Overview

Useful For
As an adjunct in the diagnosis of ulcerative colitis and Crohn disease in patients suspected of having inflammatory bowel disease

Not useful to determine the extent of disease in patients with inflammatory bowel disease (IBD) or determine the response to disease-specific therapy including surgical resection of diseased intestine.

Profile Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
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</thead>
<tbody>
<tr>
<td>AASCA</td>
<td>Saccharomyces cerevisiae Ab, IgA, S</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>GASCA</td>
<td>Saccharomyces cerevisiae Ab, IgG, S</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>NSA</td>
<td>Neutrophil Specific Antibodies</td>
<td>No</td>
<td>Yes</td>
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</tbody>
</table>

Method Name
AASCA, GASCA: Enzyme-Linked Immunosorbent Assay (ELISA)

NSA: Indirect Immunofluorescent Assay (IFA)

NY State Available
Yes

Specimen

Specimen Type
Serum

Specimen Required

Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Specimen Volume: 1 mL

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

Specimen Minimum Volume
0.8 mL

**Reject Due To**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Status</th>
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<tbody>
<tr>
<td>Gross hemolysis</td>
<td>Reject</td>
</tr>
<tr>
<td>Gross lipemia</td>
<td>Reject</td>
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<tr>
<td>Gross icterus</td>
<td>OK</td>
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</table>

**Specimen Stability Information**

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<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
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<tbody>
<tr>
<td>Serum</td>
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<tr>
<td></td>
<td>Frozen</td>
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**Clinical and Interpretive**

**Clinical Information**

Inflammatory bowel disease (IBD) refers to 2 diseases, ulcerative colitis (UC) and Crohn disease (CD), which produce inflammation of the large or small intestines. The diagnosis of these 2 diseases is based on clinical features, the results of barium X-rays, colonoscopy, mucosal biopsy histology, and in some cases operative findings and resected bowel pathology and histology.

Recently, patients with IBD have been shown to have antibodies in serum that help to distinguish between CD and UC.(1) Patients with UC often have measurable neutrophil-specific antibodies (NSA), which react with as yet uncharacterized target antigens in human neutrophils; whereas, patients with CD often have measurable antibodies of the IgA and/or IgG isotypes, which react with cell wall mannan of *Saccharomyces cerevisiae* strain Su 1.

**Reference Values**

*Saccharomyces cerevisiae* ANTIBODY, IgA

- **Negative:** < or =20.0 U
- **Equivocal:** 20.1-24.9 U
- **Weakly positive:** 25.0-34.9 U
- **Positive:** > or =35.0 U

*Saccharomyces cerevisiae* ANTIBODY, IgG

- **Negative:** < or =20.0 U
- **Equivocal:** 20.1-24.9 U
- **Weakly positive:** 25.0-34.9 U
- **Positive:** > or =35.0 U
NEUTROPHIL-SPECIFIC ANTIBODIES

Negative (not detectable)

Interpretation

The finding of neutrophil specific antibodies (NSA) with normal levels of IgA and IgG anti-Saccharomyces cerevisiae antibodies (ASCA) is consistent with the diagnosis of ulcerative colitis (UC); the finding of negative NSA with elevated IgA and IgG ASCA is consistent with Crohn disease (CD).

NSA are detectable in approximately 50% of patients with UC, and elevated levels of either IgA or IgG ASCA occur in approximately 55% of patients with CD. Approximately 40% of patients with CD have elevated levels of both IgA and IgG ASCA.

Employed together, the tests for NSA and ASCA have the following positive predictive values (PV) for UC and CD, respectively: NSA positive with normal levels of IgA and IgG ASCA, PV of 91%; NSA negative with elevated levels if IgA and IgG ASCA, PV of 90%.(2)

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 neutrophil specific antibodies (NSA), and some patients with UC have elevated levels of IgA and/or IgG anti-Saccharomyces cerevisiae antibodies (ASCA).

Approximately one-third of patients have low titered antinuclear antibodies (ANA), which make it impossible to distinguish the presence or absence of NSA. These results are reported as indeterminate.

Clinical Reference


2. Homburger HA, Unpublished Mayo information


Performance

Method Description

IgG antibodies to Saccharomyces cerevisiae antigens (IgG ASCA) are measured by commercial, microtiter enzyme immunoassays (INOVA Diagnostics, San Diego, CA).(3) This assay uses polystyrene microtiter plates coated with partially purified Saccharomyces cerevisiae antigens to capture antibodies from patient's sera and horseradish peroxidase (HRP)-conjugated anti-IgG antibodies to detect IgG ASCA. Results of the test for IgG ASCA are reported in arbitrary units (U).(Package insert: QUANTA LITE ASCA [S. cerevisiae] IgG ELISA 708865, 10/2015)

Neutrophil-specific antibodies (NSA) are detected qualitatively using an in-house developed method with a substrate of methanol-fixed, human neutrophils and fluorescein conjugated, antihuman IgG antibody as a detection protein. Results of the test for NSA are reported as positive, negative, or indeterminate.(Vidrich A, Lee J, Janes E: Segregation of pANCA antigenic recognition by DNase treatment of neutrophils: ulcerative colitis, type 1...

PDF Report
No

Day(s) and Time(s) Test Performed
Varies

Analytic Time
Same day/1 day

Specimen Retention Time
14 days

Performing Laboratory Location
Rochester

Fees and 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 Regional Manager. 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. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information
86255
86671 x 2

LOINC® Information

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<td>GASCA</td>
<td>Saccharomyces cerevisiae Ab, IgG, S</td>
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<tr>
<td>82966</td>
<td>Neutrophil Specific Antibodies</td>
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