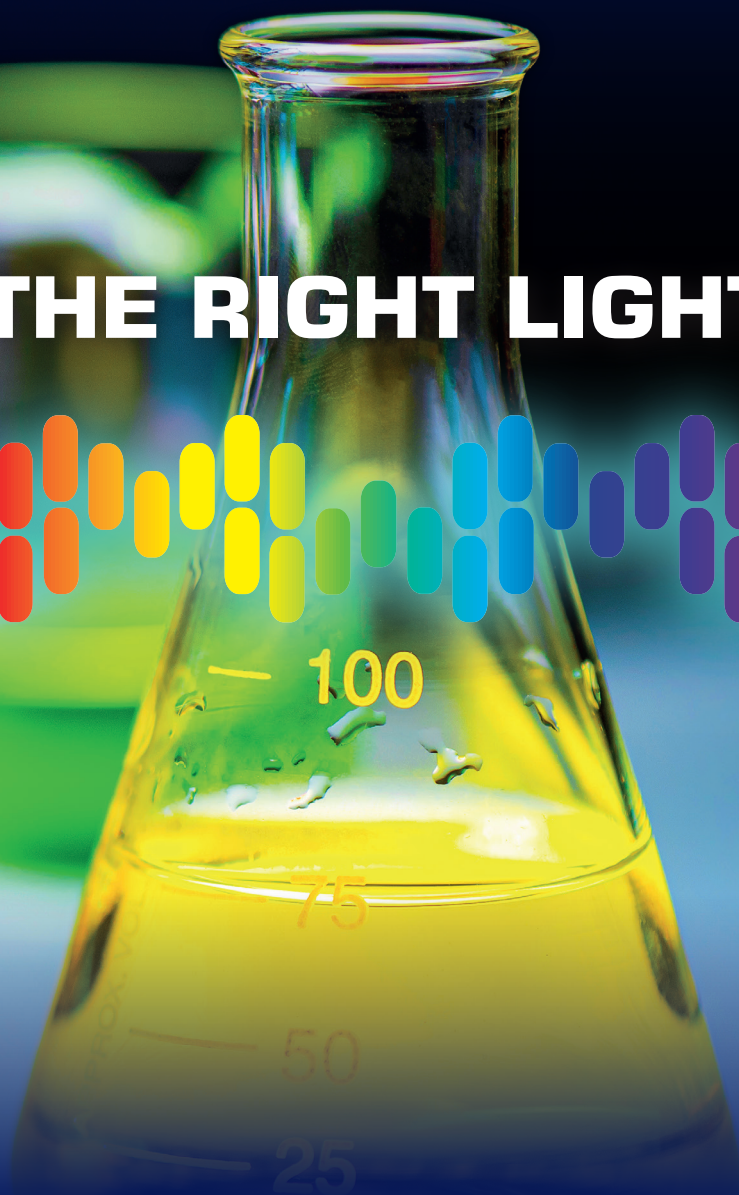


**CYANAGEN**

*Reagents for Life Science & IVD*

# THE RIGHT LIGHT



[www.cyanagen.com](http://www.cyanagen.com)

# CYANAGEN

## COMPANY PROFILE

**Cyanagen Srl** is an Italian biotech company founded in Bologna in 2003. The Company's core business is designing, developing and manufacturing chemiluminescent substrates, fluorescent antibodies, magnetic beads, and DNA/RNA extraction kits for research in life sciences (RUO) and In Vitro Diagnostics (CE-IVD).

Our key technologies, covered by international patents, achieve outstanding sensitivity, stability, performance and ease of use.

Thanks also to the OEM sales to global companies, Cyanagen is one of the world's leading manufacturers of chemiluminescent substrates for Western blotting and ELISA/CLIA.

**Cyanagen** offers the manufacturing of CUSTOM OEM products according to clients' specifications, of starting materials in bulk and customized kits.

Thanks to its experience with CE-IVD registrations, Cyanagen offers support in Analytical Validation Processes and for developing molecular diagnostics & biological assays.

**Cyanagen** actively partners with universities and other companies for national and international calls.

Certifications: ISO9001:2015 - ISO13485:2016.



