# Test Definition: AC1Q

Anti-C1q Antibodies, IgG, Serum

## Overview

### Useful For

Evaluating patients with suspected anti-C1q vasculitis

Predicting renal involvement in patients with systemic lupus erythematosus

Detection of anti-C1q antibodies in serum

### Method Name

Enzyme-Linked Immunosorbent Assay (ELISA)

### NY State Available

Yes

## Specimen

### Specimen Type

Serum

### Specimen Required

**Supplies:** Sarstedt Aliquot Tube, 5 mL (T914)
**Collection Container/Tube:**
**Preferred:** Serum gel
**Acceptable:** Red top
**Submission Container/Tube:** Plastic vial
**Specimen Volume:** 0.5 mL
**Collection Instructions:** Centrifuge and aliquot serum into a plastic vial.

### Specimen Minimum Volume

0.4 mL

### Reject Due To

| | |
|---|---|
| Gross hemolysis | Reject |
| Gross lipemia | Reject |
| Gross icterus | Reject |

### Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|---|---|---|---|
| Serum | Refrigerated (preferred) | 21 days | |
| | Frozen | 21 days | |

## Clinical & Interpretive

### Clinical Information

Anti-C1q antibodies have been found to be prevalent in hypocomplementemic urticarial vasculitis syndrome (also referred to as anti-C1Q vasculitis) as well as in some patients with systemic lupus erythematosus (SLE)1,2. These antibodies occur more frequently in lupus nephritis, particularly during active disease. The main target clinical diseases include SLE and anti-C1Q vasculitis. Anti-C1q antibodies may also be seen in infectious diseases such as HIV and hepatitis C.

### Reference Values

<20 U/mL (Negative)
20-39 U/mL (Weak Positive)
40-80 U/mL (Moderate Positive)
>80 U/mL (Strong Positive)

### Interpretation

A positive result for Anti-C1q antibodies may support a diagnosis of anti-C1q vasculitis or renal involvement in patients with systemic lupus erythematosus in the appropriate clinical context.

A negative result indicates no detectable IgG antibodies to C1q and does not rule out a diagnosis.

### Cautions

A positive result for anti-C1q antibodies indicates they are detectable above the assay's lower limit of quantitation and does not unequivocally establish any diagnosis.

### Clinical Reference

1. Dragon-Durey MA, Blanc C, Marinozzi MC, van Schaarenburg RA, Trouw LA. Autoantibodies against complement components and functional consequences. Mol Immunol. 2013;56(3):213-221
2. Defendi F, Thielens NM, Clavarino G, Cesbron JY, Dumestre-Perard C. The immunopathology of complement proteins and innate immunity in autoimmune disease. Clin Rev Allergy Immunol. 2020;58(2):229-251
3. Marzano AV, Maronese CA, Genovese G, et al. Urticarial vasculitis: Clinical and laboratory findings with a particular emphasis on differential diagnosis. J Allergy Clin Immunol. 2022;149(4):1137-1149
4. Hristova MH, Stoyanova VS. Autoantibodies against complement components in systemic lupus erythematosus - role in the pathogenesis and clinical manifestations. Lupus. 2017;26(14):1550-1555
5. Jachiet M, Flageul B, Deroux A, et al. The clinical spectrum and therapeutic management of hypocomplementemic urticarial vasculitis: data from a French nationwide study of fifty-seven patients. Arthritis Rheumatol. 2015;67(2):527-534
6. Jennette JC, Falk RJ, Bacon PA, et al. 2012 revised International Chapel Hill Consensus Conference Nomenclature of Vasculitides. Arthritis Rheum. 2013;65(1):1-11
7. Mehregan DR, Hall MJ, Gibson LE. Urticarial vasculitis: a histopathologic and clinical review of 72 cases. J Am Acad Dermatol. 1992;26(3):441–448

8. Damman J, Mooyaart AL, Seelen MAJ, van Doorn MBA. Dermal C4d deposition and neutrophil alignment along the dermal-epidermal junction as a diagnostic adjunct for hypocomplementemic urticarial vasculitis (Anti-C1q Vasculitis) and underlying systemic disease. Am J Dermatopathol. 2020;42(6):399-406
9. Marto N, Bertolaccini ML, Calabuig E, Hughes GR, Khamashta MA. Anti-C1q antibodies in nephritis: correlation between titres and renal disease activity and positive predictive value in systemic lupus erythematosus. Ann Rheum Dis. 2005;64(3):444-448
10. Shang X, Ren L, Sun G, et al. Anti-dsDNA, anti-nucleosome, anti-C1q, and anti-histone antibodies as markers of active lupus nephritis and systemic lupus erythematosus disease activity. Immun Inflamm Dis. 2021;9(2):407-418

## Performance

### Method Description
Testing for antibodies to C1q is accomplished using a laboratory-developed immunoassay.(Unpublished Mayo method)

### PDF Report
No

### Day(s) Performed
Wednesday

### Report Available
2 to 8 days

### Specimen Retention Time
2 weeks

### Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Superior Drive

## 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
83520

## LOINC® Information

| Test ID | Test Order Name | Order LOINC® Value |
|---|---|---|
| AC1Q | Anti-C1q Antibodies, IgG, S | 44702-9 |

| Result ID | Test Result Name | Result LOINC® Value |
|---|---|---|
| AC1Q | Anti-C1q Antibodies, IgG, S | 44702-9 |