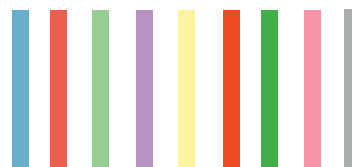


20 /21

 **grisp**
Research Solutions



WOULD LIKE TO WELCOME YOU TO OUR CATALOGUE 2020/2021

About GRiSP

Since 2008 located in Porto, Portugal, GRiSP empowers life science research by supplying researchers in the growing fields of molecular biology, biotechnology, biochemistry and genetics, with high-quality reagents, kits and solutions.

Dedicated to the development, production and commercialization of cutting-edge as well as everyday products, our team is highly motivated to provide these value-added tools at competitive prices, allowing our customers to drive their research to the next level.

At GRiSP, we strive to the perfect combination of performance, service and costs, always keeping you in mind. We believe this catalogue gives you access to a comprehensive range of products for DNA electrophoresis, Nucleic Acid Purification, PCR, qPCR, RNA research, molecular cloning, protein research, cell biology and related areas, which meets your needs to achieve excellent results.

Find out more about us at www.grisp.pt or ask your local distributor, and do not hesitate to contact us with your questions or suggestions, because your feedback matters!

GRiSP TEAM

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Please use the following account data:

ACCOUNT:

GRiSP, Lda (VAT nr: PT508573920)

IBAN: PT50 0018 210901939381020 52

BIC/SWIFT: TOTAPTPL

BANK: Banco Santander Totta S.A.

PLACING AN ORDER:

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DELIVERY TIME:

Portugal: Courier; 1-2 working days after order
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PLEASE USE ONE OF THE FOLLOWING CONTACTS:

Email: info@grisp.pt

Tel: +351 220 301 599

POSTAL ADDRESS:

GRiSP, Lda
Rua Alfredo Allen, 455
4200-135 Porto
Portugal

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CELL BIOLOGY

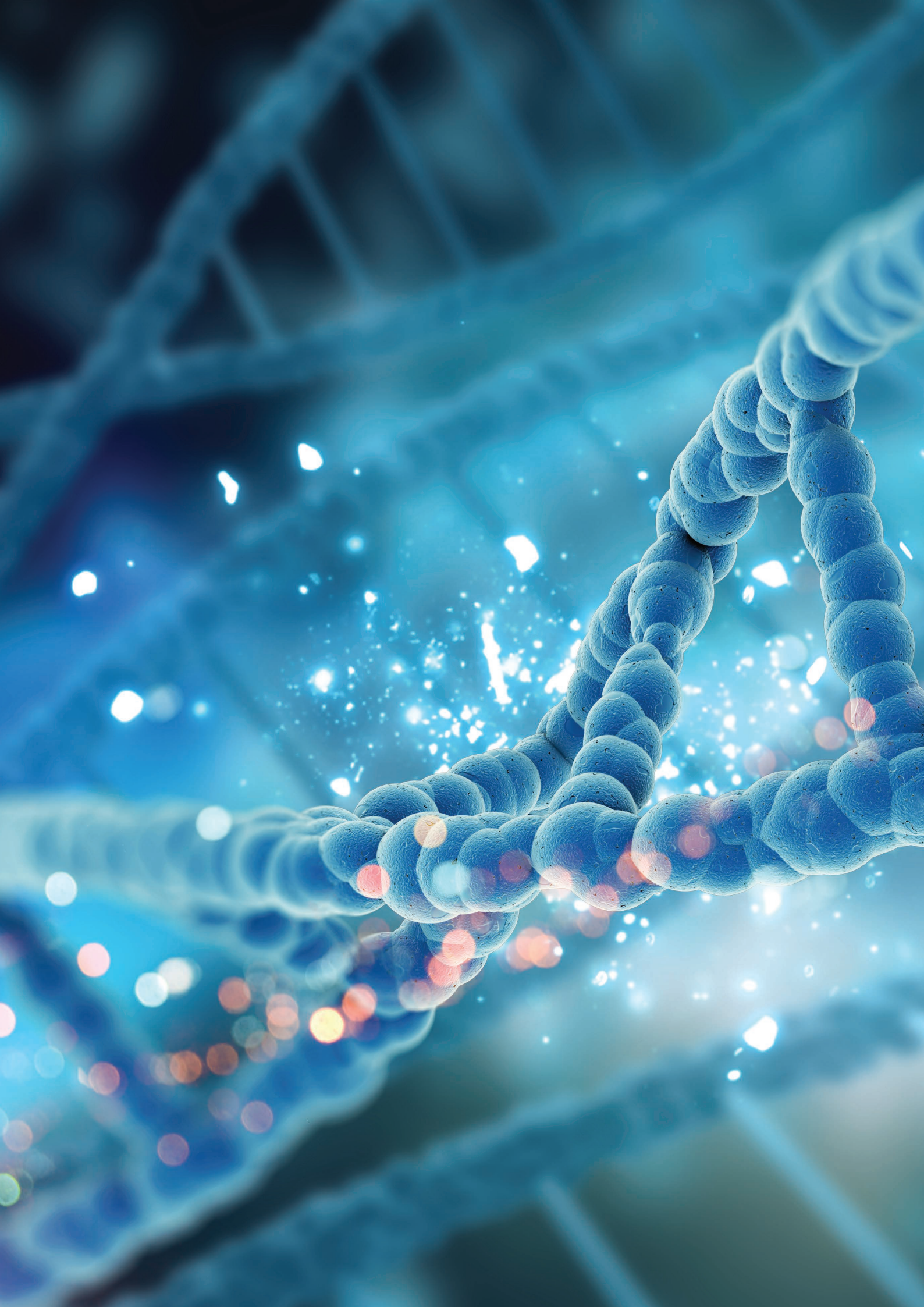
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SOLUTIONS

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01

DNA ELECTROPHORESIS

FAST ELECTROPHORESIS
AGAROSES
DNA STAINS
LOADING BUFFER
DNA LADDERS

FAST ELECTROPHORESIS

DNA Agarose Gel Electrophoresis under Fast conditions with the new SGTB Buffer

SGTB AGAROSE ELECTROPHORESIS BUFFER

SGTB is a NEW buffer ideal for Agarose Electrophoresis of DNA fragments of 100bp to 1000bp.

- TIME SAVING: allows much faster runs
- HIGH RESOLUTION: electrophoresis results in very sharp bands
- BETTER SEPARATION: larger relative distance between bands of similar size
- CLEARER and STRONGER gels
- SAVE MONEY: up to 25% saving on agarose

GB01.0120	1L 20X
GB01.0510	5L 10X
GB01.0520	5L 20X

Prepare gel



Load samples



Run gel

(minigel in 15 minutes
at 250V for SGTB)



AGAROSSES

Molecular Biology Grade agaroses, DNase- RNase- and Protease-free, suitable for the most demanding applications. High purity allowing high resolution.

