



# Antibiotic Resistances

- a complete program -

**Detection of the most important bacterial pathogens and their antibiotic resistances by PCR**

## ESBL Assay (RDB2180)

Conjugate control	Orange band
Amplification control	Orange band
<i>Klebsiella pneumoniae</i> specific	Orange band
<i>E. coli</i> specific	Orange band
TEM AS 104 E (wildtype - wt)	Orange band
TEM AS 104 K (ESBL)	Orange band
TEM AS 164 R (wt)	Orange band
TEM AS 164 S (ESBL)	Orange band
TEM AS 164 H (ESBL)	Orange band
TEM AS 238 G (wt)	Orange band
TEM AS 238 S (ESBL)	Orange band
SHV AS 238/240 (wt)	Orange band
CTX-M	Orange band

ESBLs (extended beta-lactamases spectrum) positive Enterobacteriaceae are isolated worldwide.

These enzymes hydrolyse significantly Cephalosporins and Monobactams.

Until 2000 most of the ESBLs are related to the TEM and SHV type-beta-lactamases.

Since the late 1990s novel types of ESBLs, the CTX-M enzymes, emerged. These ESBLs are increasing dramatically in Europe.

*This is the first PCR based test to detect a complete range of ESBL genes.*

## CAP Resistance Assay (RDB2145)

Conjugate control	Orange band
Amplification control	Orange band
<i>Streptococcus pneumoniae</i> spec.	Orange band
<i>S. pne</i> Macrolide res. ermB	Orange band
<i>S. pne</i> Macrolide res. mef	Orange band
<i>S. pne</i> $\beta$ -Lact. wild pbp1A	Orange band
<i>S. pne</i> $\beta$ -Lact. wild pbp2B	Orange band
<i>S. pne</i> $\beta$ -Lact. wild pbp2X	Orange band
<i>S. pne</i> Quinolone parC, wild	Orange band
<i>S. pne</i> Quinolone gyrA, wild	Orange band
<i>S. pne</i> Tetracycline tetM	Orange band

### *Streptococcus pneumoniae*

In Europe the resistance to Penicillin is quiet stable but the resistance to Macrolides (Erythromycin) is becoming more prevalent.

The different resistances vary in Europe from country to country:

Penicillin resistance about 25%

Macrolide resistance about 28%

Chinolone resistance about 1 %

Tetracyclin resistance about 25 %

*These data show how important it is to check different resistance genes for choosing the right therapy.*