



Your IVD
Specialists!

DIA500

E.L.I.S.A Automatic Analyser



Continuous loading

- Benchtop design
- High productivity
- High efficiency
- Flexible configuration
- Intuitive and adaptable software

DIA500 combines all functions required to process microplate based immuno assays on an efficient, easy-to-use and fast platform.

Sample and reagents transfers are performed by an high precision pipetting system. An array of incubators assures an accurate reaction temperature while the speed-variable orbital shakers an optimal mixing.

A fast and highly efficient 96-well microplate washing system provides a quite low background and the rapid reading module an accurate data processing. Rapid reading module in data processing. One SCARA for moving plates between modules.

The system is complemented by a powerful PC-software providing an intuitive user interface to control all system functions and to define and execute desired processes correctly.

DIA500

Smart plate transfer arm

Together with sophisticated pipeting head, transfer arm makes up the centerpiece of the assay processing platform. It can rapidly, precisely and safely pick up microplates and transfer them between the different modules on the workbench involved in the assay process.

Plate shaker-incubators

The shaker incubator modules allow individual control of the required temperature setting and shaking parameters.

Reader module

The high quality microplate reader assures accurate readings and precise data entry

Barcode reader

Multi angle barcode scanner. It can be used to identify sample tubes.

Washing module

The system is equipped with a high performance washing module, designed to provide high throughput and consistent washing performance across the plates with a specified residual volume after aspiration of less than 2 μ l per well after aspiration.



SOFTWARE

DIA500 is supplied with a versatile software package designed to control all functions of the instrument. It allows the user to configure, run and control the required assay or liquid handling procedure and manage sample and result data. The intuitive user interface closely follows and supports the workflow delining the procedures in the lab.

DIA500 is designed to handle large workloads of routine assays and small numbers of samples as well when supplied discontinuously to the lab. It is possible to process Multiple assays in parallel and different assays can be assigned to individual samples to ensure true management of **continuous loading**.

Main interface The software controls each individual operation and interaction of the modules on the work bench synchronously. It schedules the tasks and provides permanent feedback on the progress and status of the work in progress.

Pre-run simulation The software uses a complex simulation algorithm to schedule parallel processing of assays, to minimize delays and maximize throughput. The working sequence of the assay process is visualized along a common timeline. During operation the user is informed if an intervention by the operator is necessary.

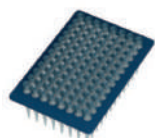
Unit Controller Each module can be individually controlled and adjusted to meet the specific requirements of the application, optimize performance and eliminate potential problems.

Traceability, quality control and data exchange The system generates trackable reports, corresponding to the strict guidelines for electronic records, tracking instructions and automated test process records for IVDs. The software provides convenient interfacing to existing LIS/HIS systems through a standardized laboratory data exchange format. Westgard or L-J QC functionality supports automatic creation of quality control charts and validation. The recorded traceability data can be filtered and monitored conveniently and can support identification and elimination of irregularities in the assay process.

Platforms tailored to customer application

The system can be customized to meet the requirements of a wide variety of laboratory applications.

ACCESSORIES



Tips:

Tips for different volumes are available with or without filter. Single tips or packed in 96-inch rack. These are designed to fit the system



Reagent carrier:

The reagent carrier can hold 4 big and 8 small reagent groups with disposable plastic containers



Sample carrier:

Sample tube carrier can hold 24 sample tubes with a diameter of 12-13mm or 16mm SST tubes.

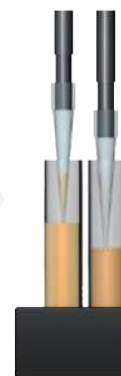
SMART SAMPLE PIPETTING SYSTEM

Air displacement technology and disposable tips

The system uses dripproof air displacement pipetting with low cost standard disposable tips. This technology eliminates any risk of cross contamination (carryover) and assures no sample dilution due to the liquid system. Different sizes of disposable tips can be used to match the specific pipetting requirements.

Real time monitoring of tips

During loading, the system continuously monitors the presence and proper fixing of each tip. In case of a problem the software will automatically set [necessary actions, like re-loading the tips to assure continuous operation or displaying the related warning and asking user for intervention if necessary.



Dynamic pipetting channel positioning system

The automatic pipetting head allows simultaneous, independent vertical movements of each individual pipetting channel. At the same time the spacing between the individual channels can be automatically adjusted to the required, equidistant grid. This design increases flexibility and processing speed in sophisticated pipetting tasks like the parallel transfer of samples from sample tubes to the microplate or other reaction vessels.