Cyanagen developed STAR FLUOR - 3D VASCULAR thanks to RenalToolBox (New Tools for Kidney Research) project funded by **Innovative Training Network (ITN) EU Marie Skłodowska-Curie actions H2020**.

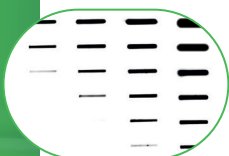
The Infra-Red marker for innovative 3D imaging of tissue vasculature for studying disease progression related to blood vessel disorders is patent pending.

# *INDEX*

Our Solutions for Your Applications .....	4
Life Science & IVD reagents overview .....	6
ECL substrates product lines .....	7
Dyes and Labelled Abs product lines .....	8
Other reagents for research .....	9
DNA/RNA extraction kit product line - CE-IVD .....	10
Magnetic Beads and ELISA substrates .....	11
OEM, Custom and Bulk Productions .....	12
Research Projects and Services .....	13

# *Our Solutions for*

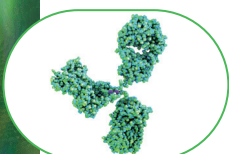
## APPLICATIONS



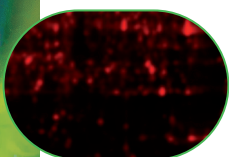
### WESTERN BLOT



### ELISA/FIA



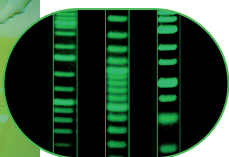
### PROTEIN LABELLING



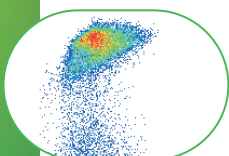
### FLUORESCENT GEL STAINING



### IMAGING



### DNA/RNA ANALYSIS



### FLOW CYTOMETRY



# Your Applications

## PRODUCT LINES

Chemiluminescent Substrates – **WESTAR / WESTAR-ONE**

Fluorescent Secondary Antibodies – **IR-BLOT and STAR FLUOR secondary antibodies**

Protein Quantitation Kits – **QPRO – BCA Kit Standard  $\mu$ QPRO – BCA Kit Micro**

Buffers – **RENEW Stripping Buffer**

Chemiluminescent Substrates – **ELISTAR ECL Substrates for Immunoassay**

Fluorescent Secondary Antibodies – **STAR FLUOR Secondary Antibodies**

Crosslinkers

Biotin Labelling Reagents

DNA/RNA Staining Reagents – **GREEN STAIN**

Fluorescent Secondary Antibodies – **STAR FLUOR Secondary Antibodies**

Fluorescent Labelling Reagents – **STAR FLUOR Reactive Dyes**

dsDNA Quantitation – **GreenQuant dsDNA kit**

DNA/RNA Staining – **GREEN STAIN**

Nucleic Acids Extraction – **STAR BEADS DNA/RNA extraction kits – RUO & CE-IVDR**

Fluorescent Secondary Antibodies – **STAR FLUOR Secondary Antibodies**

# Life Science & IVD reagents overview

## LIFE SCIENCE REAGENTS OVERVIEW

Cyanagen is focused on designing and producing reagents for western blotting assay, particularly ECL substrates and co-related products, fluorescent markers, and labelled with secondary antibodies for imaging applications, and DNA/RNA Extraction kits for research applications on Human, Veterinary, Water and Food field.

**WESTAR-ECO** - ECL chemiluminescence substrates in powder/solid form

**WESTAR** - ECL chemiluminescence substrates in two components

**WESTAR-ONE** - ECL chemiluminescence substrates in one component

**QPRO BCA kit** - protein quantitation assay

**RENEW** - Stripping Buffer

**STAR FLOUR Reactive Dyes** - functionalized to label antibodies

**STAR FLUOR Secondary Antibodies** - for fluorescent western blotting, cell imaging and flow-cytometry

**IR-BLOT Secondary Antibodies** - for infra-red fluorescent western blotting

**STAR BEADS Universal DNA/RNA Extraction Kit** - magnetic beads technology-based, for Human, Veterinary, Food, water and other applications

**GREEN QUANT dsDNA kit** - for dsDNA quantitation

**GREEN STAIN** - for DNA/RNA staining on the gel

## IVD REAGENTS OVERVIEW

The DNA/RNA extraction kits, based on magnetic beads technology, cover the IVD field for Human Diagnostics. Cyanagen offers magnetic beads and chemiluminescent products for the development of diagnostic kits.

