Test Definition: PLAIF

Phospholipase A2 Receptor (PLA2R), Renal Biopsy

Overview

Useful For

Distinguishing primary membranous nephropathy from secondary membranous nephropathy

Special Instructions

- Renal Biopsy Patient Information
- Renal Biopsy Preparation Instructions

Method Name

Immunofluorescence

NY State Available

Yes

Specimen

Specimen Type

Special

Ordering Guidance

This test will report as negative or positive for autoantibodies to phospholipase A2 receptor.

If additional interpretation/analysis is needed, request PATHC / Pathology Consultation along with this test and send: 1) the corresponding renal pathology light microscopy and immunofluorescence (IF) slides (or IF images on a CD); 2) electron microscopy images (prints or CD); and 3) the pathology report.

Shipping Instructions

1. Advise shipping frozen specimens (unstained slides or tissue block) in Styrofoam transportation coolers filled with dry ice to ensure specimens are received at required specimen stability temperature.
2. Attach the green "Attention Pathology" address label (T498) to the outside of the transport container before putting into the courier mailer.

Necessary Information

A pathology/diagnostic report is required.

Specimen Required

Submit only 1 of the following specimens:

Preferred:

Specimen Type: Unstained slides (unfixed)
Source: Kidney tissue
Slides: 2 Slides
Collection Instructions: 2 frozen tissue unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick, **centered on the slide,** and submitted on dry ice.
Additional Information: Broken or cracked unstained slides will be rejected. Stained slides that were broken and repaired (ie, double mounted) at the client site will not be rejected, as, in most cases, they can still be reviewed under the microscope. However, due to the double mounting, digital scanning cannot be performed.

Acceptable:
Specimen Type: Unfixed tissue block (O.C.T)
Source: Kidney tissue
Specimen Volume: Entire specimen
Collection Instructions:
1. Embed in O.C.T. compound.
2. Freeze specimen and ship on dry ice.

Acceptable:
Specimen Type: Wet tissue
Source: Kidney tissue
Supplies: Renal Biopsy Kit (T231)
Container/Tube: Renal Biopsy Kit, Zeus/Michel's
Specimen Volume: Entire specimen
Collection Instructions: Collect specimens according to the instructions in Renal Biopsy Preparation Instructions.
Additional Information: If standard immunoglobulin and complement immunofluorescence have already been performed, submit the residual frozen tissue (must contain glomeruli) on dry ice.

Forms

1. Renal Biopsy Patient Information
2. If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:
-Kidney Transplant Test Request
-Renal Diagnostics Test Request (T830)

Specimen Minimum Volume

See Specimen Required

Reject Due To

Broken or cracked unstained slides	Reject
Broken or cracked stained slides	Reject

that cannot be repaired	

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Special	Frozen		

Clinical & Interpretive

Clinical Information

Membranous nephropathy is the most common cause of nephrotic syndrome in White adults. Eighty-five percent of membranous nephropathy cases are primary or idiopathic, and the other 15% are secondary. Phospholipase A2 receptor (PLA2R) is an antigen located on podocytes. The majority of cases of primary membranous nephropathy have circulating autoantibodies against PLA2R.

Reference Values

An interpretive report will be provided.

Interpretation

This test, when not accompanied by a pathology consultation request, will be reported as either positive or negative.

Cautions

Broken or cracked unstained slides are not compatible with the instrumentation used in our performing laboratories and will be rejected. Additional material may be requested.

Attempts will be made to repair broken or cracked stained slides; however, if they are unable to be repaired (ie, shattered in transit), they will be rejected and discarded due to safety concerns.

Clinical Reference

1. Larsen CP, Messias NC, Silva FG, Messias E, Walker PD. Determination of primary versus secondary membranous glomerulopathy utilizing phospholipase A2 receptor staining in renal biopsies. Mod Pathol. 2013;26(5):709-715
2. Svobodova B, Honsova E, Ronco P, Tesar V, Debiec H. Kidney biopsy is a sensitive tool for retrospective diagnosis of PLA2R-related membranous nephropathy. Nephrol Dial Transplant. 2013;28(7):1839-1844
3. Cossey LN, Walker PD, Larsen CP. Phospholipase A2 receptor staining in pediatric idiopathic membranous glomerulopathy. Pediatr Nephrol. 2013;28(12):2307-2311
4. Larsen CP, Walker PD. Phospholipase A2 receptor (PLA2R) staining is useful in the determination of de novo versus recurrent membranous glomerulopathy. Transplantation. 2013;95(10):1259-1262
5. Tomas NM, Beck LH Jr, Meyer-Schwesinger C, et al. Thrombospondin type-1 domain-containing 7A in idiopathic membranous nephropathy. N Engl J Med. 2014;371(24):2277-2287

Performance

Method Description
Indirect immunofluorescence staining on sections of frozen tissue.(Unpublished Mayo method)

PDF Report
No

Day(s) Performed
Monday through Friday

Report Available
1 to 2 days

Specimen Retention Time
Unstained slides: 2 weeks after results are reported; Stained slides: digital images are obtained for all slides used in testing and kept indefinitely; Unfixed tissue blocks: 5 yearsDepends on specimen type.

Performing Laboratory Location
Mayo Clinical 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 was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
88346-primary IF

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
PLAIF	PLA2R Immunofluorescence	In Process

Result ID	Test Result Name	Result LOINC® Value
71225	Interpretation	59465-5
71226	Participated in the Interpretation	No LOINC Needed
71230	Material Received	81178-6
71229	Gross Description	22634-0

71227	Report electronically signed by	19139-5
71228	Addendum	35265-8
71617	Disclaimer	62364-5
71847	Case Number	80398-1