Dispensing modes for samples management

Multiple Dispensing: The aspirated samples can be subsequently distributed to a number of target vessels.

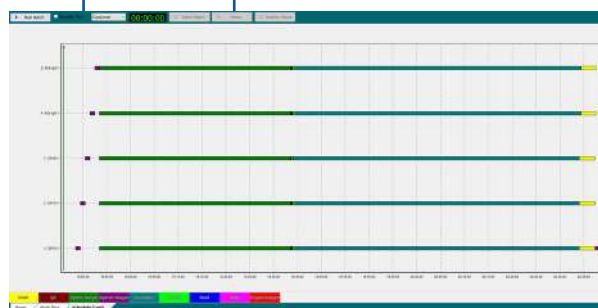
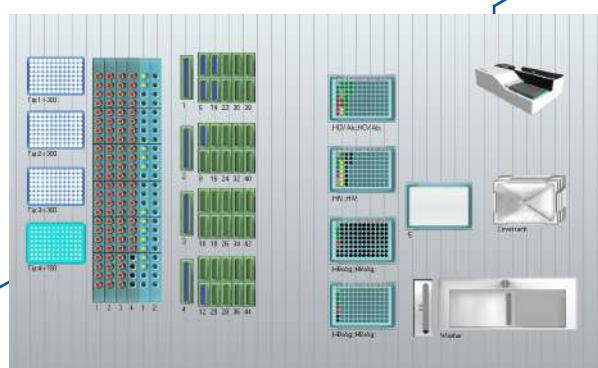
Diversified Dispensing: The aspirated samples are simultaneously transferred to different target vessels.

Liquid handling process monitoring

During aspiration the pipetting system automatically monitors three parameters vital for accurate pipetting and reliable assay processing. If a problem is identified the system provides an alarm letting the operator to eliminate the reason immediately.

Clot monitoring

Based on a sophisticated analysis of the pressure profile of each individual channel during aspiration, it is used to detect clogged tip.



Tube volume monitoring

The system detects liquid levels to verify the geometry of the samples tube and the reagent containers, and calculates the volume of liquid available. If the volume available is not sufficient to continue the scheduled process, the system will provide a warning and ask the user for intervention.

The 2 channels system gives the possibility to deactivate the defected channel, if necessary.

The system can therefore still be used and the protocol can proceed further on with the remaining operative channel till the problem is eliminated. This feature prevents critical downtime of the system while the lab is busy and gives the customer the chance to plan maintenance when appropriate.

Liquid level monitoring

Detects the surface of the liquid to be pipetted and ensures identical conditions of accurate aspiration and pipetting on all channels. This pressure-based detection system allows the instrument to use inexpensive standard pipetting tips.



BLOOD SCREENING

The sole manufacturer of a COMPLETE ELISA panel for Blood Bank screening requirements

HEPATITIS B VIRUS

HBs Ag one version ULTRA

Fourth generation Enzyme Immunoassay for the determination of Hepatitis B surface Antigen or HBs Ag (REC included)
SAG1ULTRA.CE

HBc Ab

Determination of total antibodies to Hepatitis B core Antigen
BCAB.CE

HEPATITIS C VIRUS

HCV Ab

Version 4.0 Immunoassay for the determination of total antibodies
CVAB.CE

HTLV

HTLV I&II Ab Version ULTRA

Third generation Enzyme immunoassay for the determination of antibodies to Human T-Cell Lymphotropic Virus type I&II
HTLVABULTRA.CE

DENGUE VIRUS

Dengue virus NS1 Ag

Determination of Dengue Virus NS1 Antigen
DENS1AG.CE

HIV

(HIV Ab&Ag)

Fourth generation Enzyme Immunoassay for the determination of antibodies to HIV type 1&2&O and P24 HIV-1 Antigen
IVCOMB.CE

MALARIA

Malaria Ab

Third generation Enzyme Immunoassay for the determination of total antibodies of Plasmodium species (falciparum, ovale and vivax)
MALAB.CE

TRYPANOSOMA CRUZI (Chagas)

T.cruzi Ab

Third generation Immunoassay for the determination of total antibodies
TCAB.CE

TREPONEMA PALLIDUM (Syphilis)

Syphilis Ab

"Double sandwich" (ULTRA) immunoassay for the determination of total antibodies. Available in one short step protocol