**STAR BEADS DNA/RNA Extraction Kits** - for IVD applications

**MAGNETIC BEADS** for extraction and other kit development

**ELISTAR ECL substrates** for immunoassay manufacturers



# ECL substrates product lines

CMVAGEN

## WESTAR- ECO - ECL SUBSTRATES FOR WESTERN BLOTTING

WESTAR-ECO is the eco-friendly ECL HRP substrate product line for Western blotting.

The product line includes three levels of sensitivity up to femtogram detection.

Based on proprietary technology, WESTAR-ECO kits in tablet form have minimal, green packaging. The pre-mixed working solution is easy to reconstitute in ultra-pure water. Limited use of water in the required amount at the lab, a green package and reduced CO<sub>2</sub> emission in the transport due to the light kit weight make this new concept of Western blotting kit the perfect tool for the future green lab.



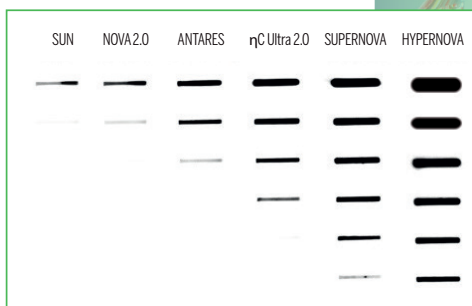
## WESTAR - ECL SUBSTRATES FOR WESTERN BLOTTING

WESTAR is a broad two-component ECL HRP substrate product line for Western blotting.

The product line includes substrates with different sensitivity levels, allowing assays from picogram to femtogram detection range.

WESTAR HYPERNOVA is the most potent substrate on the market with its extreme sensitivity.

WESTAR ANTARES and  $\eta$ C ULTRA 2.0 offer an extended signal duration.

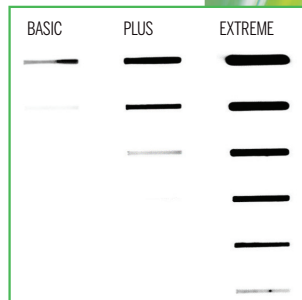


## WESTAR-ONE - ECL SUBSTRATES FOR WESTERN BLOTTING

WESTAR-ONE is the one-component ECL HRP substrate product line for Western blotting. The product line includes three levels of sensitivity up to femtogram detection are available.

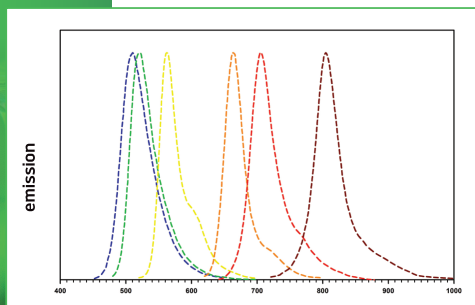
Pre-mixed solutions, based on proprietary technology, provide convenience and increased consistency in your results, avoiding pipet-ting errors and possible contaminations.

WESTAR-ONE EXTREME is the only top performer substrate single solution on the market.



# Dyes and Labelled Abs product lines

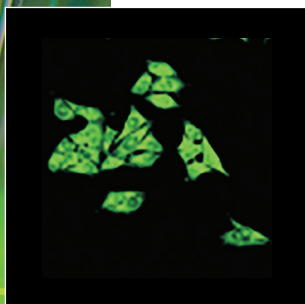
## STAR FLUOR REACTIVE DYES



STAR FLUOR REACTIVE DYES are a broad range of fluorescent dyes for various applications such as Western Blotting, cell imaging and flow cytometry. The line of dyes covers a broad spectrum from 400 to 800 nm.

The STAR FLUOR reactive dyes are available as Amine-reactive substrates in the N-hydroxy succinimide (NHS) ester form (succinimidyl esters SE). The succinimidyl esters are currently the most popular and widely employed labelling tools to react with amine groups, i.e. lysine residues, present in antibodies, proteins, and any amino-containing or amino-modified biomolecule.