GRS AGAROSE LE

(high resolution for routine analytical and preparative applications)

GA110.0500

500 g

GRS AGAROSE LMT

(Low Melting, for DNA/RNA/Protein & in-gel reactions)

GA115.0050

50 g

GRS AGAROSE S-LMT

(Low melting, fine resolution of small DNA fragments)

GA116.0050

50 g

DNA STAINS

New and safe alternatives to ethidium bromide (EtBr) for the visualization of DNA and RNA in agarose and polyacrylamide gels.

- Safe (non-carcinogenic, non-mutagenic, non-toxic)
- For dsDNA, ssDNA and RNA
- For Agarose and Polyacrylamide gels
- No hazardous waste
- Compatible with both UV light and Blue LED
- Improved cloning efficiency (when using Blue LED)

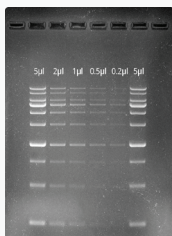


Figure 1. Electrophoresis of different quantities of GRS Ladder 1kb on a 1.2% agarose gel (TAE, 90V, 60min).

Albeit 5µl is recommended, when applying only 1µl, all bands can be readily detected with Xpert Green DNA Stain using a Blue LED transilluminator.

	UV Compatible	BLUE LIGHT Compatible	DETECTION LIMIT (ng)
XPERT GREEN DNA STAIN	✓	✓	0.5-5.0
XPERT GREEN DNA STAIN DIRECT	✓	✓	0.1-1.0
EtBr	✓	✗	0.5-5.0

XPERT GREEN DNA STAIN

- As sensitive as EtBr
- Developed for in-gel staining.

GS01.0001

1 mL (20.000x)

XPERT GREEN DNA STAIN DIRECT

- Direct Loading (no need for loading dye)
- Magnificent signal-to-noise ratio
- Ultrasensitive

GS02.0001

1 mL

LOADING BUFFER

GRS DNA LOADING BUFFER BLUE (6X)

(Convenient solution containing Bromophenol Blue and Xylene Cyanol FF as tracking dyes)

GLB01.0001

1 mL

GLB01.0501

5x 1 mL

DNA LADDERS

Set of six ready-to-use DNA ladders that are stable at room temperature: three standard and three specific ladders to meet your needs, all consisting of very sharp bands and including internal reference bands.

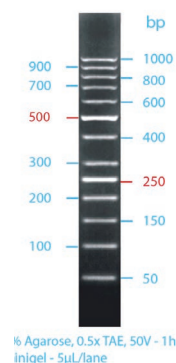
Recommended loading of 2-5 μ L per lane.

GRS LADDER 50BP

Suitable for sizing linear double-stranded DNA fragments from 50bp-1000bp, and composed of 13 linear chromatography-purified individual DNA fragments.

All bands (except 250bp and 500bp, which have increased intensity) are supplied at approximately 40ng/5 μ L

GL031.0050	50 μg
GL031.5050	5x 50 μg

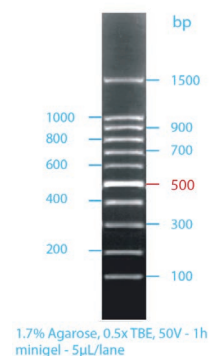


GRS LADDER 100BP

Suitable for sizing linear double-stranded DNA fragments from 100bp-1500bp, and composed of 11 linear chromatography-purified individual DNA fragments.

All bands (except 500bp, which has increased intensity) are supplied at approximately 40ng/5 μ L

GL041.0050	50 μg
GL041.5050	5x 50 μg

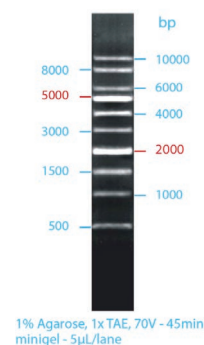


GRS LADDER 1KB

Suitable for sizing linear double-stranded DNA fragments from 500bp-10kb, and composed of 10 linear chromatography-purified individual DNA fragments.

All bands (except 2kb and 5kb, which have increased intensity) are supplied at approximately 40ng/5 μ L

GL051.0050	50 μg
GL051.5050	5x 50 μg

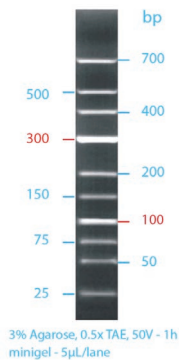




GRS LOW RANGE LADDER

Suitable for sizing linear double-stranded DNA fragments from 25bp-700bp, and composed of 10 linear chromatography-purified individual DNA fragments.
All bands (except 100bp and 300bp, which have increased intensity) are supplied at approximately 40ng/5µL

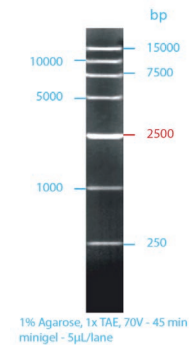
GL011.0050	50 µg
GL011.5050	5x 50 µg



GRS HIGH RANGE LADDER

Suitable for sizing linear double-stranded DNA fragments from 250bp-15kb, and composed of 7 linear chromatography-purified individual DNA fragments.
All bands (except 2500bp, which has increased intensity) are supplied at approximately 40ng/5µL

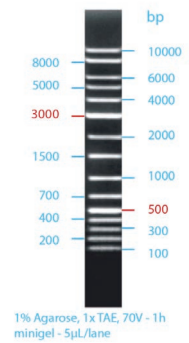
GL021.0050	50 µg
GL021.5050	5x 50 µg



GRS UNIVERSAL LADDER

Suitable for sizing linear double-stranded DNA fragments from 100bp-10kb, and composed of 15 linear chromatography-purified individual DNA fragments.
All bands (except 500bp and 3kb, which have increased intensity) are supplied at approximately 40ng/5µL

GL061.0050	50 µg
GL061.5050	5x 50 µg







02

NUCLEIC ACID PURIFICATION

PCR PURIFICATION

gDNA PURIFICATION

RNA PURIFICATION

DNA/RNA PURIFICATION

DNA/RNA/PROTEIN PURIFICATION

PLASMID PURIFICATION

ENZYMES

COLUMNS

PCR PURIFICATION

Complete range of PCR clean-up products based on the best available technologies, including enzymatic, spin column and beads based purification methods.

GRS PCR & GEL BAND PURIFICATION KIT

The GRS PCR & Gel Band Purification Kit provides an efficient and fast method for the purification and/or concentration of high quality DNA fragments (70bp to 15kb) from PCR reactions, enzymatic restriction digestion or from agarose gels. Recovers up to 95% (PCR Clean-up) or up to 90% (Gel Extraction).

 Contains a pH indicator to ensure optimal pH for DNA binding.

