














BioCLIA[®] Autoimmune Calibrator Set

PR3

PR3 Assay Calibrators

Key to Symbols Used

	Catalog Number		Expiration Date
	For <i>In Vitro</i> Diagnostic Use		Lot Number
	Store between +2°C and +8°C		Consult Instruction for Use
	Manufacturer		Authorized Representative in European Union
	Calibrator 1		Contains Sufficient for $< n >$ Tests
	Calibrator 2		Chemical Risk Warning
			Biological Risk Warning

BioCLIA® Autoimmune Calibrator

Set, PR3

Intended Use

The BioCLIA Autoimmune Calibrator Set, PR3 is intended for the calibration of the BioCLIA PR3 performed on the BioCLIA® 1200 and BioCLIA® 6500.

Catalog Numbers

MY00214 (2 X 1 mL)

MY00265 (4 X 1 mL)

Summary and Principles of the Procedure

Serological detection of anti-neutrophil cytoplasmic antibodies (ANCA) contributes to the autoimmune diseases diagnosis include Wegener's granulomatosis, acute progressive glomerulonephritis, polyarteritis, ulcerative colitis, and primary sclerosing cholangitis.^{1, 2} PR3, MPO and GBM are general indicators for the detection of ANCA, which can greatly improve the early diagnostic rate of renal vasculitis.

Proteinase 3 (PR3) is a serine protease existing in neutrophils cytoplasm eosinophilic azure particles, with molecular weight about 29 kD. PR3 can degrade many kinds of extracellular matrix such as elastin, hemoglobin and type IV collagen. PR3 promotes platelet activation by cathepsin G and makes the C1 inhibitor inactivation.³ According to its karyotype of fluorescence performance in ethanol fixed neutrophils, ANCA can be divided into cytoplasm ANCA (cANCA) and peripheral ANCA (pANCA). PR3 is with ethanol fixed neutrophils cANCA fluorescence mode in indirect immunofluorescence test.⁴

Anti-PR3 antibody is with specificity of 90% to Wegener's granulomatosis (WG). The sensitivity of anti-PR3 antibody is about 65% in WG patients when pathological changes have not yet affected the respiratory system. Sensitivity will increase to 90% when WG patients have respiratory system or kidney damage. A few of WG patients have not been treated are anti-PR3 antibody negative but will eventually turn to positive. The antibody concentration will decrease when WG patients are treated and it is taken as an indicator for monitoring and guiding clinical treatment. Anti-PR3 antibody has affinity to the respiratory tract, causing the upper and lower respiratory tract necrosis and granuloma formation.^{5, 6}

Materials supplied

- **PR3 Calibrator 1** A tube contains 1mL, ready to use reagent. Calibrator 1 contains human antibodies to PR3 in stabilizers and preservatives.

PR3 CAL 1

Preservatives: 0.0015% < Proclin 300 < 0.6%.

- **PR3 Calibrator 2** A tube contains 1mL, ready

to use reagent. Calibrator 2 contains human antibodies to PR3 in stabilizers and preservatives.

PR3 CAL 2

Preservatives: 0.0015% < Proclin 300 < 0.6%.

Target value information is indicated in the 2D barcode localized in each kit.

Warnings and Precautions

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 clothing.

Precautions:



Human serum is added in the Calibrators



Proclin 300 is added in the Calibrators at

concentration between 0.0015% - 0.6%.

- The product is for *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.
- 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

The kit is stable until the expiration date, if stored and handled as directed. Routine store the kit in refrigerator (2-8°C). Once a calibrator tube is opened, it is good for a total of 15 times, no more than 2 hours per time when kept uncapped, onboard the instrument, after which the reagent must be discarded. Three freeze-thaw cycles before testing has no effect on the kit reagents.

Assay Procedure

Note that, for obtaining optimal performance, it is important to perform all routine maintenance procedures as defined in the BioCLIA® 1200 and BioCLIA® 6500 User Manual.

See the BioCLIA® 1200 and BioCLIA® 6500 User Manual for preparation, setup, dilutions, adjustment,

assay and quality control procedures.

Traceability

The reported values were determined over multiple runs on the BioCLIA® 1200 and BioCLIA® 6500 using specific lots of reagents against an in-house standard. PR3 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

This product is designed as calibrators for monitoring the performance of the BioCLIA PR3. These calibrators are subjected to the limitations of the assay system. Deviations may indicate problems with one or more components in the test system.

References

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2. Bossuyt X. Serologic markers in inflammatory bowel disease. *Clinical Chemistry* 2006;52:171-81.
3. Campanelli D, Melchior M, Fu Y, Nakata M, Shuman H, Nathan C, Gabay JE. Cloning of cDNA for proteinase 3: a serine protease, antibiotic, and autoantigen from human neutrophils. *The Journal of experimental medicine* 1990;172:1709-15.
4. Van der Geld Y, Limburg P, Kallenberg C. Proteinase 3, Wegener's autoantigen: from gene to antigen. *Journal of leukocyte biology* 2001;69:177-90.
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6. Sturrock AB, Franklin KF, Rao G, Marshall BC, Rebentisch MB, Lemons RS, Hoidal JR. Structure, chromosomal assignment, and expression of the gene for proteinase-3. The Wegener's granulomatosis autoantigen. *Journal of Biological Chemistry* 1992;267:21193-99.
7. Richmond JY, McKinney RW. Biosafety in microbiological and biomedical laboratories: U.S.GPO. 1999.



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Technical Assistance

For technical assistance, contact your National Distributor.

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Revision 9