Celiac Disease Diagnostic Testing Algorithm

Testing for selective IgA deficiency

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

■ TTGA / Tissue Transglutaminase Antibody, IgA, Serum
■ TSTGP / Tissue Transglutaminase Antibodies, IgA and IgG Profile, Serum
■ DGLDN / Gliadin (Deamidated) Antibodies Evaluation, IgG and IgA, Serum

IgA <1 mg/dL

Selective IgA deficiency*

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

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

Any result positive or equivocal

Proceed to biopsy

Normal or elevated IgA

4.0–10.0 U/mL

■ DAGL / Gliadin (Deamidated) Antibody, IgA, Serum
■ EMA / Endomysial Antibodies (IgA), Serum

>10.0 U/mL

■ EMA / Endomysial Antibodies (IgA), Serum

NEGATIVE

Possible false-positive tTG result
Celiac disease possible but unlikely
If strong suspicion of celiac disease remains, perform HLA typing.

NEGATIVE

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

POSITIVE for DQ2 or DQ8

Possible celiac disease

POSITIVE

Any result positive or equivocal

Proceed to biopsy

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

NEGATIVE

Not celiac disease

POSITIVE

Possible celiac disease

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

NEGATIVE

Not celiac disease

POSITIVE

Possible celiac disease

Follow-up patient for future development of 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

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