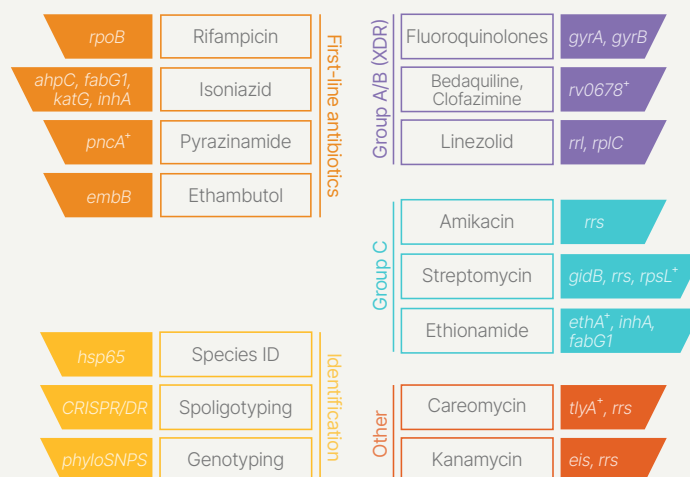


- Over 10 million active tuberculosis cases with 1.6 million deaths worldwide in 2021²
- Nearly 500,000 new cases of multidrug-resistant tuberculosis (MDR-TB) every year²
- Only 1 in 3 cases of rifampicin-resistant tuberculosis (RR-TB) and MDR-TB are correctly identified and treated²

Deploy NGS to accelerate your TB drug-resistance research

The Illumina and GenoScreen Deeplex Myc-TB Combo Kit includes a targeted NGS panel for rapid and simultaneous detection of mycobacteria, MTBC genotyping, and anti-tuberculosis drug resistance.

- Detect resistance to 15 anti-tuberculosis drugs
- Genotype and spoligotype individual MTBC strains, including in mixed infections
- Detect > 100 mycobacterial species in sputum or culture samples
- Detect drug-resistant subpopulations as low as 1-3%^{1*}



Mycobacterial genes or gene regions amplified and sequenced using the Illumina and GenoScreen Deeplex Myc-TB Combo Kit.

* Detection of heteroresistance down to 1-3% depending on coverage depth.

Get answers sooner

Traditional methods for testing antimicrobial susceptibility rely on mycobacterial culture, requiring up to 6-8 weeks for complete profiling.³ The Illumina and GenoScreen Deeplex Myc-TB Combo Kit delivers highly accurate detection of drug-resistant MTBC strains in under 48 hours, directly from smear-positive sputum samples.⁴ Access to the secure, automated, easy-to-use Deeplex Web App enables rapid analysis, interpretation, and visualization of sequencing data.

1. Prepare sample



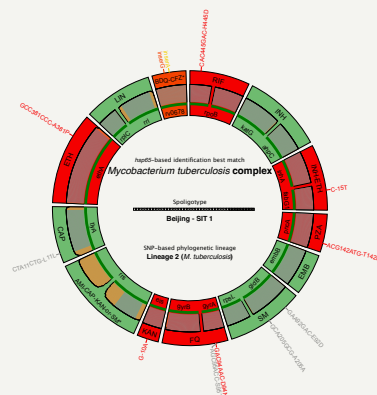
2. Sequence



4. Interpret



3. Analyze



Sample-to-results NGS workflow—The Illumina and GenoScreen Deeplex Myc-TB Combo Kit uses a fast, user-friendly workflow for targeted sequencing, delivering extensive mycobacterial characterization directly from sputum samples or mycobacteria-positive cultures.

Sample outputs from the Deeplex Web App—Deeplex map (top) showing mutations associated with antibiotic resistance (red) and information on mycobacterial and MTBC strain genotype. Resistotype (bottom) of an identified MTBC strain showing predicted resistance pattern to anti-tuberculosis drugs.

Ordering information

Product

Illumina and GenoScreen Deeplex Myc-TB Combo Kit with Nextera™ XT

Illumina and GenoScreen Deeplex Myc-TB Combo Kit with Illumina DNA Prep

Catalog no.

20090205

20099512

Each 48-sample kit contains the GenoScreen Deeplex Assay panel, library preparation kit, indexes, and access to the Deeplex Web App. Products are not available in all countries and regions. Contact your Illumina sales representative to check availability in your area.

References

1. Jouet A, Gaudin C, Badalato N, et al. [Deep amplicon sequencing for culture-free prediction of susceptibility or resistance to 13 anti-tuberculous drugs](#) [published correction appears in *Eur Respir J.* 2022 Nov 10;60(5):]. *Eur Respir J.* 2021;57(3):2002338. Published 2021 Mar 18. doi:10.1183/13993003.02338-2020
2. World Health Organization. Global tuberculosis report 2022. [who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2022](#). Published October 27, 2022. Accessed February 3, 2023.
3. World Health Organization. Guidance for the surveillance of drug resistance in tuberculosis: Sixth edition. [https://www.who.int/publications/i/item/9789240018020](#). Published April 19, 2021. Accessed March 13, 2023.
4. Feuerriegel S, Kohl TA, Utpatel C, et al. [Rapid genomic first- and second-line drug resistance prediction from clinical *Mycobacterium tuberculosis* specimens using Deeplex-MycTB](#). *Eur Respir J.* 2021;57(1):2001796. Published 2021 Jan 5. doi:10.1183/13993003.01796-2020



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