

## Overview

### Useful For

[Distinguishing primary membranous nephropathy from secondary membranous nephropathy](#)

### Special Instructions

- [Renal Biopsy Patient Information](#)
- [Renal Biopsy Procedure for Handling Tissue for Light Microscopy \(LM\), Immunofluorescent Histology \(IH\), and Electron Microscopy \(EM\)](#)

### 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 (PLA2R). 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.

### Necessary Information

**A pathology/diagnostic report is required.**

### Specimen Required

**Preferred:** Frozen tissue

**Supplies:** Renal Biopsy Kit (T231)

**Specimen Type:** Kidney tissue

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

**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 \(EM\)](#)

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

**Acceptable:** Frozen tissue

**Slides:** 2 frozen tissue unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick, submitted on dry ice.

### Forms

1. [Renal Biopsy Patient Information](#)
2. If not ordering electronically, complete, print, and send a [Renal Diagnostics Test Request](#) (T830) with the specimen.

### 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

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.

#### Interpretation

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

#### Cautions

No significant cautionary statements.

#### 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 Jul;28(7):1839-1844
3. Cossey LN, Walker PD, Larsen CP: Phospholipase A2 receptor staining in pediatric idiopathic membranous glomerulopathy. *Pediatr Nephrol.* 2013 Dec;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 Dec 11;371(24):2277-2287

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**Performance****Method Description**

Indirect immunofluorescence staining on sections of frozen 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