# Celiac disease has many symptoms, 1 Test can diagnose it.

Only Indian
Company to
Manufacture CELIAC
Detection Kit for RAPID &
ELISA TESTS in collaboration
with AIMS-ICGEB-THSTI &
Sponsored by the
Sponsored by the
Department of
Biotechnology
Govt of India



Rapid visual and sensitive test for the qualitative detection of Celiac disease associated IgM, IgG & IgA antibodies in human serum/plasma





Microwell ELISA Test for the qualitative detection of Celiac disease associated IgA antibodies in human serum/plasma

# Celiac: An under diagnosed disease.....

### Know about Celiac Disease

Celiac disease is an auto-immune digestive disease that damages the small intestine and interferes with absorption of nutrients from food. People with celiac disease can not tolerate gluten, a protein found in various cereals like Wheat, Rye & Barley.

If patient with celiac disease eat foods or use products containing gluten, their immune system responds by damaging or destroying villi- the tiny, fingerlike protrusions lining the small intestine as shown in fig. 1. Villi normally allow nutrients from food to be absorbed through the walls of the small intestine into the bloodstream. Without healthy villi, a person becomes malnourished, no matter how much food one eats. (refer fig. 2)

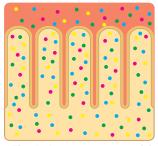


Fig. 1: A healthy person villi

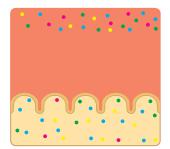


Fig. 2: Villi of a person with celiac disease

## Health problems in Celiac Disease

People with celiac disease tend to have other diseases in which the immune system attacks the body's healthy cells and tissues. They include:

- type 1 diabetes
- autoimmune thyroid disease
- autoimmune liver disease
- rheumatoid arthritis
- Addison's disease, a condition in which the glands that produce critical hormones are damaged
- Sjögren's syndrome, a condition in which the glands that produce tears and saliva are destroyed

## Diagnosis of Celiac Disease

Diagnosis of celiac disease is based on both, the characteristic changes seen in the small intestinal mucosa in the intestinal biopsy while on a gluten containing diet and, a full clinical remission following gluten free diet (GFD). The presence of serological antibodies, which disappear while on GFD, further confirms the diagnosis. IgG and the IgA anti-gliadin antibodies are no longer recommended for diagnostic or screening purposes because of its poor sensitivity and specificity. These assays have been replaced by more sensitive and specific anti-endomysial (EMA) and anti-tissue transglutaminase antibodies. With establishment of tissue transglutaminase as the main autoantigen for EMA, the ELISA developed for its identification has rapidly replaced the more labour intensive and operator dependent immunofluorescence assays for detection of EMA.

# **CELIAC MICROLISA**

Microwell ELISA Test for the Qualitative Detection of celiac disease associated IgA Antibodies to tissue transglutaminase in Human Serum/ Plasma

#### TEST PROCEDURE

Dilute sample (1:200) sample 5 μl + sample diluent 1000μl	
Add 100 µl controls, calibrators & diluted sample in respective wells.	A1 B1 C1 D1 E1 F1 G1 H1 NC PC Cal-1 Cal-2 Cal-3 S1 S2 S3
Cover the plate and incubate for 30 min. at 37°C	
Wash (5 cycles)	
Prepare working conjugate solution (1:50)	No. of strip 1 2 3 4 5 6 7 8 9 10 11 12 Enzume conjugate 20 40 60 80 100 120 140 160 180 200 220 240 Concentrate (µI). Conjugate 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 10.8 Diluent(ml).
Add 100 µl working conjugate in each well	
Cover the plate and incubate for 30 min. at 37°C	
Wash (5 cycles)	
Prepare working substrate solution	No. of strip 1 2 3 4 5 6 7 8 9 10 11 12 TMB 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 Substrate (ml). TMB 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 Diluent( ml).
Add 100 µl working substrate in each well	1
Incubate in dark for 30 min at room temperature.	
Add 100 µl Stop Solution and read result at 450 nm/630 nm.	

# Microwells pre-coated with Antigens (activated tissue transglutaminase) Antigens bind with IgA Antibodies specific to tissue transglutaminase Binding of Anti Human IgA conjugated with HRPO Addition of Substrate Addition of Stop Solution IgA antibody in the sample transglutaminase (tTG) TMB Substrate



- Based on Indirect Elisa
- Excellent Sensitivity: 000% and Specificity 000%
- Easy to use on Automated & Semiautomated Processor
- Colour Coded reagents to monitor procedural steps
- Shelf Life: 12 Months at 2-8°C
- Unique Break-away wells

## DIAGNOS

## **CELIAC CARD**

Rapid visual and sensitive test for the qualitative detection of Celiac disease associated IgM, IgG & IgA antibodies in human serum/plasma



- > Rapid Visual Qualitative Antibody Test
- \*Excellent Sensitivity: 99,23% & Specificity: 99,50%
- Results within 20 minutes
- Long Shelf life: 24 Months at 2-8°C
- Bio-hazard free, fully covered, see-through Device
- No Instruments required

\* checked with samples taken from Pediatric Deptt, AIIMS, NEW DELHI

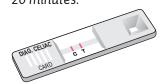


Add 5 drops of Assay Buffer to the sample cup.

Take sample upto the mark (5 µl) using sample dropper and add to the sample cup & mix properly.

Transfer 3 drops of diluted sample from sample cup using transfer dropper to the device well.

Read result after 20 minutes.



#### RESULT INTERPRETATION



**REACTIVE** for celiac disease



NON-REACTIVE for celiac disease



**INVALID** result re-run the test









For further enquiries, Please contact:

#### J. Mitra & Co. Pvt. Ltd.

A 180-181, Okhla Indl. Area, Phase-1, New Delhi - 110 020, INDIA Tel: +91-11-47130300, 500, 26818971-73

E-mail: jmitra@jmitra.co.in Website: www.jmitra.co.in