MAYO CLINIC LABORATORIES

Test Definition: SCERG

Saccharomyces cerevisiae Antibody, IgG, Serum

Overview

Useful For

Measuring IgG anti-*Saccharomyces cerevisiae* antibodies as a part of a profile to aid in distinguishing between ulcerative colitis and Crohn disease in patients for whom the specific diagnosis is unclear based on endoscopic, pathologic, and imaging evaluations

This test is **not useful for** determining the extent of disease in patients with inflammatory bowel disease or determining the response to disease-specific therapy including surgical resection of diseased intestine

Method Name

Enzyme-Linked Immunosorbent Assay (ELISA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

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	OK
Heat-treated specimen	Reject

Specimen Stability Information

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

Clinical & Interpretive

Clinical Information

Inflammatory bowel disease (IBD) refers to 2 diseases, ulcerative colitis (UC) and Crohn disease (CD, regional enteritis), both of which result from chronic inflammation in the gastrointestinal (GI) tract.(1) CD is characterized by chronic diarrhea, abdominal pain, and fatigue.(2) In comparison, UC frequently presents with bloody diarrhea that is of an urgent nature.(3) Inflammation in UC most frequently affects the rectum and proximal colon, and presents with continue mucosal involvement. In CD, inflammation can affect almost any area of the GI tract, and is usually evidenced as patchy, transmural lesions.

Diagnosis of IBD is primarily based on clinical evaluation, endoscopy with biopsy, and imaging studies.(4) Because CD and UC are characterized by GI inflammation, fecal calprotectin can be used to differentiate IBD from non-inflammatory conditions such as irritable bowel syndrome (IBS). Fecal calprotectin is useful in excluding IBD as a diagnosis and avoiding unnecessary endoscopic or imaging procedures.

CD and UC are associated with the presence of various anti-microbial and autoantibodies.(5) Patients with UC often have measurable antineutrophil cytoplasmic antibodies (ANCA), which react with as yet uncharacterized target antigens in human neutrophils; in contrast, patients with CD often have measurable IgA and/or IgG antibodies which react with cell wall mannan of *Saccharomyces cerevisiae*. Despite these associations, current guidelines indicate that testing for these antibodies is not sufficiently sensitive for use in the diagnosis of IBD.(2,3) Rather, these antibodies should be limited to distinguishing between CD and UC in cases where the specific diagnosis is unclear based on pathologic and imaging studies.

Reference Values

Negative: <20.0 RU/mL
Positive: > or =20.0 RU/mL
Reference values apply to all ages.

Interpretation

The presence of antineutrophil cytoplasmic antibodies (ANCA) in the absence of IgA and IgG anti-*Saccharomyces cerevisiae* antibodies (ASCA) is consistent with the diagnosis of ulcerative colitis; the presence of IgA and IgG ASCA in the absence of ANCA is consistent with Crohn disease.

Cautions

Results from this test should not be exclusively relied upon to establish the diagnosis of ulcerative colitis (UC) or Crohn disease (CD) or to distinguish between these 2 diseases. *Saccharomyces cerevisiae* IgA and IgG antibodies (ASCA) are

most useful for distinguishing between UC and CD when assessed in conjunction with antineutrophil cytoplasmic antibodies (ANCA).

Some patients with CD have detectable ANCA, and some patients with UC have detectable IgA and/or IgG ASCA. Some patients with UC or CD do not have detectable ANCA, IgA ASCA, or IgG ASCA.

Clinical Reference

1. Rose NR, Mackay IR, eds: Inflammatory bowel diseases. In: The Autoimmune Diseases: Elsevier; 2008
2. Lichtenstein GR, Loftus EV, Isaacs KL, Regueiro MD, Gerson LB, Sands BE: ACG Clinical Guideline: Management of Crohn's disease in adults. Am J Gastroenterol. 2018 Apr;113(4):481-517
3. Rubin DT, Ananthakrishnan AN, Siegel CA, Sauer BG, Long MD: ACG Clinical Guideline: Ulcerative colitis in adults. Am J Gastroenterol. 2019 Mar;114(3):384-413
4. Clark C, Turner J: Diagnostic modalities for inflammatory bowel disease: Serologic markers and endoscopy. Surg Clin North Am. 2015 Dec;95(6):1123-1141
5. Zhou G, Song Y, Yang W, et al: ASCA, ANCA, ALCA and many more: Are they useful in the diagnosis of inflammatory bowel disease? Dig Dis. 2016;34(1-2):90-97. doi: 10.1159/000442934

Performance

Method Description

Immunoglobulin G (IgG) anti-*Saccharomyces cerevisiae* antibodies (ASCA) are measured by commercial, microtiter enzyme immunoassay. This assay uses polystyrene microtiter plates coated with purified mannan from the cell wall of *S cerevisiae* to capture antibodies from patient sera and horseradish peroxidase-conjugated anti-IgG antibodies to detect IgG ASCA. Results of the test for IgG ASCA are reported in relative units per milliliter (RU/mL).(Package insert: Anti-Saccharomyces cerevisiae ELISA (IgG). EUROIMMUN Medizinische Labordiagnostika AG; 5/2011)

PDF Report

No

Day(s) Performed

Tuesday, Thursday

Report Available

2 to 4 days

Specimen Retention Time

14 days

Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Superior Drive

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Saccharomyces cerevisiae Antibody, IgG, Serum

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

86671

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
SCERG	Saccharomyces cerevisiae Ab, IgG, S	47321-5

Result ID	Test Result Name	Result LOINC® Value
SCERG	Saccharomyces cerevisiae Ab, IgG, S	47321-5