

**BioCLIA Autoimmune Calibrator Set, human tTG IgG**

Cat.No.	Kit Size
MY00241	2 X 1 mL
MY00292	4 X 1 mL

**INTENDED USE**

The BioCLIA Autoimmune Calibrator Set, human tTG IgG is intended for the calibration of the BioCLIA human tTG IgG performed on the BioCLIA 6500 and BioCLIA 500.

For professional *in vitro* diagnostic use only.

**SUMMARY AND EXPLANATION**

Tissue transglutaminase (abbreviated as tTG or TG2) is a 78-kDa, calcium-dependent enzyme of the protein-glutamine  $\gamma$ -glutamyltransferases family (or simply transglutaminase family).<sup>1,2</sup> It is best known for its link with celiac disease.

Three tTG is particularly notable for being the autoantigen in celiac disease, a lifelong illness in which the consumption of dietary gluten causes a pathological immune response resulting in the inflammation of the small intestine and subsequent villous atrophy.<sup>3-5</sup>

Anti-transglutaminase antibodies result in a form of gluten sensitivity in which cells response to Triticeae glutes that are cross-linked to tTG, which are able to stimulate transglutaminase specific B-cell responses that eventually result in the production of anti-transglutaminase antibodies IgA and IgG.<sup>6</sup> Serology for anti-tTG antibodies has superseded older serological tests (anti-endomysium, anti-gliadin, and anti-reticulin) and has a strong sensitivity (99%) and specificity (>90%) for identifying celiac disease.

**MATERIALS SUPPLIED**

- Human tTG IgG Calibrator 1** Barcode labeled tubes with buffer containing human IgG antibodies to human tTG in stabilizers and preservatives. Ready to use, 1 mL.

CAL	1
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Preservatives: 0.0015% < Proclin 300 < 0.6%.

- Human tTG IgG Calibrator 2** Barcode labeled tubes with buffer containing human IgG antibodies to human tTG in stabilizers and preservatives. Ready to use, 1 mL.

CAL	2
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Preservatives: 0.0015% < Proclin 300 < 0.6%.

The Calibrator Code contains calibrators' information is provided in each kit.

**WARNINGS AND PRECAUTIONS**

- For professional *in vitro* diagnostic use only.
- Do not use any calibrators beyond their expiration dates.
- Do not mix calibrators from different lots unless specified.
- Instructions must be carefully followed for using and storing of calibrators. Any modification in procedure may interfere with the results.

- Calibrators and contaminated vials must be handled strictly following safety guidelines or rules of biological hazards to ensure the users' and environmental safety.
- Any serious incident that has occurred in relation to the device shall be reported to the manufacturer and the competent authority of the Member State in which the user and/or the patient is established!

**Precautions:**

Human serum is added in the calibrators.

- The human derived material in this product was tested by FDA approved methods and found nonreactive for Hepatitis B Surface Antigen (HBsAg), Anti-HCV and HIV 1/2 antibodies. Handle as if potentially infectious.<sup>7</sup> Avoid contacting with skin and eyes. Do not empty into drains. Wear suitable protective gloves and clothing.



- Proclin 300 is added in the calibrators at concentration between 0.0015% - 0.6%.
- Calibrators contain chemical and biological components. Avoid ingesting or splashing onto skin and mucous membrane. If direct contact with calibrators happens, rinse immediately the contact surface with plenty of water and see a doctor if necessary.

**STORAGE CONDITIONS**

- Store the kit at 2-8 °C.
- The shelf life of the unopened kit is 12 months from day of production.
- Vial opened calibrators could be used for 28 successive days, exposure no more than 2 hours each time when kept uncapped and is good for up to 20 calibrations, after which the reagent must be discarded.
- Avoid repeated freezing and thawing.

**ASSAY PROCEDURE**

Detailed information about operating the BioCLIA instruments can be taken from the Instrument User's Manual.

Note that, it is important to perform all routine maintenance procedures for optimal performance.

### Assay Calibration

The BioCLIA Autoimmune Reagent Kit utilizes a predefined lot specific Master Curve which is uploaded into the instrument via the barcode provided in the main reagent kit. The Calibrator Code contains calibrator information is then scanned. Based on the results of running two calibrators, the instrument specific Working Calibration Curve is generated and is used to calculate the concentration from the RLU obtained for each patient.

For each new lot of reagent, please calibrate prior to the first time use, and every 28 days thereafter. The software will not allow the lot to be used if the above requirements are not meet.

### Programming and Running samples

1. Put the kit into the corresponding position of the reagent chamber of the fully automatic chemiluminescence analyzer. The information of the kit can be uploaded into the instrument system through the scanning of reagent barcode, and can also be set through the supporting software of the instrument.
2. The information of calibrator / quality control is identified by scanning the calibrator / control barcodes, and the position of calibrator / quality control is assigned in the instrument system.
3. The sample to be tested is placed on the instrument sample rack chamber, and the corresponding test information is edited through the instrument supporting software.
4. Start the operation procedure, and all calibrator / quality control / sample processing steps will be automatically executed.

### TRACEABILITY

The reported values were determined over multiple runs on the BioCLIA 6500 and BioCLIA 500 using specific lots of reagents against an in-house standard. Human tTG IgG results are reported in RU/mL which is interpreted from relative light unit (RLU). Method comparison test showed good sensitivity and specificity of tested assay.

### LIMITATIONS

- The calibrators are designed for calibration of the same lot of BioCLIA Autoimmune Reagent Kit.
- The calibrators can be kept uncapped onboard the instrument up to 2 hours for each time of usage. And a total up to 20 calibrations are suggested, for any longer period of time, the reagent should be discarded, otherwise may result in improper calibration of the assay and which can give improper results.

### SYMBOLS

	Catalog Number		Use-by date
	In Vitro diagnostic medical device		Lot Number
	Store between +2°C and +8°C		Consult Instruction for Use
	Manufacturer		Authorized Representative in the European Community
	CE Marking		Contains Sufficient for <n> Tests
	Biological Risk		GHS07 Warning

	Calibrator 1
	Calibrator 2

### REFERENCE

1. Király R, Demény M, Fésüs L. Protein transamidation by transglutaminase 2 in cells: a disputed Ca<sup>2+</sup>-dependent action of a multifunctional protein. *Febs Journal* 2011;278:4717-39.
2. Klöck C, Diraimondo TR, Khosla C. Role of transglutaminase 2 in celiac disease pathogenesis. *Seminars in Immunopathology*; 2012.
3. Di SA, Vanoli A, Giuffrida P, Luinetti O, Solcia E, Corazza GR. The function of tissue transglutaminase in celiac disease. *Autoimmunity Reviews* 2012;11:746-53.
4. Griffin M, Casadio R, Bergamini CM. Transglutaminases: nature's biological glues. *Biochemical Journal* 2002;368:377-96.
5. Diraimondo TR, Klöck C, Khosla C. Interferon-γ activates transglutaminase 2 via a phosphatidylinositol-3-kinase-dependent pathway: implications for celiac sprue therapy. *Journal of Pharmacology & Experimental Therapeutics* 2012;341:104-14.
6. Dieterich W, Ehnis T, Bauer M, Donner P, Volta U, Riecken EO, Schuppan D. Identification of tissue transglutaminase as the autoantigen of celiac disease. *Nature Medicine* 1997;3:797-801.
7. Richmond JY, McKinney RW. Biosafety in microbiological and biomedical laboratories: U.S.GPO. 1999.



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The eIFU is available on Website:

<http://en.hob-biotech.com/usercenter/login.aspx>

### TECHNICAL ASSISTANCE

For technical assistance, contact your National Distributor.

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