MAYO CLINIC LABORATORIES

Test Definition: IBDP2

Inflammatory Bowel Disease Serology Panel, Serum

Overview

Useful For

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.

Profile Information

Test Id	Reporting Name	Available Separately	Always Performed
ANCA2	Cytoplasmic Neutrophilic Ab IBD, S	No	Yes
SCERA	Saccharomyces cerevisiae Ab, IgA, S	Yes	Yes
SCERG	Saccharomyces cerevisiae Ab, IgG, S	Yes	Yes

Testing Algorithm

For more information see Inflammatory Bowel Disease Diagnostic Testing Algorithm.

For more information see Ulcerative Colitis and Crohn Disease Therapeutic Drug Monitoring Algorithm.

Special Instructions

- Ulcerative Colitis and Crohn Disease Therapeutic Drug Monitoring Algorithm
- Inflammatory Bowel Disease Diagnostic Testing Algorithm

Method Name

SCERA, SCERG: Enzyme-Linked Immunosorbent Assay (ELISA)
ANCA2: Indirect Immunofluorescent Assay (IFA)

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: 1 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Forms

If not ordering electronically, complete, print, and send Gastroenterology and Hepatology Test Request (T728) with the specimen.

Specimen Minimum Volume

0.8 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), 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 noninflammatory 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 antimicrobial 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

Saccharomyces cerevisiae ANTIBODY, IgA
Negative: <20.0 RU/mL
Positive: > or =20.0 RU/mL

Saccharomyces cerevisiae ANTIBODY, IgG
Negative: <20.0 RU/mL
Positive: > or =20.0 RU/mL

CYTOPLASMIC NEUTROPHIL ANTIBODIES, INFLAMMATORY BOWEL DISEASE PANEL, SERUM
Negative (not detectable)

Interpretation

The presence of antineutrophil cytoplasmic antibodies in the absence of IgA and IgG anti-*Saccharomyces cerevisiae* antibodies 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.

Some patients with CD have detectable antineutrophil cytoplasmic antibodies (ANCA), and some patients with UC have detectable IgA and/or IgG anti-*Saccharomyces cerevisiae* antibodies (ASCA). Some patients with UC or CD do not have detectable ANCA, IgA ASCA, or IgG ASCA.

ANCA results may be reported as indeterminate if interfering antinuclear antibodies (ANA) are present.

Clinical Reference

1. Rose NR, Mackay IR, eds: Inflammatory bowel diseases. In: The Autoimmune Diseases. Elsevier; 2008
2. Lichtenstein GR, Loftus EV, Isaacs KL, et al. ACG clinical guideline: Management of crohn's disease in adults. Am J Gastroenterol. 2018;113(4):481-517
3. Rubin DT, Ananthakrishnan AN, Siegel CA, et al. ACG clinical guideline: Ulcerative colitis in adults. Am J Gastroenterol. 2019;114(3):384-413
4. Clark C, Turner J. Diagnostic modalities for inflammatory bowel disease: Serologic markers and endoscopy. Surg Clin North Am. 2015;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;34:90-97

Performance

Method Description

IgA or IgG antibodies to *Saccharomyces cerevisiae* antigens (ASCA) are measured by commercial, microtiter enzyme immunoassays. These assays use 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-IgA or anti-IgG antibodies to detect ASCA. Results of the tests for ASCA are reported in relative units per milliliter (RU/mL).(Package inserts: Anti-Saccharomyces cerevisiae ELISA (IgA), 5/2011; Anti-Saccharomyces cerevisiae ELISA (IgG), EUROIMMUN Medizinische Labordiagnostika AG; 5/2011)

Antineutrophil cytoplasmic antibodies (ANCA) are detected qualitatively using an in-house developed method with a substrate of ethanol-fixed, human neutrophils and fluorescein conjugated, antihuman IgG antibody as a detection protein. Results of the test for ANCA are reported as positive, negative, or indeterminate.(Unpublished Mayo method)

PDF Report

No

Day(s) Performed

Monday through Friday

Report Available

3 to 7 days

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

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 x 2
86036

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
IBDP2	Inflammatory Bowel Disease Panel, S	87551-8

Result ID	Test Result Name	Result LOINC® Value
610030	Cytoplasmic Neutrophilic Ab IBD, S	17355-9
614542	ANCA2 Interpretation	49308-0
SCERA	Saccharomyces cerevisiae Ab, IgA, S	47320-7
SCERG	Saccharomyces cerevisiae Ab, IgG, S	47321-5