## STAR FLUOR LABELLED ANTIBODIES



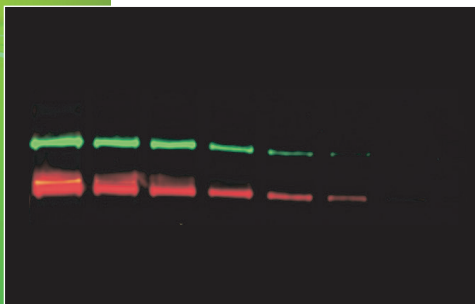
STAR FLUOR Abs are fluorescent, highly cross-adsorbed antibodies for the most common fluorescent immunoassays, such as Western blotting, cell imaging and flow cytometry.

These antibodies ensure minimal cross-reactivity when using antibodies from different host species.

The superior brightness allows the detection of a very low amount of proteins with a high signal-to-noise ratio.

Antibody Labelling kits are also available.

## IR-BLOT SECONDARY ANTIBODIES



IR-BLOT secondary antibodies are high-quality secondary antibodies optimised for quantitative Western blot in the infrared region.

These antibodies are highly cross-adsorbed, so ensuring extremely low background and specific signal.

IR-BLOT secondary antibodies are available as 700 and 800, Goat anti-Rabbit and Goat anti-Mouse.

# Other reagents for research

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## STAR BEADS Universal DNA/RNA Extraction kit – RUO

The kit allows rapid and efficient genomic DNA and pathogen DNA/RNA isolation from several sample types. The kit can be used in research in human and veterinary applications and food and water analysis.

- Based on magnetic bead technology
- Valid for the isolation of genomic DNA (whole blood excluded) and pathogen DNA/RNA
- Isolation from any sample type, including cells, tissues, biological fluids, meat, honey bees
- Available in both BOTTLE and the 96 - 16 test PREFILLED PLATE formats.
- Extraction time is 30 minutes for 96 and 32 samples
- Direct usage of extracted nucleic acids in downstream applications
- Useful for research in Human, Veterinary, Food, Water and other field

## GREENQUANT for dsDNA quantitation

GREEN QUANT dsDNA kit contains a fluorescent proprietary DNA-binding dye (488nmEx/522nmEm) that allows accurate and sensitive quantitation of small amounts of double-stranded DNA (dsDNA) in a purified sample. The kit is compatible with a wide range of fluorimeters, such as Qubit™.

Compared to spectrophotometric DNA quantitation, the assay provides evident advantages, such as significantly increased sensitivity, high selectivity for double-stranded DNA (dsDNA) over single-stranded DNA (ssDNA) or RNA, and improved contaminant tolerance (protein and carbohydrate molecules).

## OTHER REAGENTS

- RENEW Stripping Buffer: ready-to-use solution for removing antibodies from membranes
- GREEN STAIN: for fluorescent detection of nucleic acids (DNA and RNA) in electrophoretic gels available as 10000x or loading dye
- CROSSLINKERS: chemical compounds used to bind covalently or conjugate biomolecules
- Biotin Labelling Reagents: the product line of amine-reactive biotinylation reagents for modifying biomolecules such as proteins and amine-modified nucleic acids for Biotin/Streptavidin applications.



# DNA/RNA extraction kit product line – CE-IVD

## STAR BEADS Viral DNA/RNA Extraction Kit – CE-IVD



CE-IVD kit, initially developed for COVID-19 detection, allows fast and reliable nucleic acid extractions from viruses.

- Compatible with different matrices such as Saliva and Swabs
- Available in BOTTLE and the READY-TO-USE 96 - 32 test PREFILLED PLATE Formats for KingFisher™ Flex, Allsheng, Molgen, Procomcure, BIOER, BIGFISH and other extractors
- Extractions in 25 minutes for 96 samples and 22 minutes for 32 samples

## STAR BEADS Pathogen DNA/RNA Extraction Kit – CE-IVD



CE-IVD kit for the extraction of nucleic acids from viruses, COVID-19 included, bacteria and protozoa Useful for the detection of sexually transmitted infections, CMV, HPV, Monkey Pox, HSV-1, Neisseria Meningitidis, pathogens from plasma, urine, cerebrospinal fluid and other body fluids.