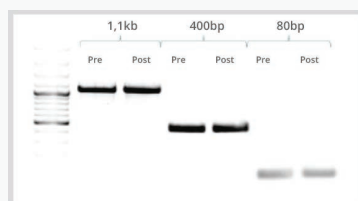
GK01.0100	100 preps
GK01.3100	3 x 100 preps
GK01.5100	5 x 100 preps

EXO/SAP GO - PCR PURIFICATION KIT

Enzymatic PCR Clean-Up kit, comprising Exonuclease I (Exo I) and recombinant Shrimp Alkaline Phosphatase (rSAP) in an optimal molar ratio. Unused primers are hydrolyzed by Exo I, whilst rSAP dephosphorylates excess dNTPs. 100% recovery, even for very short PCR products.

 DNA is ready for sequencing in 15 minutes.

GK18.0500	500 rxn
GK18.2000	4x500 rxn



100% amplicon recovery

XPERT PURIFICATION MAGNETIC BEADS

Xpert Purification Magnetic Beads consists of Solid Phase Reversible Immobilization paramagnetic particles coated with carboxyl groups that reversibly bind DNA. The magnetic beads are supplied in a buffer that has been optimized in order to selectively bind DNA fragments of 100bp and larger. Primers, primer dimers, dNTPs, enzymes, excess salts and other impurities can be removed quickly and efficiently by a simple washing procedure.

 Can be seamlessly integrated into NGS Library preparation workflows.

GK19.0005	5 mL
GK19.0025	25 mL
GK19.0060	60 mL

gDNA PURIFICATION

Spin column based genomic DNA purification kits. Complete range to ensure that there is always an option available for your type of sample.

- Spin Columns based
- High yield
- Fast and efficient procedure
- Proteinase K, RNase A, Lysozyme included, whenever required for the main protocol
- Adaptations available for samples other than the primary application



GRS GENOMIC DNA KIT - BLOOD & CULTURED CELLS

(for whole and frozen blood, buffy coat and cultured animal cells)
(available adaptation, for bacteria and fungus)

GK02.0100

100 preps

GRS GENOMIC DNA KIT - TISSUE

(for tissues, like tailsnips, liver, kidney, brain, adipose tissue, earpunches, insects and FFPE) (available adaptation, for amniotic fluid, buccal swab, soil and stool)

GK03.0100

100 preps

GRS GENOMIC DNA KIT - PLANT

(for Plant tissue and cells)

GK04.0100

100 preps

GRS GENOMIC DNA KIT - BACTERIA

(for Gram (+) positive and Gram (-) negative bacteria)

GK07.0100

100 preps

GRS GENOMIC DNA KIT - BROADRANGE

(for whole and frozen blood, serum, plasma, buffy coat, amniotic fluid, buccal swab, hair, tissue, rodent tails, ear-punches, FFPE and insect cells)

GK06.0100

100 preps

GRS GENOMIC DNA KIT - CARD

(for dried blot spots on Whatman® FTA® Cards)

GK25.0100

100 preps

GRS PURE DNA KIT


(for purification and/or concentration from samples containing partial purified DNA)

GK05.0100

100 preps

RNA PURIFICATION

Spin column based total RNA isolation kits. Complete range to ensure that there is always an option available for your type of sample.

- Spin Columns based
- High yield
- Fast and efficient procedure
- DNase I included
- Individually packed columns 



GRS TOTAL RNA KIT - BLOOD & CULTURED CELLS

(for fresh whole blood and cultured animal cells)

GK08.0100

100 preps

GRS TOTAL RNA KIT - TISSUE

(for a wide variety of tissues and FFPE)

GK09.0100

100 preps

GRS TOTAL RNA KIT - PLANT

(for plant tissue and cells)

GK10.0100

100 preps

GRS TOTAL RNA KIT - BACTERIA

(for Gram (+) positive and Gram (-) negative bacteria)

GK16.0100

100 preps

GRS TOTAL RNA KIT - YEAST & FUNGUS

(for yeast and a wide variety of fungus species)

GK17.0100

100 preps

GRS PURE RNA KIT

(for purification and/or concentration from samples containing partial purified RNA)

GK15.0100

100 preps

GRS microRNA PURIFICATION KIT

(for purification of high quality miRNAs, from fresh blood, cultured cells, tissue, and FFPE)

GK11.0050

50 preps

TRIPLEXTRACTOR DIRECTRNA KIT

(combination of the strong phenol/guanidine thiocyanate lysis capacity of tripleXtractor reagent, with a spin column system)

GK23.0100

100 preps

TRIPLEXTRACTOR REAGENT

(Monophasic phenol/guanidine thiocyanate solution)
(Protocol adaptation available for recovering microRNAs from samples stored in tripleXtractor, using our GRS microRNA Purification Kit - GK11.0050)

GB23.0100

100 mL

GB23.0200

200 mL

DNA/RNA PURIFICATION

Spin column based kits for purification of DNA and/or RNA.

GRS VIRAL DNA/RNA PURIFICATION KIT

(for DNA and RNA from cell-free media (serum, plasma, body fluids and the supernatant from viral infected cell cultures)

GK12.0050

50 preps

GRS CIRCULATING CELL-FREE DNA/RNA PURIFICATION KIT

(for the isolation of high-quality DNA and RNA from up to 5 ml of serum or plasma)

GK20.0050

50 preps

DNA/RNA/PROTEIN PURIFICATION

Spin column based kit for the consecutive purification of DNA, RNA and protein from the same sample.

GRS FULLSAMPLE PURIFICATION KIT

(for consecutive purification of genomic DNA, total RNA (including miRNA), and total protein from whole blood and other biological fluids, animal tissues and cultured cells)

GK26.0050

50 preps


PLASMID PURIFICATION

Spin column based plasmid purification kits.

GRS PLASMID PURIFICATION KIT - MINI

Efficient and fast method for the purification of high quality plasmid DNA from 1-6 ml of cultured bacterial cells.

Eluted DNA is suitable for all common downstream applications including PCR, enzymatic restriction digestion, cloning and DNA sequencing.

 Includes Blue Lysis Buffer for easy visualization of lysis and neutralization.

GK13.0100

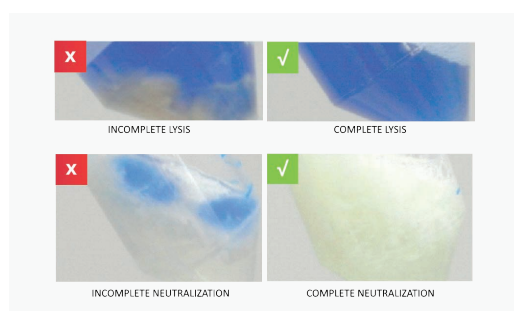
100 preps

GK13.3100

3 x 100 preps

GK13.5100

5 x 100 preps



ENZYMES

Highly pure enzymes, commonly used in Nucleic Acid Purification applications.

PROTEINASE K

Lyophilized powder purified from *Pichia pastoris* harbouring the gene encoding endolytic protease from *Tritirachium album*.

