MAYO CLINIC LABORATORIES

NEW TEST

Notification Date: March 10, 2020
Effective Date: March 17, 2020

Alpha Defensin, Lateral Flow Assay, Synovial Fluid

Test ID: ALDEF

Useful for:
Detection of alpha defensins 1-3, human host response proteins, in synovial fluid of adults with a total joint replacement who are being evaluated for revision surgery.

Methods:
Lateral Flow Assay (LFA).

Reference Values:
Negative
Reference values apply to all ages.

Specimen Requirements:

Collection Container/Tube: Red-top tube

Submission Container/Tube: Plastic vial

Specimen Volume: 0.6 mL

Specimen Stability Information:

Specimen Type	Temperature	Time
Synovial Fluid	Refrigerated	7 days

Necessary Information
The following 2 ask-at-order entry questions must be answered at the time of test ordering:

1. Is this for a prosthetic joint? Answer "Yes" or "No".
   Note: Test orders for submitted specimens with an answer of "No" to this ask-at-order entry question will be canceled.
2. Alpha Defensin Source? Answer options include "Synovial Fluid, Left Ankle; Synovial Fluid, Right Ankle; Synovial Fluid, Left Elbow; Synovial Fluid, Right Elbow; Synovial Fluid, Left Hip; Synovial Fluid, Right Hip; Synovial Fluid, Left Knee; Synovial Fluid, Right Knee; Synovial Fluid, Left Shoulder; Synovial Fluid, Right Shoulder; Synovial Fluid, Left Wrist; Synovial Fluid, Right Wrist".

Cautions:

- Alpha defensin testing should be used to evaluate for the presence of a prosthetic joint infection if other clinical and diagnostic test findings (ie., synovial fluid cell count and differential) are inconclusive.
- Test results should be utilized in conjunction with other clinical and diagnostic findings to aid the diagnosis of prosthetic joint infection (PJI).
- This kit has been developed for use with freshly collected synovial fluid only. The use of this test kit with any other specimen type may lead to inaccurate test results. The use of synovial fluid diluted with saline, blood, contrast agent, or any substances injected into the joint may lead to false–negative results.
- Presence of red blood cells (RBCs), greater than 1 million/mcL, in the synovial fluid specimen may lead to false–negative results. This represents dilution of the synovial fluid specimen with greater than 20% blood.
- The performance of this test has only been validated for conditions evaluated by the Musculoskeletal Infection Society (MSIS) criteria.
- A decrease in sensitivity (an increased likelihood of false-negative results) has been observed in the presence of a sinus tract communicating with the prosthesis. Since the presence of a sinus tract is definitive evidence of PJI, use of this test under those circumstances is **not** recommended.
- False-positive results have been reported in the presence of metallosis.
- A negative test result does **not** preclude the possibility of infection.
- Synovial fluid obtained after repeated aspirations within a short time period might lead to false–negative results due to the lack of buildup of alpha defensin.

CPT Code:

83516

Day(s) Setup:

Monday through Friday, Sunday.

Analytic Time:

Same day/1 day

Questions

Contact Dunisha Messmer, Laboratory Technologist Resource Coordinator at 800-533-1710.