- Magnetic beads technology
- DNA and RNA isolation in the same extraction
- All-in-one kit for different pathogens analysis
- Available in 96 and 16 test prefilled plate formats
- The kit is for Allsheng, Molgen, Procomcure, BIOER, BIGFISH and other extractors
- Extractions in 30 minutes for 96 and 32 sample kits

## STAR BEADS Genomic DNA Extraction kit – CE-IVD



The kit is CE-IVDR certified for extracting genomic DNA from whole blood and saliva. Based on magnetic bead technology.

- Valid for the isolation of genomic DNA from tissues and cultured cells for Research-Use-Only (RUO) applications
- Available in both BOTTLE and the 96 - 16 test PREFILLED PLATE formats
- Extraction time is 60 minutes for 96 samples and 32 samples
- Direct usage of extracted genomic DNA in downstream applications

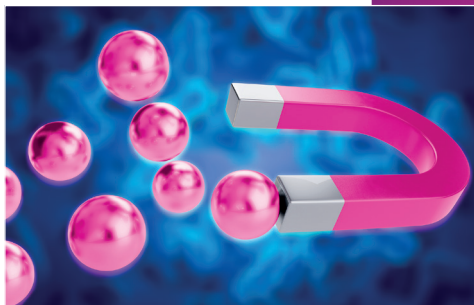


# Magnetic Beads and ELISA substrates

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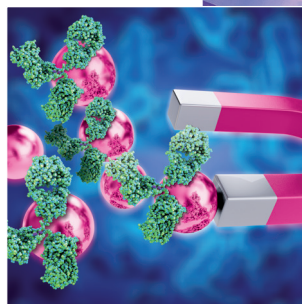
## STAR BEADS Magnetic Beads for DNA/RNA extraction

STAR BEADS Magnetic beads for DNA/RNA extraction are monodispersed magnetic particles, 1  $\mu\text{M}$  in size, with high batch-to-batch reproducibility. These high-capacity silica-based magnetic particles are ideal for nucleic acid extraction in high quantities and purity, thus providing an easy-to-use and fast way for DNA/RNA isolation, which is compatible with manual and automated procedures.



## STAR BEADS Magnetic Beads for protein purification & immunoassays - COMING SOON

Tailor-made magnetic silica-particles that can be functionalised with various proteins (or antibodies) such as Protein A and G, Streptavidin, etc., targeted for antibody purification and immunoprecipitation assays. STAR BEADS Magnetic Beads are highly efficient with low non-specific binding and compatible with manual and automated protocols.



## ELISTAR - ECL SUBSTRATES FOR IMMUNOASSAY MANUFACTURERS

ELISTAR are ultrasensitive chemiluminescent substrates for horseradish peroxidase (HRP) based immunoassays dedicated to OEM sales.

ELISTAR are ideal substrates when developing chemiluminescent immunoassays such as ELISA or CLIA due to the different sensitivity levels within the class.

Available in single and two solution formats. Different kinds of substrates from high levels of sensitivity to high signal duration.



# OEM, Custom and Bulk Productions

## ELISTAR - ECL for Immunoassay Manufacturers

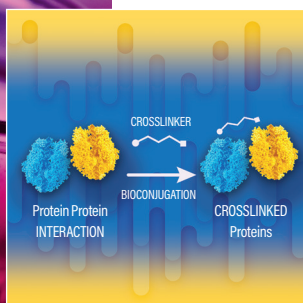


ELISTAR is a line of chemiluminescent substrates for horseradish peroxidase (HRP) based immunoassays.

Due to the six sensitivity levels, ELISTAR substrates are ideal for developing chemiluminescent immunoassays.

ELISTAR substrates produce a bright signal that can be measured immediately within one minute, avoiding long incubations or adding stopping reagents, like in traditional colourimetric assays.

## Crosslinker & Biotin Labelling Reagents



Crosslinkers are chemical compounds that covalently bind or conjugate biomolecules together. Cyanagen's crosslinker reagents are classified according to the reactive groups, their hydrophobicity or hydrophilicity, and the spacer length between the reactive groups. Amine-reactive Biotinylation reagents are useful for modifying biomolecules such as proteins and amine-modified nucleic acids for Biotin/Streptavidin applications. These reagents are divided into two groups based on water solubility: NHS and sulfo-NHS.

