

GenoType[®] Mycobacterium CM GenoType[®] Mycobacterium AS

Molecular Genetic Test Systems for the Differentiation of Mycobacteria from Culture Specimens



- simple
- safe
- fast
- easy to combine
- can be automated



CE -labelling

Quality management certified to ISO 9001



Discrimination of *M. tuberculosis* complex and MOTT

Within the genus *Mycobacterium* it can be distinguished between the tuberculosis pathogens of the *M. tuberculosis* complex and non-tuberculous mycobacteria (MOTT, "Mycobacteria Other Than Tuberculosis"). In view of the varying pathogenicity and apathogenicity of some species a fast and certain differentiation is most essential. From a medical point of view it is indispensable to make a clear and safe distinction between the *Mycobacterium tuberculosis* complex and MOTT and to apply adequate therapies and appropriate quarantine measures when tuberculosis pathogens have been detected. A late diagnosis and hence a delay in the beginning of appropriate treatment is detrimental to the success of the treatment and facilitates transmission of the disease.

Differentiation of non-tuberculous mycobacteria

Non-tuberculous mycobacteria can cause chronic mycobacterioses. Infectiousness and symptoms vary in a broad range and depend both on the pathogen as well as on the immunocompetence of the affected person. If the body's own immune defence is weakened such as in HIV or leukemia patients, mycobacteria can spread unhindered in the organism and may lead to infections. This is a serious threat and requires rapid and appropriate treatment of atypical mycobacterioses. Consequently the clinical significance of the MOTT group members also has to be differentiated in order to avoid under- or overtreatment. In the interest of the patients, time-consuming biochemical analyses should be replaced by fast and exact molecular genetic diagnostics.

GenoType[®] Mycobacterium CM and GenoType[®] Mycobacterium AS

On the basis of a positive solid or liquid culture the combination of the two test systems **GenoType[®] Mycobacterium CM** and **GenoType[®] Mycobacterium AS** allows a safe and fast differentiation of more than 30 clinically relevant mycobacteria species. Both tests are based on the **DNA-STRIP[®] Technology** including an amplification step and a subsequent reverse hybridization. The high sensitivity achieved by this combination enables the detection of even weak-positive cultures and the identification of mixed cultures from fast- and slow-growing mycobacteria.

GenoType® Mycobacterium CM

The **GenoType® Mycobacterium CM** („Common Mycobacteria“) allows the detection and discrimination of 13 non-tuberculous mycobacteria species and of the *M. tuberculosis* complex as a whole. In addition, a special genus-specific probe identifies the presence of other mycobacteria species. In this case the **GenoType® Mycobacterium AS** offers a further differentiation.

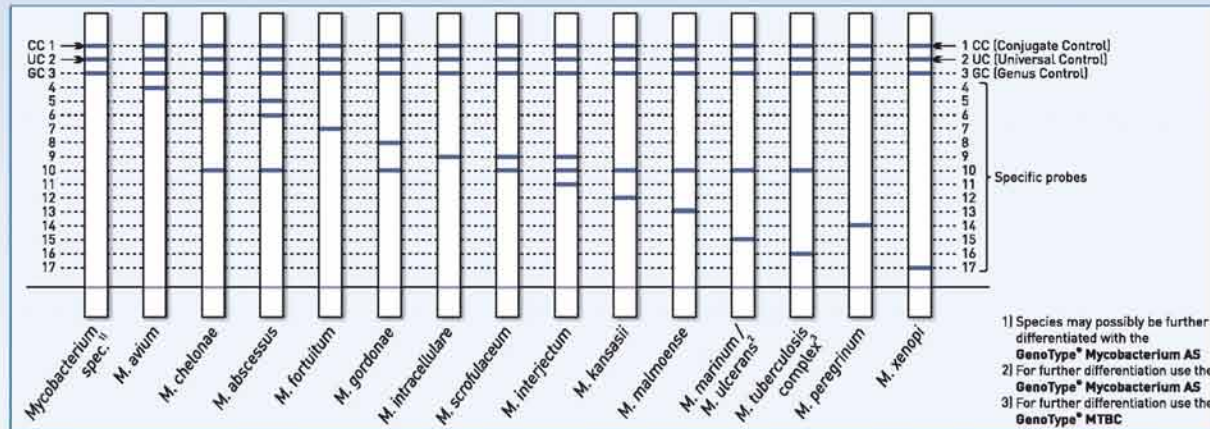


Fig. 1: Reaction zones of **GenoType® Mycobacterium CM**

GenoType® Mycobacterium AS

When applying the **GenoType® Mycobacterium AS** („Additional Species“), another 16 non-tuberculous species can be distinguished. The use of this test system is particularly advantageous when only the genus-specific probe is developed in the **GenoType® Mycobacterium CM**. The amplicon generated in the **GenoType® Mycobacterium CM** may also be used for the **GenoType® Mycobacterium AS**; it is thus not necessary to perform a second PCR.

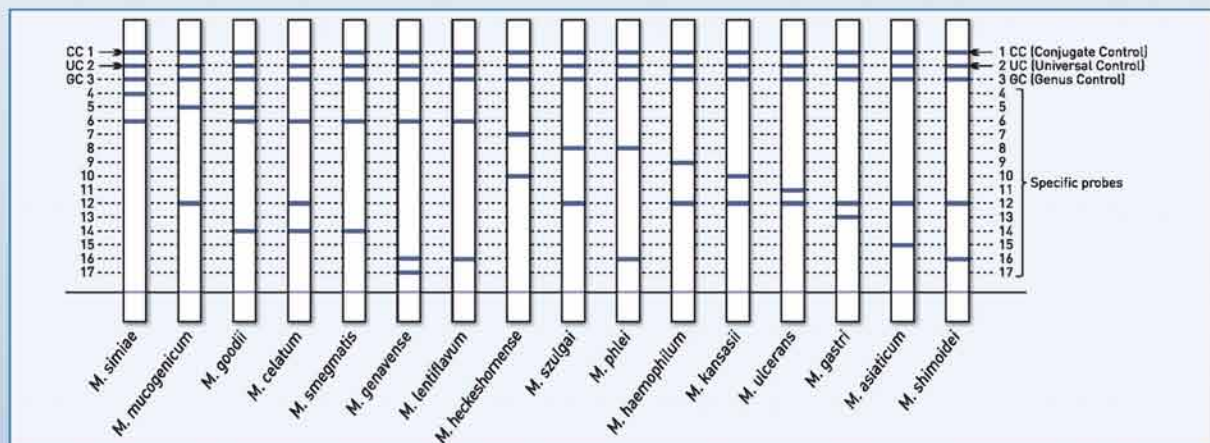


Fig. 2: Reaction zones of **GenoType® Mycobacterium AS**

Benefits of **GenoType® Mycobacterium CM** and **GenoType® Mycobacterium AS**

- **GenoType® Mycobacterium CM**: Detection and differentiation of 13 non-tuberculous, clinically relevant mycobacteria species and also of the *M. tuberculosis* complex as a whole in a single procedure
- **GenoType® Mycobacterium AS**: Differentiation of another 16 non-tuberculous mycobacteria species
- The amplicon generated in the **GenoType® Mycobacterium CM** may also be used in the **GenoType® Mycobacterium AS**; a second PCR is thus not necessary
- High diagnostic reliability by internal controls: conjugate control, universal control, mycobacteria-specific control

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