

MRSA combi Assay (RDB2147)

PCR-Test for detection of *Staphylococcus aureus* and its antibiotic resistance genes

Conjugate control	
Amplification control	
<i>Staphylococcus aureus</i> specific	
<i>S. epidermidis</i> specific	
<i>S. haemolyticus</i> specific	
<i>S. aureus</i> Macrolide res. (ermA)	
<i>S. aureus</i> Macrolide res. (ermC)	
<i>S. aureus</i> beta-Lact. res. (mecA)	
<i>S. aureus</i> beta-Lact. res. (mecC)	
<i>S. aureus</i> Tetracycline res. (tetK)	
<i>S. aureus</i> Tetracycline res. (tetM)	
<i>S. aureus</i> Quinolone wild (gyrA)	
<i>S. aureus</i> Quinolone wild (parC)	
<i>S. aureus</i> Aminogly. res. (aacA)	
<i>S. aureus</i> Vancomycin res. (vanA)	
cMRSA - PVL lukF/lukS	

The most important antibiotic resistances to Methicillin-sensitive *S. aureus* strains (MSSA) are:

Penicillin	75 %
Quinolone	20 %
Macrolide	25 %
Lincosamide	15 %
Aminoglycoside	7 %
Tetracycline	< 5 %

Multiresistant *Staphylococcus aureus*

= Multiresistances against different other antibiotic groups in MRSA

- Most common in Europe is the Quinolone resistance (Ciprofloxacin). About 90% of MRSA strains have in addition a Quinolone resistance.
- The combined resistance of Macrolides and Lincosamides (Erythromycin and Clindamycin) is present in 70% and 65% of the MRSA isolates.
- The resistance of Aminoglycosides (Gentamycin) is common in 13% of the MRSA cases.
- About 7% of the MRSA strains have a Tetracycline resistance. (Oxytetracyclin)

Therefore it is important to check not only the mecA resistance but also the possible resistances to other used antibiotic groups.