(Activity: ~30 U/mg)

GE010.0100

100 mg

RNase A

Ribonuclease A is a pancreatic endoribonuclease that specifically cleaves single-stranded RNA at the 3' end of pyrimidine residues.

Lyophilized powder purified from bovine pancreas.

(Activity: ~50 Kunitz units/mg)

GE011.0100

100 mg

DNase I SET

Incubation with the RNase-free DNase I set ensures complete DNA removal from RNA solutions as this enzyme hydrolyzes phosphodiester bonds of dsDNA, ssDNA, chromatin, and DNA-RNA hybrid molecules, without compromising RNA yield and integrity.

(Concentration: 2 Kunitz units/uL)

GKC01.0100

100 rxn

ZYMOLYASE® -20T

Prepared from *Arthrobacter luteus* and supplied as an ammonium sulfate precipitate of a complex of enzymes, allowing for the production of protoplasts or spheroplasts of various yeast strains.

(Lytic activity: 20.000 U/g)

GE013.0001

1 g

SHRIMP ALKALINE PHOSPHATASE (rSAP)

Heat-labile multipurpose alkaline phosphatase that catalyzes the dephosphorylation of DNA, RNA and nucleotides. This recombinant enzyme replaces native SAP because it is much more stable at room temperature and is available at higher concentrations.

(Activity: 1 U/uL)

GE015.0001

1 mL

EXONUCLEASE I

Ribonuclease A is a pancreatic endoribonuclease that specifically cleaves single-stranded RNA at the 3' end of pyrimidine residues.

Lyophilized powder purified from bovine pancreas.

(Activity: 20 U/uL)

GE014.0001

1 mL

COLUMNS

Silica-based spin columns for Nucleic Acid Purifications, which can conveniently be incorporated in your specific method.

PCR PURIFICATION & GEL EXTRACTION	GKC.PG50	50 units
GENOMIC DNA MINI	GKC.GC50	50 units
gDNA PLUS DNA MINI	GKC.GCP50	50 units
GENOMIC DNA FILTER	GKC.GF50	50 units
RNA MINI (INDIVIDUALLY PACKED)	GKC.RC50	50 units
RNA FILTER	GKC.RF50	50 units
VIRAL MINI (INDIVIDUALLY PACKED)	GKC.VC50	50 units
PLASMID MINI	GKC.PN50	50 units

Note: Columns and filter columns are supplied with collection tubes





03

DNA AMPLIFICATION

ROUTINE PCR

IMPROVED ROUTINE PCR

FAST PCR

LONG PCR

HIGH-FIDELITY PCR

DIRECT PCR

qPCR

ONE-STEP qPCR

NUCLEOTIDES

WATER

PCR PLASTICS

END-POINT PCR		
ROUTINE PCR	GRS TAQ	Entry level Taq for routine PCR amplifications
	GRS TAQ HOTSTART	Entry level hotstart Taq for routine PCR amplifications with increased sensitivity and specificity
IMPROVED ROUTINE PCR	XPERT TAQ	Increased robustness and yield, for improved routine PCR
	XPERT HOTSTART	Improved results on demanding amplifications (GC-rich, multiplex, etc)
FAST PCR	XPERT FAST	Extreme speed on robust routine amplifications
	XPERT FAST HOTSTART	Extreme speed on robust routine amplifications with increased specificity
LONG PCR	XPERT TAQ PLUS	Amplification of very long targets, as well as complex and/or crude samples
HIGH-FIDELITY PCR	XPERT HIGHFIDELITY	Fast amplifications with high-fidelity (error-rate 50x lower than Taq)
	XPERT AMPLIFI	Ultra low error-rate (100x lower than Taq) for demanding and complex target
	XPERT AMPLIFI HOTSTART	Improved hotstart technology, together with a ultra low error-rate (100x lower than Taq) for the most demanding and complex targets
DIRECT PCR		
GENERAL	XPERT DIRECTXTRACT	Direct sample lysis (15min) as template for fast and robust PCR, from samples as: Tissue, Blood, Hair, etc. Ideal for mouse genotyping
PLANT	XPERT DIRECTXTRACT PLANT LYSIS KIT	Direct sample lysis (15min) from plant tissue, suitable for direct PCR amplification
qPCR		
INTERCALATING DYE	XPERT FAST SYBR (and ONE-STEP version)	Low inhibition dye technology for improved signal, as well as extreme sensitivity and speed. Also available as One-Step kit
PROBE	XPERT FAST PROBE (and ONE-STEP version)	Highly efficient enzyme for extreme sensitivity and specificity, in both single and multiplex. Also available as One-Step kit.

IMPORTANT:

*GRiSP recommends following our protocol guidelines at all times.
Most of our enzymes are not regular options, and will not work as expected if other protocols are used,
rather than the supplied with the product.*

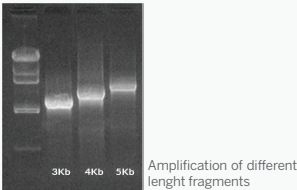
ROUTINE PCR

Wild-type Taq DNA polymerases for routine applications, for regular samples are used.

GRS TAQ

Recombinant thermostable enzyme, with identical characteristics as native Taq regarding activity, specificity, thermostability and performance in PCR. Highly purified, it is the entry level option for routine PCR amplifications.

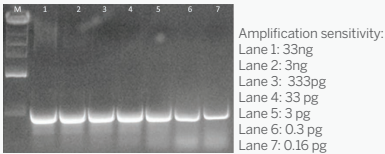
- Amplicon size: up to 5 kb
- Extension Rate: 1 kb/min
- Hotstart: No
- A-overhang: Yes



GRS TAQ HOTSTART

Recombinant thermostable enzyme with antibody based hotstart, for increased sensitivity and specificity. Highly purified, it is the entry level option for routine PCR amplifications when hotstart is required.

- Amplicon size: up to 5 kb
- Extension Rate: 1 kb/min
- Hotstart: Yes
- A-overhang: Yes



GRS TAQ	KIT	GE01.0500	500 U
		GE01.2500	2500 U
	MASTERMIX	GE02.0100	1.25 mL
		GE02.5100	5x 1.25 mL
GRS TAQ HOTSTART	KIT	GE71.0500	500 U
		GE71.2500	2500 U
	MASTERMIX	GE73.0100	1.25 mL
		GE73.5100	5x 1.25 mL

IMPROVED ROUTINE PCR

Improved performance Taq DNA polymerases for demanding routine applications, when regular Taq is not enough.

XPert Taq

DNA polymerase with enhanced performance, optimized for demanding routine amplifications. The robustness, high sensitivity and yield of Xpert Taq DNA polymerase makes this the ideal enzyme for improved routine results.

- Amplicon size: up to 8 kb
- Extension Rate: 1 kb/min
- Hotstart: No
- A-overhang: Yes

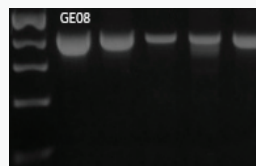


Amplification of a 5Kb fragment from 100 pg to 1 pg.