## Magnetic Beads



Magnetic Beads are ideal for purifying or isolating nucleic acids from various sources. They can be used to develop customized nucleic acid isolation and extraction methods. They can be customized, including surface activation, Exomes, Streptavidin, T cell activation, cell isolation, Immunoprecipitation and other functionalizations.

# Research Projects and Services

CYANAGEN

## EU projects

### **Infra-Red fluorescent marker for glomerular filtration rate measurement (2012 – 2016)** - In Collaboration with the University of Heidelberg

PATENT - US 20150328342 A1 – Drug screening in pharmaceutical companies and human and veterinary diagnostics.

**Monitoring of Antibiotic Residues in Milk** - in collaboration with the Bavarian Milk Consortium (Milchpruefing) Chemiluminescent assay for detecting antibiotics in milk, with the Biosensor System MCR 3, using CYANAGEN ELISTAR SUPERNOVA.

## **EU-funded project - Marie Skłodowska-Curie Action**

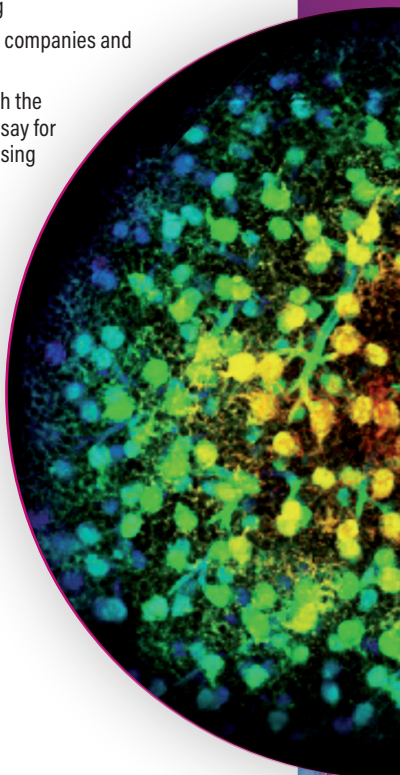
**Innovative Training Network (ITN) EU Marie Skłodowska-Curie actions** - In Collaboration with the University of Heidelberg

Three-year PhD student project (2019-2022)

**Development of an Infra-Red fluorescent marker for** vascular imaging for Drug screening in pharmaceutical companies and Human diagnostics

Currently under validation for in vivo imaging

PATENT pending.



## Services for kit manufacturers

- Customized products in bulk or fully packed kits for OEM sales
- Dedicated production of Starting Materials in bulk
- Customized Diagnostic kits
- Analytical validation service for molecular diagnostics & biological assays
- Design and synthesis of fluorescent dyes according to the client's specifications
- Customized R&D programs in the diagnostic and bioanalytical fields





**CYANAGEN**

*Reagents for Life Science & IVD*

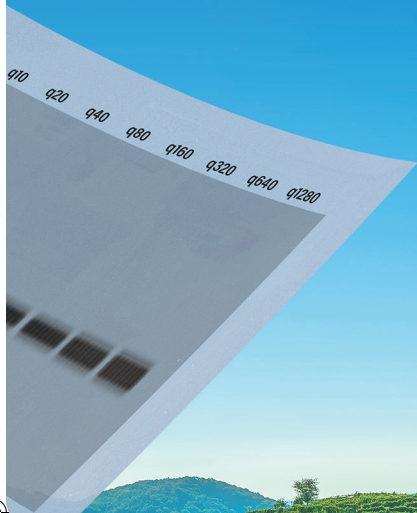




# WESTAR-ECO

*Make Your Lab Green*

*Western blotting and ELISA in tabs*





# **CYANAGEN**

*Reagents for Life Science & IVD*

**Cyanagen s.r.l.**

Headquarter:

**Via degli Stradelli Guelfi, 40/C  
40138 Bologna (ITALY)**

Registered Office:

**Via Andrea Costa, 4/2  
40134 Bologna (ITALY)**

**T +39 051 534063  
contact\_us@cyanagen.com**

**www.cyanagen.com**

**Quality certifications  
ISO 9001:2015 - ISO 13485:2016  
REV 2023-00**