Syphilis Ab One Version ULTRA

SIAB1ULTRA.CE

or in two steps protocol optimized for automation
SIABULTRA.CE

HEPATITIS E VIRUS

HEV Ab Version ULTRA

"Double sandwich" (ULTRA) immunoassay for the determination of total antibodies.
EVABULTRA.CE

Kit formats: 96, 192, 480, 960 tests



COVID-19

Reliable testing for SARS-CoV-2

COVID-19 IGM

Determination of IgM antibodies to COVID-19
COV19M.CE
COV19M.CE.192

COVID-19 IGA

Determination of IgA antibodies to COVID-19
COV19A.CE
COV19A.CE.192

COVID-19 IGG

Determination of IgG antibodies to COVID-19
COV19G.CE
COV19G.CE.192

COVID-19 SPIKE 1&2 IGG

Determination of IgG antibodies to COVID-19 Spike antigens
COV19GSPIKE.CE
COV19GSPIKE.CE.192

COVID-19 IGG CONFIRMATION

Confirmation of samples positive for IgG antibodies to COVID-19 in first screening. The test can be used in addition to identify the specificity of antibodies to the major immunodominant COVID-19 antigens
COV19CONF.CE

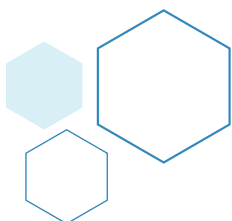
ACE2-RBD Neutralization Assay

Determination of inhibition activity of RBD-ACE2 binding induced by antibodies to SARS-CoV-2
ACE2-RBDNEUTR.CE

COVID-19 IGG/IGM CONFIRMATION AND TYPING

Confirmation of samples positive for IgG and IgM antibodies to COVID-19 in first screening. The test can be used in addition to identify (a) the specificity ("typing") of antibodies to the major immunodominant COVID-19 antigens and (b) identify those samples with a titer of "potentially" neutralizing IgG to Spike antigens such to select the donor as a candidate for immunotherapy, as well
COV19TY.CE

Calibrated on the first WHO International Standard (IS) for anti-SARS-CoV-2 immunoglobulin (NIBSC 20/136)





AUTOIMMUNITY

A wide panel of CE certified Autoimmune disease kits

IGG ANTI SSB

Quantitative determination of IgG autoantibodies against SSB autoantigens
SSB.CE

IGG ANTI SSA 52KD

Quantitative determination of IgG autoantibodies against SSA-52KD autoantigens
SSA52.CE

IGG ANTI DSDNA

Quantitative determination of IgG autoantibodies against double stranded DNA (dnDNA)
DSDNA.CE

ANA SCREENING IGG

Qualitative determination of IgG antibodies to anti Nuclear Antigens
ANAS.CE

ANA 8 PARAMETERS PROFILE

Qualitative determination of IgG antibodies to Ro/SSA60KDa, Ro/SSA52KDa, La/SSB, RNP-68, Sm, Scl-70, CENP-B
ANA8PRO.CE

ENA SCREENING IGG

Qualitative determination of IgG antibodies to Extractable anti Nuclear Antigens
ANAS.CE

ENA 6 PARAMETERS PROFILE

Qualitative determination of IgG antibodies against Ro/SSA, La/SSB, RNP-68, Sm, Scl-70, Jo-1
ENA6PRO.CE

IGG ANTI SCL-70

Quantitative determination of IgG autoantibodies against Scl-70 autoantigens
SCL70.CE

IGG ANTI SSA 60 KD

Quantitative determination of IgG autoantibodies against SSA-60KD autoantigens
SSA60.CE

IGG ANTI U1-SNRNP 68

Quantitative determination of IgG autoantibodies to RNP-68KDa
RNP.CE

IGG ANTI SM

Quantitative determination of IgG autoantibodies against Sm autoantigens
SM.CE

IGG ANTI JO-1

Quantitative determination of IgG autoantibodies against Jo-1 autoantigens
JO1.CE

IGG ANTI CENTROMERE B

Quantitative determination of IgG autoantibodies against Centromere B autoantigens
CENPB.CE



EMERGING TROPICAL DISEASES

A complete panel of tests for the serological diagnosis of tropical diseases

DENGUE VIRUS

Dengue Virus IgG
Qualitative/semi-quantitative determination of IgG antibodies
DENG.CE