XPert Hotstart

Chemically modified hotstart Taq DNA polymerase with excellent amplification efficiency, enabling higher specificity, increased sensitivity and greater yield, as compared to standard Taq DNA polymerases. The ideal choice for demanding GC-rich and multiplex amplifications.

- Amplicon size: up to 5 kb
- Extension Rate: 2 kb/min
- Hotstart: Yes (chemical)
- A-overhang: Yes



Amplification comparison versus four competitors with different hotstart methods.

XPert Taq	KIT	GE03.0500	500 U
		GE03.2500	2500 U
	MASTERMIX	GE04.0100	1.25 mL
		GE04.5100	5x 1.25 mL
	MASTERMIX WITH DYE	GE14.0100	1.25 mL
		GE14.5100	5x 1.25 mL
XPert Hotstart	KIT	GE48.0500	500 U
	KIT (+dNTPs)	GE08.0500	500 U
	MASTERMIX	GE18.0100	1.25 mL
		GE18.5100	5x 1.25 mL
	MASTERMIX WITH DYE	GE28.0100	1.25 mL
		GE28.5100	5x 1.25 mL

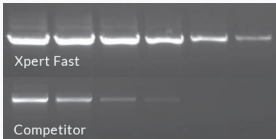
FAST PCR

Based on the enhanced characteristics of Xpert Fast DNA Polymerase, it is now possible to perform amplifications with both sensitivity and speed, saving precious time.

XPert FAST

Robust enzyme, ideal for amplifying with extreme speed, yield and consistency. Even better amplification can be achieved in a much shorter time when compared to conventional Taq DNA polymerases.

- Amplicon size: up to 5 kb
- Extension Rate: 2 sec/Kb
- Hotstart: No
- A-overhang: Yes

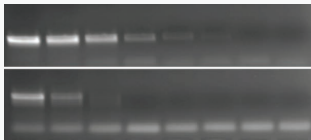


Amplification under fast conditions; Xpert Fast vs competitor fast enzyme.

XPert FAST HOTSTART

Robust enzyme, suitable for the amplification of difficult targets with extreme speed, yield and specificity. The optimized buffer composition makes the enzyme particularly resistant to inhibitors, and thus suitable for direct PCR of unpurified samples, and fast complex PCR amplifications.

- Amplicon size: up to 5 kb
- Extension Rate: 2 sec/Kb
- Hotstart: Yes
- A-overhang: Yes



Top: Xpert Fast Hotstart mastermix; Bottom: competitor fast enzyme

XPert FAST	KIT(dNTPs included)	GE05.0500	500 U
		GE05.2500	2500 U
	MASTERMIX WITH DYE	GE15.0001	1 mL
		GE15.5001	5x 1 mL
XPert FAST HOTSTART	KIT (dNTPs included)	GE25.0250	250 U
		GE35.0001	1 mL
	MASTERMIX	GE35.5001	5x 1 mL
		GE45.0001	1 mL
	MASTERMIX WITH DYE	GE45.5001	5x 1 mL

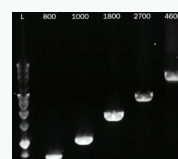
LONG PCR

Long PCR is a demanding application, requiring highly optimized enzymes and buffer systems to ensure correct amplification.

XPERT TAQ PLUS HOTSTART

Enhanced DNA polymerase with superior PCR performance when it comes to the amplification of long fragments. Also recommended for other difficult templates such as mammalian genomic DNA and GC/AT-rich.

- Amplicon size: up to 30 kb
- Extension Rate: 1-4 kb/min
- Hotstart: Yes
- A-overhang: Yes



Amplification of different DNA fragments with high yield and specificity.

XPERT TAQ PLUS HOTSTART	KIT (dNTPs included)	GE09.0250	250 U
	MASTERMIX	GE19.0001	1 mL
		GE19.5001	5x 1 mL
	MASTERMIX WITH DYE	GE29.0001	1 mL
		GE29.5001	5x 1 mL

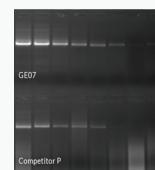
HIGH-FIDELITY PCR

When error introduction is a problem during PCR amplification, regular enzymes are just not good enough. Now with two new enhanced enzymes available.

XPERT HIGHFIDELITY

Robust enzyme with enhanced DNA binding, resulting in improved processivity, yield and low error-rate.

- Amplicon size: up to 10 kb
- Extension Rate: 2 kb/min
- Hotstart: No
- A-overhang: No
- Error-rate: 50x lower than Taq



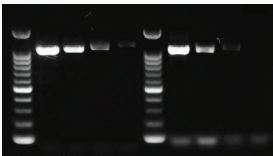
Amplification of a 5kb amplicon. Top: Xpert High-Fidelity; Bottom: competitor P

XPERT HIGHFIDELITY	KIT (dNTPs included)	GE07.0250	250 U
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XPert AMPLIFI

Premium DNA polymerase with superior performance in complex templates, including GC / AT-rich sequences. Very high amplification success rate, across a wide range of challenging templates, along with industry leading error-rate.

- Amplicon size: up to 20 kb
- Extension Rate: 2-6 kb/min
- Hotstart: No
- A-overhang: No
- Error-rate: 100x lower than Taq

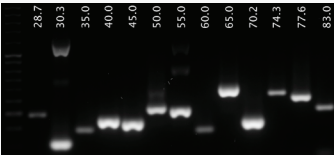


Amplification of a 1kb amplicon (51% GC). Left: Xpert AmpliFi; Right: competitor K

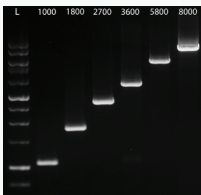
XPert AMPLIFI HOTSTART

Hotstart version of the AmpliFi DNA polymerase. Add to the overall superior performance of this enzyme, all the advantages of a new proprietary hotstart method, including extreme specificity and sensitivity on demanding samples - achieve the best PCR amplification success rate.

- Amplicon size: up to 20 kb
- Extension Rate: 2-6 kb/min
- Hotstart: Yes (reversible)
- A-overhang: No
- Error-rate: 100x lower than Taq



Successful amplification across a wide range of GC content, using Xpert AmpliFi hotstart.



Successful amplification across a wide range of amplicon sizes, using Xpert AmpliFi hotstart.

