MAYO CLINIC LABORATORIES

Test Definition: LY27B

HLA-B27, B

Overview

Useful For
Assisting in the diagnostic process of ankylosing spondylitis, juvenile rheumatoid arthritis, and Reiter syndrome

Method Name
FlowCytometry

NY State Available
Yes

Specimen

Specimen Type
Whole Blood EDTA

Specimen Required
Specimen must arrive within 96 hours of draw.
Container/Tube: Lavender top (EDTA)
Specimen Volume: 6 mL
Collection Instructions: Do not transfer blood to other containers.

Forms
If not ordering electronically, complete, print, and send a General Request (T239) with the specimen.

Reject Due To
All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Minimum Volume
1 mL

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	4 days	

Clinical & Interpretive

Clinical Information
This major histocompatibility coded class I antigen is associated with ankylosing spondylitis, juvenile rheumatoid arthritis, and Reiter syndrome. The mechanism of the association is not understood but probably is that of linkage disequilibrium.
There is an increased prevalence of HLA-B27 in certain rheumatic diseases, particularly ankylosing spondylitis.

Studies have demonstrated that the B*27:06 allele, which is present in a small percentage of individuals of Asian ethnicity, may not be associated with ankylosing spondylitis.

Reference Values
An interpretive report will be provided.

Interpretation
Approximately 8% of the normal population carries the HLA-B27 antigen.
HLA-B27 is present in approximately 89% of patients with ankylosing spondylitis, 79% of patients with Reiter syndrome, and 42% of patients with juvenile rheumatoid arthritis. However, lacking other data, it is not diagnostic for these disorders.

Cautions
Orders received for both this test and SSO1 / HLA Class I Molecular Phenotype, Blood or DISI / HLA Class I Molecular Typing Disease Association (which provides data on all HLA Class I low-resolution antigens, including B27) will be questioned due to test overlap. This HLA-B27 test is best used alone if a particular disease such as ankylosing spondylitis is under consideration.
Extreme temperature changes during shipping may alter the specimen making it unacceptable for testing.

Clinical Reference
1. Brewerton DA, Hart FD, Nicholls A, et al: Ankylosing spondylitis and HLA-27. Lancet 1973;1:904-907
2. Albrecht J, Muller HA: HLA-B27 typing by use of flow cytofluorometry. Clin Chem 1987;33:1619-1623

Performance

Method Description
Anti-HLA fluorescein isothiocyanate (FITC)/CD3 phycoerythrin monoclonal antibody reagent is added to human whole blood. The fluorochrome-labeled antibodies bind specifically to leukocyte surface antigens. The stained specimens are treated with lysing solution to lyse red blood cells, then washed and fixed prior to flow cytometric analysis. The flow cytometer is set up using BD caliBRITE beads with Autocomp software and HLA-B27 calibration beads with the HLA-B27 software. The HLA-B27 software first identifies, on a forward scatter (FSC) versus fluorescence 2 (FL2) dot plot, the cluster of events with a uniformly bright CD3-positive signal (T-lymphocytes). During analysis, the median fluorescence intensity of the anti-HLA-B27 FITC signal is calculated for the events included in the FSC/FL2 gate. Specimens with a median fluorescence 1 channel result greater than or equal to the decision marker are considered HLA-B27 positive. Specimens with a median channel result lower than the decision marker are considered HLA-B27 negative. This decision marker is encoded in the suffix of the reagent lot number listed on the vial label.(Package insert: HLA-B27 Test Kit. Becton-Dickinson, San Jose, CA)

PDF Report
No

Specimen Retention Time
7 days

Performing Laboratory Location

Rochester

Fees & Codes

Test Classification

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

86812