Dengue Virus IgM
Qualitative determination of IgM antibodies
DENM.CE

Dengue Virus NS1 Ag
Determination of Dengue Virus NS1 Antigen
DENS1AG.CE

WEST NILE VIRUS

West Nile Virus IgG
Detection of IgG antibodies
WNG.CE

West Nile Virus IgM
Detection of IgM antibodies
WNM.CE

CHIKUNGUNYA VIRUS

Chikungunya Virus IgG
Detection of IgG antibodies
CHIKVG.CE

Chikungunya Virus IgM
Qualitative determination of IgM antibodies
CHIKVM.CE

YELLOW FEVER VIRUS

Yellow Fever Virus IgG
Detection of IgG antibodies for the follow-up of the vaccination
YFVG.CE

TRYPANOSOMA CRUZI (Chagas)

T.Cruzi Ab
Third generation Enzyme Immunoassay for the determination of total antibodies to Trypanosoma Cruzi
TCAB.CE.96

PLASMODIUM (Malaria)

Malaria Ab
Third generation Enzyme Immunoassay for the determination of total antibodies to Plasmodium species (falciparum, ovale and vivax)
MALAB.CE.96

ZIKA VIRUS

ZIKV IgG
Qualitative and semi quantitative determination of IgG antibodies
ZIKVG.CE

ZIKV IgM
Qualitative determination of IgM antibodies
ZIKVM.CE

ZIKV IgG Avidity Test
Determination of the avidity of IgG antibodies
ZIKVAV.CE





HEPATITIS

A UNIQUE panel of CE certified kits for the diagnosis of Viral Hepatitis in human serum and plasma

HEPATITIS A

HAV Ab

Determination of total antibodies
[AVAB.CE](#)

HAV IgM

"Capture" Enzyme Immunoassay for the determination of IgM class antibodies
[AVM.CE](#)

HEPATITIS B

HBc Ab Determination of total antibodies to Hepatitis B core Antigen
[BCAB.CE](#)

HBc IgM "Capture" Enzyme immunoassay for the quantitative/qualitative determination of IgM class antibody to Hepatitis B Virus core Antigen
[BCM.CE](#)

HBs Ab Qualitative/quantitative determination of total antibodies to Hepatitis B surface Antigen
[SAB.CE](#)

HBs Ag one version ULTRA Fourth generation Enzyme Immunoassay for the determination of Hepatitis B surface Antigen
[SAG1ULTRA.CE.96](#)

HBs Ag Confirmation Set of Reagents for the confirmation of HBs Ag positivity
[SCONF.CE](#)

HBe Ag&Ab Determination of Hepatitis B Virus "e" Antigen and Antibody
[HBE.CE](#)

HEPATITIS C

HCV Ab Version 4.0 Enzyme Immunoassay for the determination of total antibodies
[CVAB.CE.96](#)

HCV IgM Quantitative/qualitative determination of IgM antibodies
[CVM.CE](#)

HCV Ab Confirmation Microstrip based Enzyme Immunoassay for the confirmation of HCV Ab positivity
[CCONF.CE](#)

HEPATITIS D

HDV Ab Competitive Immunoassay for the qualitative determination of total antibodies
[DAB.CE](#)

HDV Ag Determination of Hepatitis Delta Virus
[DAG.CE](#)

HDV IgM "Capture" Enzyme Immunoassay for the determination of IgM antibodies
[DIM.CE](#)

HEPATITIS E

HEV Ab Version ULTRA "Double sandwich" (ULTRA) immunoassay for the determination of total antibodies
[EVABULTRA.CE.96](#)

HEV IgG Determination of IgG antibodies
[EVG.CE](#)

HEV IgM Determination of IgM antibodies
[EVM.CE](#)



PRENATAL SCREENING

A complete Panel of CE certified Prenatal Screening kits

CYTOMEGALOVIRUS

CMV IgG Quantitative/qualitative determination of IgG antibodies
[CMVG.CE](#)

CMV IgM "Capture" Enzyme Immunoassay for the determination of IgM antibodies
[CMVM.CE](#)

CMV Antibody Avidity Test (NOT CE) Determination of "avidity" of IgG class antibodies
[CMVAV](#)

RUBELLA VIRUS

RUB IgG Quantitative/qualitative determination of IgG antibodies
[RUBG.CE](#)

RUB IgM "Capture" Enzyme Immunoassay for the determination of IgM antibodies
[RUBM.CE](#)

RUB Antibody Avidity Test (NOT CE) Detection of "avidity" of IgG class antibodies
[RUBAV](#)

HUMAN PAPILLOMA VIRUS

Papilloma Virus IgG Quantitative/qualitative determination of IgG antibodies (R.U.O)
[HPVG.CE](#)