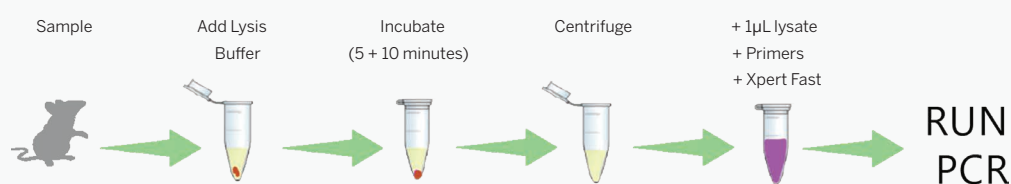
XPert AMPLIFI	KiT (dNTPs included)	GE17.0100	100 U
	MASTERMIX	GE27.0100	1.25 mL
		GE27.5100	5x 1.25 mL
XPert AMPLIFI HOTSTART	KiT (dNTPs included)	GE37.0100	100 U
	MASTERMIX	GE47.0100	1.25 mL
		GE47.5100	5x 1.25 mL

DIRECT PCR

Accompanying the growing need for fast and efficient methods for detection, direct PCR allows for the amplification of DNA from crude sample extracts, with no purification steps, and without any quality compromise.

XPert DIRECTXTRACT PCR KIT

Convenient and easy to use combination of a simple and efficient DNA extraction method with the direct amplification using Xpert Fast hotstart DNA polymerase.

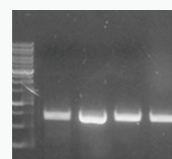


- Total procedure time: ~1h
- Suitable for a wide variety of samples, including whole blood, mouse tails, FTA-cards, and FFPE tissue
- Ideal for genotyping and screening applications

XPert DIRECTXTRACT PLANT LYSIS KIT

DNA extraction is carried out in a single tube, without the need of multiple washing steps, therefore minimizing the risk of contamination, eliminating the need for the time-consuming and costly process of freezing plant tissues with liquid nitrogen, followed by mechanical disruption, organic extraction, and column-based DNA purification.

- Fast and simple procedure
- Universal for various plant samples



Amplification of a 700bp target from 4 different leaf samples, using Xpert directXtract Plant Lysis Kit

XPert DIRECTXTRACT	KIT WITH DYE	GE60.0080	80 rxn
		GE60.0480	480 rxn
	KIT WITHOUT DYE	GE62.0080	80 rxn
		GE62.0480	480 rxn
	LYSIS BUFFER ONLY	GE61.0080	80 rxn
XPert DIRECTXTRACT PLANT LYSIS KIT	LYSIS KIT	GE65.0100	100 rxn

qPCR

Despite being one of the most widely used technique by researchers, qPCR is still a growing field for new applications, pushed by advances in enzyme performance. Available for both probe based and intercalating dye based assays, for fast and accurate results.

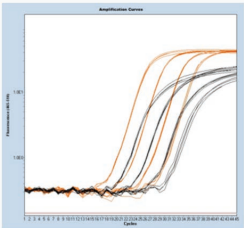
XPERT FAST SYBR

Combination of a highly efficient hotstart enzyme with a novel low inhibition technology. Extreme sensitivity and specificity is achieved, as a result of the little to no inhibition caused by the intercalating dye.

- Early Ct values
- Extreme sensitivity
- Excellent signal
- Convenient 1mL aliquots for reduced contamination risk

APPLICATIONS:

- Absolute quantification
- Gene Expression Analysis
- High-throughput PCR
- Low-copy number target gene detection



Amplification comparative test between Xpert Fast SYBR (orange) and competitor T (black), for ACTG1 gene.

Available as BLUE version, for visual pipetting aid

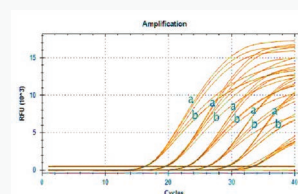


XPERT FAST SYBR	UNIVERSAL	GE20.0100	1 mL
		GE20.5100	5x 1 mL
		GE20.2501	25x 1 mL
	UNIVERSAL / BLUE	GE22.0100	1 mL
		GE22.5100	5x 1 mL
		GE22.2501	25x 1 mL
	FLUORESCCEIN	GE21.0100	1 mL
		GE21.5100	5x 1 mL
		GE21.2501	25x 1 mL

XPert FAST PROBE

Highly efficient hotstart enzyme optimized for prevention of primer-dimers, and allowing for extremely high sensitivity and specificity, both with singleplex and multiplex applications. Compatible with all common probe-based qPCR assays.

- Highly efficient multiplex
- Extreme sensitivity
- Efficient amplification of GC/AT-rich sequences
- Convenient 1mL aliquots for reduced contamination risk



Xpert Fast Probe amplifications in Singleplex (A) and Quadplex (B), using TaqMan Probes

APPLICATIONS:

- Absolute quantification
- Gene Expression Analysis
- Multiplex and singleplex applications
- Low-copy number target gene detection



Available as BLUE version, for visual pipetting aid

XPert FAST PROBE	UNIVERSAL	GE30.0100	1 mL
		GE30.5100	5x 1 mL
		GE30.2501	25x 1 mL
	UNIVERSAL / BLUE	GE32.0100	1 mL
		GE32.5100	5x 1 mL
		GE32.2501	25x 1 mL

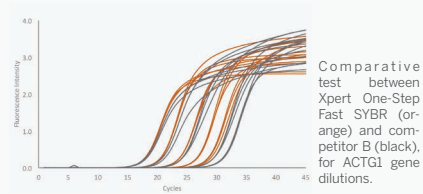
ONE-STEP qPCR

Adding convenience and reducing contamination probability to the widely used qPCR technique, allows One-Step options to bring extra advantages on sensitive applications.

XPERT ONE-STEP FAST SYBR

First-strand cDNA synthesis and subsequent qPCR in a single-tube reaction procedure, decreasing contamination risk and reducing hands-on time considerably. For intercalating dye applications.

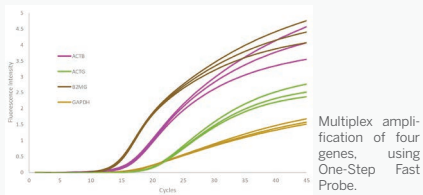
- Thermostable RTase included
- Extreme sensitivity
- Excellent signal
- Convenient aliquots for reduced contamination risk



XPERT ONE-STEP FAST PROBE

First-strand cDNA synthesis and subsequent qPCR in a single-tube reaction procedure, decreasing contamination risk and reducing hands-on time considerably. For probe based applications.

- Thermostable RTase included
- Extreme sensitivity
- High efficiency in multiplex applications
- Convenient aliquots for reduced contamination risk



XPERT ONE-STEP FAST SYBR	UNIVERSAL	GE40.0100	100 rxn
		GE40.5100	5X 100 rxn
XPERT ONE-STEP FAST PROBE	UNIVERSAL	GE50.0100	100 rxn
		GE50.5100	5X 100 rxn

NUCLEOTIDES

Highly pure (>99%) dNTPs, free of endonucleases, exonucleases, RNase, and phosphatase activity.

GRS dNTP MIX

Aqueous solution of equimolar amounts (10mM each) of dATP, dCTP, dGTP, and dTTP at pH 7.0

GP010.0001	1 mL
GP010.0501	5x 1 mL

GRS dNTP SET

100mM aqueous solutions of dATP, dCTP, dGTP, and dTTP at pH 7.0

GP011.0411	4x 0.25 mL
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WATER

Ultrapure water, free of DNases, RNases, Phosphatases and Nucleic Acids. Not DEPC treated.

