MAYO CLINIC LABORATORIES

Test Definition: ALBS1

Albumin, Serum (Non-Orderable)

Overview

Useful For

Only orderable as part of profile. For more information see SFIG / Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid.

Assessing nutritional status

Aiding in the diagnosis of multiple sclerosis when used in conjunction with serum IgG, and cerebrospinal fluid IgG and albumin concentrations

Method Name

Only orderable as part of profile. For more information see: SFIG / Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid.

Colorimetric

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Only orderable as part of profile. For more information see: SFIG / Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid.

Collection Container/Tube:
Preferred: Serum gel
Acceptable: Red top
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL
Collection Instructions:
1. Serum gel tubes should be centrifuged within 2 hours of collection.
2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume

0.5 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	7 days	
	Frozen	120 days	

Clinical & Interpretive

Clinical Information

Albumin is a carbohydrate-free protein, which constitutes 55% to 65% of total plasma protein. It maintains oncotic plasma pressure, is involved in the transport and storage of a wide variety of ligands, and is a source of endogenous amino acids. Albumin binds and solubilizes various compounds, including bilirubin, calcium, long-chain fatty acids, toxic heavy metal ions, and numerous pharmaceuticals.

Hypoalbuminemia is caused by several factors: impaired synthesis due either to liver disease (primary) or due to diminished protein intake (secondary), increased catabolism as a result of tissue damage and inflammation, malabsorption of amino acids, and increased renal excretion (eg, nephrotic syndrome).

Measurement of albumin in serum is helpful when paired with albumin measured in cerebrospinal fluid (CSF) along with total IgG in serum and CSF as an aid in evaluating multiple sclerosis and other conditions where the integrity of the blood brain barrier is reviewed. The combination of these four analytes is referred to as CSF IgG index.

Reference Values

Only orderable as part of profile. For more information see: SFIG / Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid.

> or =12 months: 3500-5000 mg/dL
Reference values have not been established for patients who are <12 months of age.

Interpretation

Hyperalbuminemia is of little diagnostic significance except in the case of dehydration. When plasma or serum albumin values fall below 2.0 g/dL, edema is usually present.

Cautions

Albumin concentration determined by the bromcresol green method may not be identical to the albumin concentration determined by electrophoresis.

Clinical Reference

1. Rifai N, Horvath AR, Wittwer CT, eds. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 6th ed. Elsevier; 2018
2. Peters T, Jr: Serum albumin. In: Putnam F, ed. The plasma proteins. Vol 1. 2nd ed. Academic Press; 1975

Performance

Method Description

At a pH value of 4.1, albumin displays a sufficiently cationic character to be able to bind with bromcresol green (BCG), an anionic dye, to form a blue-green complex. The color intensity of the blue-green color is directly proportional to the albumin concentration in the sample and is measured photometrically.(Package insert: Albumin reagent. Roche Diagnostics; V 8.0, 06/2024)

PDF Report

No

Day(s) Performed

Monday through Sunday

Report Available

Same day/1 day

Specimen Retention Time

1 week

Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Main Campus

Fees & 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 account representative. For assistance, contact Customer Service.

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

82040

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
ALBS1	Albumin, S	1751-7

Result ID	Test Result Name	Result LOINC® Value
ALB_S	Albumin, S	1751-7