PARVO VIRUS B19

Parvovirus B19 IgG Quantitative/qualitative determination of IgG antibodies
[PARVOG.CE](#)

Parvovirus B19 IgM Qualitative determination of IgM antibodies
[PARVOM.CE](#)

TOXOPLASMA GONDII

Toxo IgG Quantitative/qualitative determination of IgG antibodies
[TOXOG.CE](#)

Toxo IgM "Capture" Enzyme Immunoassay for the determination of IgM antibodies
[TOXOM.CE](#)

Toxo Antibody Avidity Test (NOT CE) Determination of "avidity" of IgG class antibodies
[TOXOAV](#)

HERPES SIMPLEX VIRUS

HSV1 IgG Quantitative/qualitative determination of IgG antibodies to Herpes Simplex Virus type 1
[HSV1G.CE](#)

HSV1 IgM "Capture" Enzyme Immunoassay for the determination of IgM antibodies to Herpes Simplex Virus type 1
[HSV1M.CE](#)

HSV2 IgG Quantitative/qualitative determination of IgG antibodies to Herpes Simplex Virus type 2
[HSV2G.CE](#)

HSV2 IgM "Capture" Enzyme Immunoassay for the determination of IgM antibodies to Herpes Simplex Virus type 2
[HSV2M.CE](#)

HSV1&2 IgG Quantitative/qualitative determination of IgG antibodies to Herpes Simplex Virus type 1&2
[HSVG.CE](#)

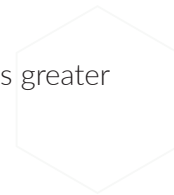
HSV1&2 IgM "Capture" Enzyme Immunoassay for the determination of IgM antibodies to Herpes Simplex Virus type 1&2
[HSVM.CE](#)



ELISA MICROPLATE READER SPECIFICATIONS



| | | |
|-------------------------------------|-------|---|
| Measurement system detector: | _____ | Silicon photo diode light source: quartz halogen lamp |
| Wavelength range: | _____ | 340 - 850 nm |
| Filters configuration: | _____ | 405, 450, 492, 620nm + 4 poss for optional filters |
| Indication range: | _____ | 0.000 - 4.000 Abs |
| Measurement increment: | _____ | 0,001A |
| Measurement modes: | _____ | Single and dual wavelength measurement |
| Accuracy: | _____ | ±1% (da 0,0 a 3,0 A) o ±0,003 A whichever is greater |
| Precision: | _____ | CV ≤0,2% (0,3 to 3A) |
| Linearity: | _____ | ±2% (0,0 to 3,0 A) |
| Measurement speed: | _____ | 6 seconds fast mode |



Instrument Specifications

| | | |
|--|-------|---|
| Configuration: | _____ | Bench-top |
| Working platform: | _____ | Flexible configuration |
| Liquid handling system: | _____ | Common X-movement. 2 channel= 9-27 mm. Equidistant channel spacing. Independent, simultaneous vertical tip movement. |
| Type of tips: | _____ | Independently operated dispense channels with disposable tips to avoid carryover |
| Number of channels: | _____ | 2 |
| Sample pipetting principle: | _____ | Sample pipetting by air displacement |
| Specification of tips: | _____ | 300µl and 800µl |
| Pipetting range: | _____ | Range: 1 to 800µl |
| Increment: | _____ | 0,1 µl |
| Pipetting precision: | _____ | Type of tip : 300µl - volume :100µl - accuracy :± 1% - precision : <0,75% Type fo tip : 800µl - volume :100µl - accuracy :± 1% - precision : <0,75% |
| Liquid handling functions: | _____ | Pipetting, dispensing, dilution, conjugation, aliquoting, multiple - and diversified dispensing |
| Liquid level monitoring: | _____ | Liquid level, clot and empty tube monitoring |
| Sample/Control Positions: | _____ | 6 x 24 = 144 |
| Reagent position: | _____ | Big= 6 x 24 / small= 6 x 48 |
| Plate transfer arm: | _____ | Transfers microplates between incubators, washer and measurement module |
| Plate positions /Shaker-Incubators: | _____ | 5 |
| Temperature range: | _____ | Room temperature to 60°C adjustable at an increment of 0.1°C |
| Accuracy: | _____ | ±0,5°C to 37°C |
| Washer: | _____ | 2 washing channel (16 dispensation needles +16 aspiration needles) |
| Selectable wash buffers: | _____ | 3 |
| Wash volume: | _____ | 50 to 1000 µl per well |
| Residual volume: | _____ | ≤2µl per well |
| Washing modes: | _____ | Dispense - aspirate, overflow washing, crosswise aspiration with selectable injection height immersion time and final aspiration |
| Liquid level detectors: | _____ | For all wash buffer containers and the waste container |
| Measurement module : | _____ | See detailed specifications for microplate reader |
| Barcode scanner: | _____ | Automatic barcode scanner |
| Software: | _____ | Preconfigured to the individual system |
| Environmental conditions: | _____ | Operating temperature : 18 - 25°C, Humidity: 30 - 60% non condensing Storage temperature: 10 - 30°C, Humidity: 15 - 70% non condensing |
| Power: | _____ | 500-700 W, Voltage: 220 V, Frequency: 50-60 Hz (standard configuration). System will be pre-configured according to the requirements in the specific country |
| Interface: | _____ | CAN-bus - RS232 |
| Dimensions LxWxH mm: | _____ | 1270x785x1000 |
| Weight: | _____ | kg 180 |
| Certification: | _____ | CE Declaration of Conformity according to Regulation (EU) 2017/746 (IVDR) |



