Celiac Disease Diagnostic Testing Algorithm

Testing for selective IgA deficiency
**IGA / Immunoglobulin A (IgA), Serum**

- IgA ≥1 mg/dL and below age-matched reference values

**■ TTGA / Tissue Transglutaminase Antibody, IgA, Serum**

- TTGG / Tissue Transglutaminase Antibody, IgG, Serum
- DGGL / Gliadin (Deamidated) Antibody, IgG, Serum

**■ TSTGP / Tissue Transglutaminase Antibodies, IgA and IgG Profile, Serum**

**■ DGLDN / Gliadin (Deamidated) Antibodies Evaluation, IgG and IgA, Serum**

- Any result positive or equivocal

**■ DAGL / Gliadin (Deamidated) Antibody, IgA, Serum**

**■ EMA / Endomysial Antibodies IgA, Serum**

- Proceed to biopsy

- Biopsy results inconsistent with serology

**■ CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood**

- Not celiac disease
- Possible celiac disease

Any result negative

0<4.0 U/mL

- Celiac disease very unlikely.
- Exception: ~10% of patients with celiac disease are seronegative

If celiac disease is highly suspected, consider CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood

4.0–10.0 U/mL

- DGLN / Gliadin (Deamidated) Antibodies Evaluation, IgG and IgA, Serum
- EMA / Endomysial Antibodies IgA, Serum

- Possible false-positive tissue transglutaminase result
- Celiac disease possible but unlikely
- If strong suspicion of celiac disease remains, perform HLA (human leukocyte antigen) typing.

- Normal or elevated IgA

>10.0 U/mL

- Proceed to biopsy

- Biopsy results inconsistent with serology

- Not celiac disease
- Possible celiac disease

*For individuals with clinical symptoms suggestive of recurrent infections, suggest further evaluation for possible primary immunodeficiency:
- **IGGS / IgG Subclasses, Serum**
- **IMMG / Immunoglobulins (IgG, IgA, and IgM), Serum**

**NEGATIVE**

- Order CELI
- POSSITIVE

- POSSITIVE for DQ2 or DQ8

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- POSSITIVE (EMA positive and/or d-gliadin ≥20.0 Units)

- POSSITIVE

- POSSITIVE for DQ2 or DQ8

- POSSITIVE (EMA negative and d-gliadin <20.0 Units)

- POSSITIVE

- POSSITIVE for DQ2 or DQ8

Celiac disease very unlikely.

Exception:
- ~10% of patients with celiac disease are seronegative

If celiac disease is highly suspected, consider CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood

Selective IgA deficiency*

IgA <1 mg/dL