Capital BIO
TECHNOLOGY

M. Tuberculosis Drug Resistance Detection Array Kit

(DNA Microarray Chip Method)



LuxScan™ 10K/B Microarray Chip Scanner

The gene chip test technology is adopted to rapidly evaluate the drug resistance to two first-line anti-tuberculosis drugs (Rifampin and Isoniazid) so as to achieve the rapid diagnosis for multidrug-resistant tuberculosis.

Targeted Drugs	Rifampin-Resistance Gene	Isoniazid-Resistance Gene	
Drug resistance gene	rpoB	katG	inhA
Loci	511, 513, 516, 526, 531, 533	315	-15

Fast

Complete all tests within 6h

Efficient

Test M.Tuberculosis drug resistance to RIF and INH simultaneously

Accurate

Passed the verification of 1186 clinical trials, which is 100% consistent with the sequencing results

Sensitive

Limit of detection is 1×10^3 IU/ml

Clinical Application

- Tuberculosis drug resistance test
- Clinical Treatment for multi-drug resistant

Clinical Verification

There are 1186 samples from Beijing Chest Hospital, Shanghai Pulmonary Hospital and Guangzhou Chest Hospital for clinical verification

Hospital	Drug Sensitive Case	Drug Resistant Case	Total (case)
Beijing Chest Hospital	149	425	574
Shanghai Pulmonary Hospital	155	320	475
Guangzhou Chest Hospital	76	61	137
Total	380	806	1186

Rifampin

Chip test result	Rifampin drug-sensitive result			Total coincidence rate
	Positive (drug-resistant)	Negative (drug-sensitive)	Total	
Positive (mutant)	736	11	747	93.7%
Negative (wild)	64	375	439	
Total	800	386	1186	

Isoniazid

Chip test result	Isoniazid drug-sensitive result			Total coincidence rate
	Positive (drug-resistant)	Negative (drug-sensitive)	Total	
Positive (mutant)	617	12	629	83.8%
Negative (wild)	180	377	557	
Total	979	389	1186	

The coincidence rate with sequencing is 100%.

Test Process



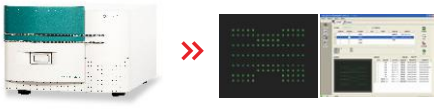
DNA extraction PCR amplification

3.5 h



Hybridization reaction Chip washing

2.5 h



Microarray scanning Result interpretation

5 min

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