
Overview

Useful For

For the quantitative measurement of human IgA heavy chain and light chain intact immunoglobulin in serum. The result can be used when monitoring previously diagnosed IgA multiple myeloma patients and is used in conjunction with other clinical and laboratory findings.

Heavy and light chain pair quantitation may be useful for:

1. Distinguishing between broadly migrating monoclonal proteins and restricted polyclonal immunoglobulin patterns on serum protein electrophoresis.
2. Quantitating monoclonal IgA proteins that are difficult to quantitate using serum protein electrophoresis alone.
3. Providing a more specific quantitation of the monoclonal protein than total IgA measurements alone.

Method Name

Turbidimetric

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Specimen Type: Serum

Container/Tube: Red top or SST

Specimen Volume: 0.75 mL

Collection Instructions: Draw blood in a plain red-top tube, serum gel tube(s) is also acceptable. Separate serum immediately after coagulation (30 minutes) to prevent hemolysis. Send 0.75 mL of serum refrigerated in a plastic vial.

NOTE: Patient should be fasting for eight hours to avoid lipemic sample interference.

Reject Due To

Hemolysis	Mild reject; Gross reject
Lipemia	Mild reject; Gross reject
Icterus	NA
Other	Microbially-contaminated specimen; specimen containing particulate matter

Specimen Minimum Volume

0.5 mL

Specimen Stability Information

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

Clinical & Interpretive**Clinical Information**

Elevated serum concentrations of monoclonal protein are indicative of an underlying abnormality, such as monoclonal gammopathy of undetermined significance (MGUS), multiple myeloma, and other lymphoproliferative disorders. International guidelines recommend serum protein electrophoresis (SPE) densitometry to be performed to quantify monoclonal proteins. However, monoclonal IgA proteins can often be obscured by other proteins in the Beta region of a SPE gel, making quantification inaccurate.

Nephelometry can be used in these instances to measure total IgA, but this will include nontumor immunoglobulin, and measurement of either IgA Kappa or IgA Lambda may give a more accurate representation of tumor production. Furthermore, measurement of both IgA Kappa and IgA Lambda, calculation of the IgA Kappa:IgA Lambda ratio and comparison with values found in normal subjects can give a more sensitive indication of clonality. Use of the IgA Kappa:IgA Lambda ratio will also compensate for any changes in plasma volume.

Reference Values

IgA Kappa (g/L): 0.48-2.82

IgA Lambda (g/L): 0.36-1.98

IgA Kappa:IgA Lambda ratio: 0.80-2.04

Interpretation

An elevated IgA heavy and light chain (HLC) pair ratio suggests a clonal proliferation of an IgA Kappa clone of plasma cells.

A low IgA HLC pair ratio suggests a clonal proliferation of an IgA Lambda clone of plasma cells.

Cautions

Decisions on patient evaluation and management must not be given on the basis of IgA Kappa, IgA Lambda, or IgA Kappa:IgG Lambda ratio measurements alone. Clinical history and other laboratory findings must be taken into account.

Heavy and light chain (HLC) quantitation should be used as a complementary method to serum protein electrophoresis.

The effect of therapeutic drugs on the measurement of IgA Kappa and IgA Lambda by this assay has not been evaluated.

Small increases in the concentrations of monoclonal IgA proteins may not result in an altered HLC pair ratio.

Clinical Reference

1. Smith A, Wisloff F, Samson D; UK Myeloma Forum; Nordic Myeloma Study Group; British Committee for Standards in Haematology. (2005) Guidelines on the diagnosis and management of multiple myeloma 2005. *Br J Haematol.* 2006 Feb; 132(4):410-451. [PubMed 16412016](#)
2. Bradwell AR, Harding S, Drayson M, Mead G. Novel nephelometric assays give a sensitive measure of residual disease in multiple myeloma (MM). *Br J Haematol.* 2008; 141(s1):39. Abstract 107.

Performance**PDF Report**

No

Performing Laboratory Location

LabCorp Burlington

Fees & Codes**Test Classification****CPT Code Information**

83883 x 2

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
FHLCA	IgA Heavy Light Chains (HLC), S	74773-3

Result ID	Reporting Name	LOINC®
Z5616	IgA Kappa, S	74864-0
Z5617	IgA Lambda, S	74865-7
Z5618	IgA K/L HLC Ratio	74869-9