GRS PCR GRADE WATER

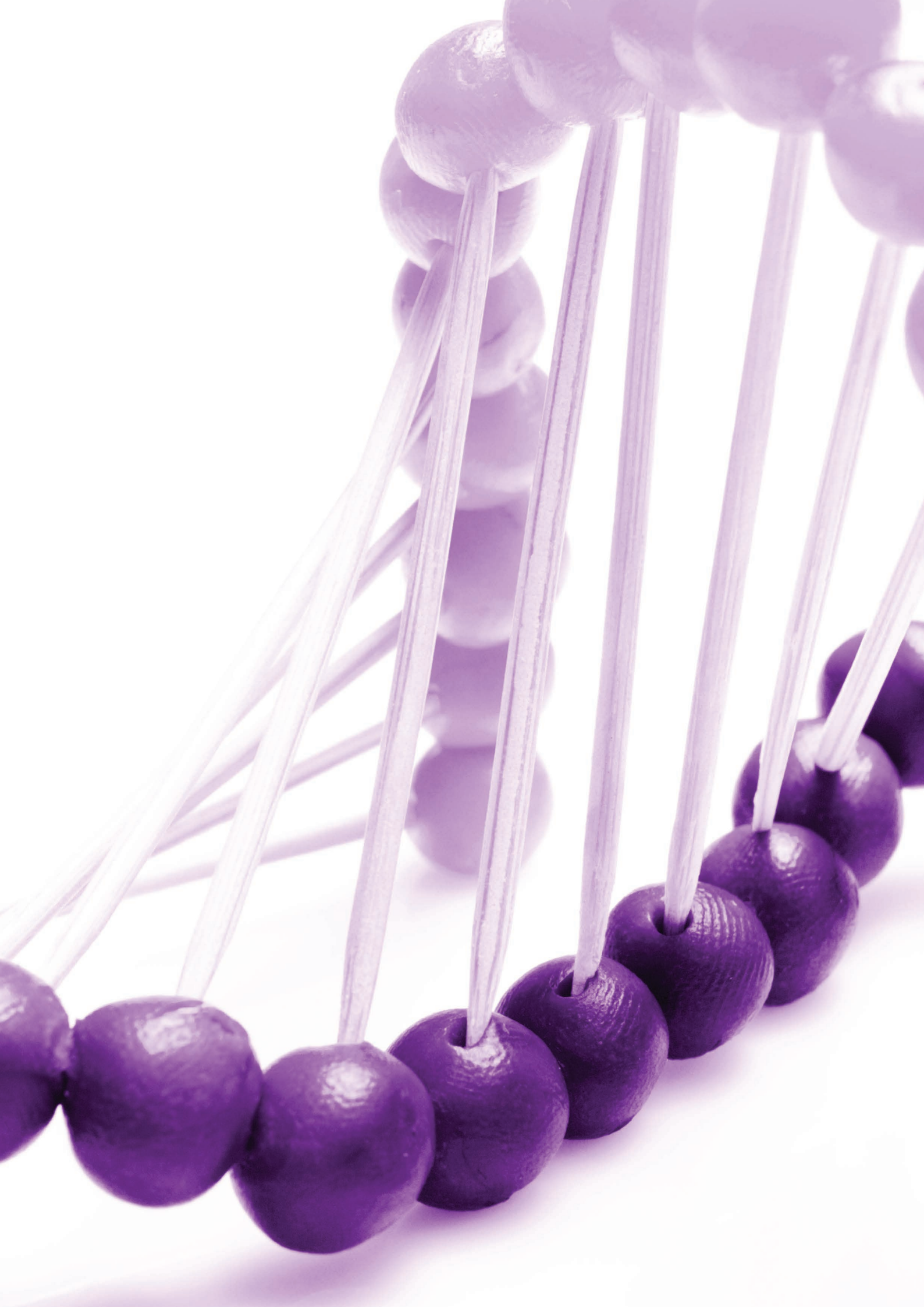
Quality tested, ultrapure water suitable for all molecular biology applications, including PCR, RT-PCR, and realtime PCR. GRS PCR grade water is prepared by a purification process that does not use chemical compounds such as DEPC.

GW010.1001	10x 1 mL
GW010.1000	1 L

PCR PLASTICS

High quality, european made, plasticware for PCR and qPCR applications. Functionally QC tested, free of nucleases, human gDNA and endotoxins.

TUBES	GRS INDIVIDUAL 0.2 mL PCR TUBES (FLAT CAP)	GPP01.1000	1000 UNITS
STRIPS	GRS PCR STRIPS 0.2 mL (ATTACHED FLAT CAPS)	GPP02.0120	120 STRIPS
	GRS PCR STRIPS 0.1 mL (ATTACHED FLAT CAPS)	GPP03.0120	120 STRIPS
	GRS PCR STRIPS OF 0.2 mL TUBES + STRIPS OF FLAT CAPS	GPP04.0120	120 STRIPS
	GRS PCR STRIPS OF 4 TUBES WITH CAPS (FOR ROTOR-GENE®)	GPP14.0250	250 TUBES + CAPS
PLATES	GRS 96W PCR PLATES (NON-SKIRTED)	GPP05.0050	50 PLATES
	GRS 96W PCR PLATES (HALF-SKIRTED)	GPP06.0050	50 PLATES
	GRS 96W PCR PLATES (HALF-SKIRTED) WHITE	GPP07.0050	50 PLATES
	GRS 96W PCR PLATES (FULL-SKIRTED)	GPP08.0050	50 PLATES
	GRS 96W PCR PLATES (FULL-SKIRTED) WHITE	GPP09.0050	50 PLATES
	GRS 384W PCR PLATES (FULL-SKIRTED)	GPP17.0050	50 PLATES
	GRS 0,1 ml FAST PCR PLATES (HALF-SKIRTED)	GPP16.0025	25 PLATES
	GRS 96W PCR PLATE (HALF-SKIRTED) (LOW PROFILE - FOR LC480)	GPP13.0050	50 PLATES
SEALS	GRS PCR SEALS	GPP10.0100	100 SEALS
	GRS qPCR SEALS	GPP11.0100	100 SEALS
CAPS	GRS 8-STRIPS OF FLAT CAPS	GPP12.0125	125 STRIPS
OTHERS	GRS ROLL FOR ADHESIVE SEALS	GPP15.0001	1 UNIT





04

RNA RESEARCH

cDNA SYNTHESIS

STORAGE & DECONTAMINATION

cDNA SYNTHESIS

Engineered reverse transcriptase enzymes with extreme performance (45°C-55°C stability, no RNase H activity and capable of preparing full-length cDNAs). Ideal for achieving consistent results, even for demanding samples. Available in different convenient formats.

