

BioCLIA Autoimmune Calibrator Set, Nucleosome

Cat.No.	Kit Size
MY00212	2 X 1 mL
MY00263	4 X 1 mL

INTENDED USE

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

For professional *in vitro* diagnostic use only.

SUMMARY AND EXPLANATION

Anti-nuclear antibody (ANA) is a class of auto-antibodies with different binding affinities specific to different nuclear antigens. Generally, ANAs include extractable nuclear antigen (ENA) antibodies and un-extractable nuclear antigen antibody. ¹ Determination of ANA has significant correlation to the diagnosis of Sharp syndrome (MCTD), systemic lupus erythematosus (SLE), sjogren's syndrome, progressive systemic sclerosis, polymyositis/dermatomyositis, overlap syndrome, and limited types of progressive systemic sclerosis (CREST syndrome).

Nucleosomes (Nuc) are chromosome subunits composed of histone (H1, H2A, H2B, H3 or H4) and dsDNA. ^{2,3} H3-H3-H4-H4 tetramer and H2A-H2B dimer on both sides form the center of the Nuc in which the core of His is surrounded by two circles of DNA double helix (a total of 146 base pairs). The Nuc are bead-shape arranged and connected to each other by the help of DNA and H1. Complete Nuc antigens in the body is mainly produced in the process of cell apoptosis and released into the interstitial cells, which may trigger the body to produce autoimmune response. ^{4,5}

Anti-Nuc antibodies are associated with various autoimmune diseases, common in SLE (50-100%) and autoimmune hepatitis (40-50%) patients' sera. They are confirmed independent of the anti-dsDNA antibodies that 18% of SLE patient sera are Nuc sensitive but dsDNA insensitive. Therefore, monitoring both anti-Nuc and anti-dsDNA antibodies can greatly improve the SLE serological detection rate.

MATERIALS SUPPLIED

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



Preservatives: 0.0015% < Proclin 300 < 0.6%.

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



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. ⁷ 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. DGP IgA 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

	Calibrator 1
	Calibrator 2

	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

REFERENCE

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3. Harp JM, Hanson BL, Timm DE, Bunick GJ. Asymmetries in the nucleosome core particle at 2.5 Å resolution. *Acta Crystallographica Section D: Biological Crystallography* 2000;56:1513-34.
4. Zhou Y-B, Gerchman SE, Ramakrishnan V, Travers A, Muyldermans S. Position and orientation of the globular domain of linker histone H5 on the nucleosome. *Nature* 1998;395:402-05.
5. Thoma F, Koller T, Klug A. Involvement of histone H1 in the organization of the nucleosome and of the salt-dependent superstructures of chromatin. *The Journal of cell biology* 1979;83:403-27.
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HOB Biotech Group Corp., Ltd.
C6 Building, No. 218 Xinghu Road, Suzhou Industrial Park,
Suzhou, Jiangsu, 215123, China

CONTACT INFORMATION:

TEL (+86)512-69561996

Fax (+86)512-62956652

WEBSITE: www.hob-biotech.com

CUSTOMER SERVICE: HOB Biotech Group Co., Ltd

CUSTOMER SERVICE: TEL (+86)4008601202



EUROPE REPRESENTATIVE: Emergo Europe

ADDRESS/LOCATION :

Prinsessegracht 20, 2514 AP The Hague, The Netherlands



The eIFU is available on Website:

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

TECHNICAL ASSISTANCE

For technical assistance, contact your National Distributor.

Date of issue: 17th March 2019

Date of revision: 20th December 2021

Change Control Number: CN21129E

Version: A/1 (EN)