SEROLOGY

A wide panel of CE certified Serology kits

HELICOBACTER PYLORI

HP IgG Quantitative/qualitative determination of IgG antibodies
HPG.CE

HP IgM Quantitative/qualitative determination of IgM antibodies
HPM.CE

HP IgA Quantitative/qualitative determination of IgA antibodies
HPA.CE

CagA IgA Quantitative/qualitative determination of IgA antibodies to Helicobacter Pylori cytotoxin associated gene A antigen
CAGA.CE

CagA IgG Quantitative/qualitative determination of IgG antibodies to Helicobacter Pylori cytotoxin associated gene A antigen
CAGG.CE

HP Ag Quantitative/qualitative determination of Helicobacter Pylori antigen in human stools (respective extraction kit available)
HPAG.CE.96

CHLAMYDIA

Chlamydia Pneumoniae IgA
Qualitative determination of IgA antibodies
CPA.CE

Chlamydia Pneumoniae IgG
Qualitative determination of IgG antibodies
CPG.CE

Chlamydia Pneumoniae IgM
Qualitative determination of IgM antibodies
CPM.CE

Chlamydia Trachomatis IgA
Qualitative determination of IgA antibodies
CTA.CE

Chlamydia Trachomatis IgG
Quantitative determination of IgG antibodies
CTG.CE

Chlamydia Trachomatis IgM
Qualitative determination of IgM antibodies
CTM.CE

COXSACKIE B VIRUS

CoxB IgG
Determination of IgG antibodies
COXBG.CE

CoxB IgM
Determination of IgM antibodies
COXBM.CE

EPSTEIN BARR VIRUS

EBV VCA IgA Quantitative/qualitative determination of IgA antibodies to Epstein Barr Virus Capsidic Antigen
VCAA.CE

VCA IgG Quantitative/qualitative determination of IgG antibodies to Epstein Barr Virus Capsidic Antigen
VCAG.CE

VCA IgM "Capture" system quantitative/qualitative determination of IgM antibodies to Epstein Barr Capsidic antigen
VCAM.CE

EBNA IgG Quantitative/qualitative determination of IgG antibodies to Epstein Barr Virus Nuclear Antigen
EBNG.CE

EBNA IgM Qualitative determination of IgM antibodies to Epstein Barr Virus Nuclear Antigen
EBNM.CE

Ea IgG Quantitative/qualitative determination of IgG antibodies to Epstein Barr Virus Early Antigen
EAG.CE

Ea IgM Qualitative determination of IgM antibodies to Epstein Barr Virus Early Antigen
EAM.CE

EBV Avidity Test Determination of "Avidity" of IgG antibodies
VCAA.CE

MENINGITIS

Meningitis IgG
Determination of IgG antibodies
MENG.CE

MEASLES VIRUS

Measles Virus IgG
Semi-quantitative determination of IgG antibodies
MEAG.CE

Measles Virus IgM
Qualitative determination of IgM antibodies
MEAM.CE

TETANUS TOXOID

TETOX IgG
Quantitative determination of IgG antibodies
TETG.CE

MADE IN ITALY

Dia.Pro Diagnostic Bioprobes S.r.l

Via G. Carducci, 27 - 20099
Sesto San Giovanni (MI) - Italy
Tel +39 02 27.00.71.61/64.50
Fax + 39 02 44.38.67.71
www.diapro.it
email: info@diapro.it

EN ISO 13485 Certified

BRO-ELISA Rev.0922

