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DISMISS



Gluten Sensitivity Antibodies Cascade

TEST: 164125

CPT: 83516. If reflex testing is performed, concomitant CPT codes/charges will apply.

Synonyms • Nonceliac Gluten Sensitivity

Test Includes IgA and IgG antibodies to deamidated gliadin peptide and tissue transglutaminase (tTG/DGP screen), IgG antibodies to gliadin (AGA), wheat allergen-specific IgE (wheat IgE). Profile starts with tTG/DGP screen test. If positive, testing stops. If negative, testing reflexes to the AGA test. If positive, testing stops. If negative, it reflexes to the wheat IgE test.

Expected Turnaround Time 3 - 6 days

Turnaround time is defined as the usual number of days from the date of pickup of a specimen for testing to when the result is released to the ordering provider. In some cases, additional time should be allowed for additional confirmatory or additional reflex tests. Testing schedules may vary.

Related Documents For more information, please view the literature below.

[Celiac Disease Testing Services](#)

[LABupdate: Gluten Sensitivity Testing](#)

• [Sample Report](#)

SPECIMEN REQUIREMENTS

Specimen

Serum

Volume 1 mL

Minimum Volume 0.5 mL (**Note:** This volume does **not** allow for repeat testing.)

Container Red-top tube or gel-barrier tube

Storage Room temperature

Instructions

Stability Requirements	Temperature	Period
	Room temperature	14 days
	Refrigerated	14 days
	Frozen	14 days

Causes for Rejection Lipemia; hemolysis; microbially-contaminated sera

TEST DETAILS

Use This profile is recommended for children and adults with suspected sensitivity to gluten.

Limitations Patients with gluten sensitivity who are on a gluten-free diet may have negative serological test results for gluten sensitivity.

Methodology Enzyme-linked immunosorbent assay (ELISA): tTG/DGP screen and AGA; quantitative allergen-specific IgE: wheat IgE

Additional Information Gluten is a protein found in wheat, rye, and barley. Gliadin is the alcohol-soluble fraction of gluten that contains the bulk of the toxic components of gluten. It is resistant to degradation in the human upper gastrointestinal tract and is able to pass through the epithelial barrier of the intestine. Gluten sensitivity is a state of heightened immunological responsiveness to ingested gluten. It represents the

spectrum of diseases with diverse manifestations such as enteropathy (celiac disease), dermatopathy (dermatitis herpetiformis), neurological disorders (ataxia and neuropathy), and may be underlying reason for many other nonspecific symptoms like anemia, chronic fatigue, joint inflammation and pain, migraines, depression, attention-deficit disorder, epilepsy, osteoporosis and osteopenia, infertility, recurrent fetal loss, vitamin deficiencies, short stature, failure to thrive, delayed puberty, dental enamel defects, and autoimmune disorders. Patients with gluten sensitivity are reported to have increased mortality and its prevalence in the general population is up to 12%.

Antibodies to deamidated gliadin peptide and tissue transglutaminase are specific to celiac disease while antibodies to native gliadin are present in patients with and without gastrointestinal manifestations and are serological evidence of gluten sensitivity. Another subset of patients may have gluten sensitivity expressed in the form of allergic reaction to foods containing gluten like wheat. All of those patient groups may benefit from gluten-free diet.

This screening profile is designed to aid in the diagnosis of different forms of gluten sensitivity.

Step One: The screening starts with testing for IgA and IgG antibodies to deamidated gliadin peptide (DGP) and tissue transglutaminase (tTG) that allows for simultaneous detection for all four types of antibodies in one test (tTG/DGP screen). This step will aid in the diagnosis of gluten-sensitive enteropathies including celiac disease. Antibodies to DGP and tTG are highly specific and sensitive for those conditions.^{1,2} **When the result is positive, testing stops and the interpretive comment on the report would read:** "Suggestive of celiac disease or other gluten-sensitive enteropathies. Subsequent testing for Endomysial Antibody, IgA [164996] and/or genetic testing for Celiac Disease HLA DQ Association [167082] may be indicated for further patient evaluation." When result is negative, testing will reflex to the second step.

Step Two: In the second step, the test for IgG antibodies to native gliadin (AGA) is performed. AGA currently remain the most sensitive markers of the whole spectrum of gluten sensitivity including all the extraintestinal manifestations.^{1,3} **When the result is positive, testing stops and the interpretive comment would read:** "Suggestive of nonceliac gluten sensitivity. The patient may benefit from a gluten-free diet." When the result is negative, testing will reflex to the third step.

Step Three: In the third and last step, the test for wheat allergen-specific IgE is performed. Allergic reaction to wheat may mimic the clinical presentation of gluten sensitivity like celiac disease and is one of the common food allergies in children. The triggering agent, however, may not be just gluten but any other protein or combination of proteins found in wheat.⁴ Because wheat allergy patients may also be allergic to other grains with similar proteins like rye and barley,⁴ they will benefit from the gluten-free diet. **When the result is positive, testing stops and the interpretive comment would read:** "Suggestive of wheat allergy. The patient may benefit from a gluten-free diet." **When the result is negative, testing stops and the interpretive comment would read:** "Not suggestive of gluten sensitivity."

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- Footnotes
1. Hadjivassiliou M, Grünewald RA, Kandler RH, et al. Neuropathy associated with gluten sensitivity. *J Neurol Neurosurg Psychiatry*. 2006 Nov; 77(11):1262-1266. [PubMed 16835287](#)
 2. Snyder CL, Young DO, Green PHR, Taylor AK. Celiac disease. In: Pagon RA, Bird TD, Dolan CR, Stephens K, Adam MP, eds. *GeneReviews*. Accessed July 3, 2008. [PubMed 20301720](#)
 3. Ford RP. The gluten syndrome: A neurological disease. *Med Hypotheses*. 2009 Sep; 73(3):438-440. [PubMed 19406584](#)
 4. Mayo Foundation for Medical Education and Research. *Wheat Allergy*. Available at: <http://www.mayoclinic.com/health/wheat-allergy/DS01002>. Accessed September 2, 2010.

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- References
- Beck M. Giving up gluten to lose weight? Not so fast. *The Wall Street Journal*. Available at: <http://online.wsj.com/article/SB10001424052748703846604575447413874799110.html>. Accessed August 24, 2010.
- Green PHR, Cellier C. Celiac disease. *N Engl J Med*. 2007 Oct 25; 357(17):1731-1743. [PubMed 17960014](#)
- Green PHR. Mortality in celiac disease, intestinal inflammation, and gluten sensitivity. *JAMA*. 2009 Sep 16; 302(11):1225-1226. [PubMed 19755704](#)

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[CPT Statement/Profile Statement](#)

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