Test Definition: HIGA

HLC IgA Kappa Lambda IF

Overview

Useful For

Immunofluorescent staining of IgA kappa and IgA lambda to aid in the diagnosis of monoclonal gammopathy-associated nephropathies

Testing Algorithm

For the initial immunofluorescence (IF) stain performed, the appropriate bill-only test ID will be added and charged (IFPCI). For each additional IF stain performed, an additional bill-only test ID will be added and charged (IFPCA).

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
IFPCI	IF Initial	No	No
IFPCA	IF Additional	No	No

Method Name

Direct Immunofluorescence

NY State Available

Yes

Specimen

Specimen Type

Special

Ordering Guidance

If additional interpretation/analysis is needed, request PATHC / Pathology Consultation along with this test and send the corresponding renal pathology light microscopy and immunofluorescence (IF) slides (or IF images on a CD), electron microscopy images (prints or CD), and the pathology report.

Shipping Instructions

1. Advise shipping specimens in Styrofoam transportation coolers to avoid extreme hot or cold temperatures to ensure specimens are received at required specimen stability temperature.

2. Attach the green pathology address label included in the kit to the outside of the transport container.

Specimen Required

Preferred: Frozen tissue

Supplies: Renal Biopsy Kit (T231)

Specimen Type: Kidney tissue

Container/Tube: Renal Biopsy Kit, Zeus/Michel's

Specimen Volume: Entire specimen

Collection Instructions: Collect specimens according to the instructions in Renal Biopsy Procedure for Handling Tissue for Light Microscopy (LM), Immunofluorescent Histology (IF), and Electron Microscopy (EM) in Special Instructions.

Additional Information: If standard immunoglobulin and complement immunofluorescence has already been performed, submit the residual frozen tissue (must contain glomeruli) on dry ice.

Acceptable: Tissue slides

Collection Instructions: Submit 2 frozen tissue unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Ship on dry ice.

Forms

Renal Biopsy Patient Information in Special Instructions

Reject Due To

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

Specimen Stability Information

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

Clinical & Interpretive

Clinical Information

Heavy chain/light chain (HLC) antibodies target conformational epitopes at the junctions of the heavy chain and light chain constant regions (CH1 and CL) of serum IgA kappa, IgA lambda, IgG kappa, IgG lambda, IgM kappa, and IgM

lambda to provide quantitation of intact HLC pairs and aid in determining monoclonality. Direct HLC tissue immunofluorescence demonstrates that HLC antibodies complement conventional immunofluorescence in the pathologic diagnosis of monoclonal gammopathy-associated kidney lesions (such as heavy chain deposition disease and proliferative glomerulonephritis with monoclonal immunoglobulin deposits), can unmask polytypic IgA deposits, and assist in the pathologic distinction between type II and III cryoglobulinemic glomerulonephritis.

Reference Values

An interpretive report will be provided.

Interpretation

Staining intensity is graded as negative (0), weak (trace, 1+), moderate (2+) and strong (3+).

Cautions

No significant cautionary statements.

Clinical Reference

1. Leung N, Bridoux F, Batuman V, et al: The evaluation of monoclonal gammopathy of renal significance: a consensus report of the International Kidney and Monoclonal Gammopathy Research Group. Nat Rev Nephrol. 2019 Jan;15(1):45-59

2. Bridoux F, Leung N, Hutchison CA, et al: International Kidney and Monoclonal Gammopathy Research Group. Diagnosis of monoclonal gammopathy of renal significance. Kidney Int. 2015 ;87(4):698-711

3. Gagliardi A, Carbone C, Russo A, et al: Combined use of free light chain and heavy/light chain ratios allow diagnoses and monitoring of patients with monoclonal gammopathies: Experience of a single institute, with three exemplar case reports. Oncol Lett. 2016;12:2363-2370. doi: 10.3892/ol.2016.4965

4. Koulieris E, Panayiotidis P, Harding S, et al: Ratio of involved/uninvolved immunoglobulin quantification by Hevylite assay: Clinical and prognostic impact in multiple myeloma. Exper Hematol Oncol. 2012;1:9. doi: 10.1186/2162-3619-1-9

5. Joly F, Cohen C, Javaugue V, et al: Randall-type monoclonal immunoglobulin deposition disease: novel insights from a nationwide cohort study. Blood. 2019;133(6):576-587

Performance

Method Description

Direct immunofluorescence staining on sections of frozen renal tissue.(Unpublished Mayo method)

PDF Report

No

Performing Laboratory Location

Rochester

Fees & Codes

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 US Food and Drug Administration.

CPT Code Information

88346-Primary IF

88350-If add'l IF

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
HIGA	HLC IgA Kappa Lambda IF	In Process

Result ID	Reporting Name	LOINC®
610380	Interpretation	50595-8
610381	Participated in the Interpretation	No LOINC Needed
610382	Report electronically signed by	19139-5
610383	Addendum	35265-8
610384	Gross Description	22634-0
610385	Material Received	94736-6
610386	Disclaimer	62364-5
610387	Case Number	80398-1