MAYO CLINIC LABORATORIES

NEW TEST

Notification Date: July 9, 2024
Effective Date: August 1, 2024

Methicillin Resistance Gene, Molecular Detection, PCR, Varies

Test ID: MECPI

Useful for:

Detecting *mecA* in staphylococcal bacterial isolates

Evaluating treatment options when oxacillin or cefoxitin breakpoints are unavailable (eg, certain *Staphylococcus* species other than *Staphylococcus aureus*)

Predicting antimicrobial resistance when bacterial growth is inadequate for phenotypic antimicrobial susceptibility testing (eg, staphylococcal small colony variants)

Assessing discrepancies amongst cefoxitin and oxacillin phenotypic testing results or penicillin-binding protein 2a test results

Methods:

Real-Time Polymerase Chain Reaction (PCR)/Reverse Transcription PCR (RT-PCR)

Reference Values:

Not detected

Specimen Requirements:

Supplies: Infectious Container, Large (T146)
Container/Tube: Agar slant or other appropriate media
Specimen Volume: Organism in pure culture
Collection Instructions:
1. Perform isolation of bacteria.
2. Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Necessary Information:

Organism identification and specimen source are required.

Specimen Stability Information:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

Cautions:

- Only pure isolates of staphylococcal species should be tested.
- This test should be used in conjunction with phenotypic antimicrobial susceptibility tests, when available, and interpreted considering the patient's clinical condition.
- This US Food and Drug Administration-modified assay will not predict methicillin resistance caused by mechanisms other than *mecA.* Methicillin resistance due to *mecC* is not assessed by this assay.
- False-negative results may occur due to the presence of *mecA* in quantities lower than the limit of detection of the assay.
- Mutations or polymorphisms in primer or probe binding regions may affect detection of new or unknown *Staphylococcus aureus* or methicillin-resistant *S aureus* variants resulting in a false-negative result.
- Xpert SA Nasal Complete assay results may sometimes be invalid due to a failed sample processing control, an error, or lack of a result and may require retesting, which can lead to a delay in obtaining final results.

CPT Code:

87641

Day(s) Performed: Continuously **Report Available:** 2 to 4 days

Questions

Contact Brandon DeBoom, Laboratory Resource Coordinator at 800-533-1710.