Overview

Useful For
Confirming marked increases in the granulocyte or monocyte pools as in granulocytic or monocytic leukemias, myeloproliferative disorders, and malignant histiocytosis

Following the course of therapy in cases of chronic granulocytic or chronic monocytic leukemias

Method Name
Turbidimetric

NY State Available
Yes

Specimen

Specimen Type
Plasma EDTA

Specimen Required
Collection Container/Tube: Lavender top (EDTA)

Submission Container/Tube: Plastic vial

Specimen Volume: 2 mL

Collection Instructions:
1. Centrifuge and transfer plasma to a plastic vial within 2 hours of collection.
2. Freeze immediately after transferring.

Forms
If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:

- Hematopathology/Cytogenetics Test Request (T726)
- Benign Hematology Test Request Form (T755)

Specimen Minimum Volume
1 mL

Reject Due To

| Gross hemolysis | OK |
| Gross lipemia   | OK |

Specimen Stability Information
Clinical and Interpretive

Clinical Information
Lysozyme is a bacteriolytic enzyme that is found in some hematopoietic cells. It is primarily present in granulocytes, monocytes, and histiocytes. The enzyme is present in only minute amounts in lymphocytes; and is not present in myeloblasts, eosinophils, and basophils.

Lysozyme in the plasma comes chiefly from the degradation of granulocytes and monocytes and its concentration reflects the turnover of these cells. Increases are seen in benign (eg, infection, inflammation) and malignant processes (eg, some leukemias). Plasma lysozyme is elevated in patients with acute or chronic granulocytic or monocytic leukemias and falls with successful treatment. Conversely, patients with lymphocytic leukemia may have depressed plasma lysozyme levels.

Patients with renal disorders (including rejection of transplanted kidneys) or Crohn’s disease (regional enteritis) also tend to have elevated levels of plasma lysozyme.

Reference Values
> or =12 months: 2.7-9.4 mcg/mL
Reference values have not been established for patients who are <12 months of age.

Interpretation
Levels >200 mcg/mL may be seen in acute nonlymphocytic leukemia (M2, M4, M5) or chronic granulocytic leukemias.

Cautions
Increased levels may be seen in nonmalignant disorders including infections, Crohn’s disease, kidney transplant rejection, and other renal disorders.

Clinical Reference

Performance

Method Description
The term "lysozyme" is derived from the ability of this enzyme to dissolve the walls of certain bacteria, including Micrococcus lysodeikticus. This organism is suspended in buffer, and the plasma sample is added. The resulting decrease in turbidity is measured spectrophotometrically. The rate of clearing is a reflection of the concentration of the enzyme.(Litwack G: Photometric determination of lysozyme activity. Proc Soc Exp Biol Med 1955;89:401-403)
No

Day(s) and Time(s) Test Performed
Monday through Friday

Analytic Time
2 days

Maximum Laboratory Time
5 days

Specimen Retention Time
7 days

Performing Laboratory Location
Rochester

Fees and Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification
This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information
85549

LOINC® Information

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