XPert cDNA SYNTHESIS KIT

Kit version, containing all necessary components for high performance cDNA synthesis applications (including the high performance Xpert RTase), in separate vials. Oligo(dT)20 and random hexamer primers included.

GK80.0100	100 rxn
GK80.3100	3 x 100 rxn

XPert cDNA SYNTHESIS MASTERMIX

Mastermix version, containing all necessary components for high performance cDNA synthesis applications, in a optimized format (Oligo(dT)20 and random hexamer primers included in the mastermix). The high performance Xpert RTase is supplied in a separate vial.

GK81.0100	100 rxn
GK81.3100	3 x 100 rxn

Ideal option for a convenient and optimized utilization.

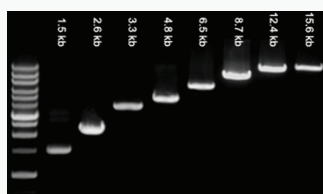
XPert cDNA SYNTHESIS SUPERMIX (WITH gDNA ERASER)

Supermix version, containing all necessary components for high performance cDNA synthesis applications, in mastermix format (Oligo(dT)20 and random hexamer primers, as well as the high performance Xpert RTase) included. Containing additional gDNA Eraser, for 10 min removal of contaminating gDNA from the sample)

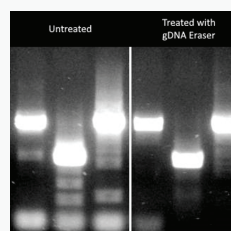
GK82.0100	100 rxn
GK82.3100	3 x 100 rxn

Ideal option for a optimized performance with extended assurance.

XPert cDNA SYNTHESIS KIT AND MASTERMIX
ELONGATION PERFORMANCE



SAMPLE TREATMENT WITH gDNA ERASER



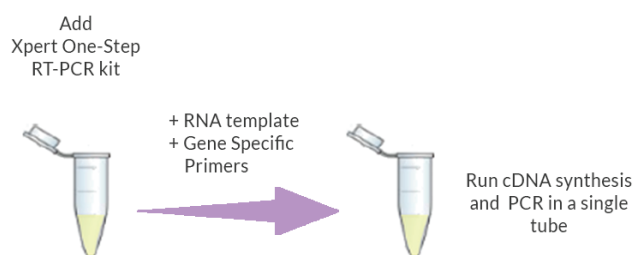
XPERT ONE-STEP RT-PCR KIT

Consisting of a RTase mix and a Fast PCR Mastermix, the Xpert One-Step RT PCR Kit can be used with any RNA template, including mRNA, viral RNA and total RNA, as the RTase is not inhibited by rRNA or tRNA. Provides a robust RT-PCR performance that requires minimal to no optimization.

GK64.0100

100 rxn

The RTase mix comprises a genetically modified thermostable MMLV reverse transcriptase with improved synthesis efficiency, and an advanced RNase inhibitor to impede RNA degradation. The Fast PCR Mastermix contains all other required components, including a fast hotstart DNA polymerase for improved speed, sensitivity and specificity.



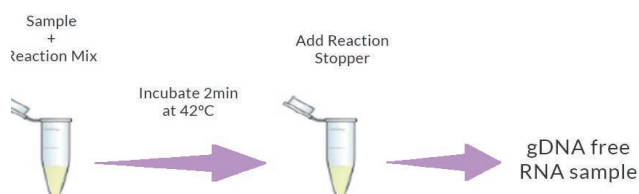
KIT (GK80)	MASTERMIX (GK81)	SUPERMIX WITH gDNA ERASER (GK82)
EACH COMPONENT SUPPLIED IN A SEPARATE VIAL	ALL COMPONENTS (EXCEPT RTase) SUPPLIED IN A SINGLE VIAL	ALL COMPONENTS SUPPLIED IN A SINGLE VIAL. ADDITIONAL VIALS INCLUDED, FOR gDNA ERASER
VERSATILE USERS LOOKING FOR CONTROL OVER COMPONENTS AMOUNT AND RATIO	OPTIMIZED USERS LOOKING FOR FAST AND OPTIMIZED PERFORMANCE	ASSURANCE USERS LOOKING FOR THE HIGHEST ASSURANCE AND CONVENIENCE, OR DEALING WITH gDNA CONTAMINATION ISSUES
XPERT ONE-STEP RT-PCR KIT	FOR cDNA SYNTHESIS AND PCR AMPLIFICATION IN A SINGLE TUBE USING GENE SPECIFIC PRIMERS	

gDNA ERASER DNA REMOVAL KIT

The gDNA Eraser DNA Removal Kit offers a quick and effective method for the elimination of contaminating DNA from RNA samples. Any residual DNA (ssDNA, dsDNA and plasmid DNA) is eliminated efficiently from the RNA sample in just a few minutes. The reaction is stopped by adding a stop solution, eliminating the need of a heating or organic extraction step that could be prejudicial to the RNA integrity. The gDNA-free RNA solution can then be reverse-transcribed into cDNA directly.

GK83.0200

200 rxn



RNase INHIBITOR (40U/μL)

RNase Inhibitor specifically inhibits common RNases, including RNase A, RNase B, and RNase C. As the RNase inhibitor does not interfere with DNA polymerase activity, it is an extremely useful additive in PCR and RT-PCR. GRiSP's RNase Inhibitor is a sturdy enzyme with improved resistance to oxidation, being stable under very low concentrations (<1mM) of DTT.

GE85.0100

100 μL

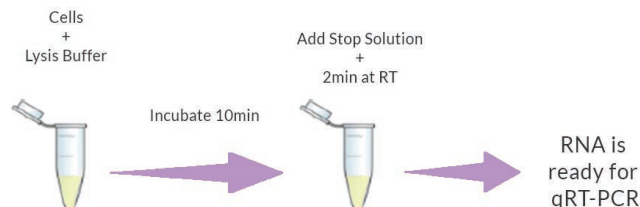
XPERT cDNA READY LYSIS KIT

Provides a simple, fast and reliable method to prepare template RNA for cDNA synthesis, directly from cultured cells, without the need for the time-consuming process of RNA purification by a column-based method or the usage of hazardous reagents such as Trizol®. Cells are efficiently lysed whilst genomic DNA is eliminated simultaneously.

GK84.0050

50 rxn

RNA is ready for qRT-PCR in less than 15 minutes!



STORAGE & DECONTAMINATION

Solutions for storing RNA and for decontamination of work material.

RNA STAND-BY SOLUTION

Aqueous solution that inactivates RNases and preserves cellular RNA of intact fresh tissues or cells. Does not jeopardize quality nor quantity of RNA to be isolated subsequently, whether the sample is stored frozen or not. Perfect for tissue collection and storage.

GB33.0100**100 mL**

RNase XTERMINATOR SPRAY

Ready-to-use solution, supplied in an easy-to-use Spray Bottle, for eliminating RNase, DNase, and other enzymes, as well as DNA contamination, from laboratory surfaces and material. Simply spray on the contaminated area and wipe away from the surface using ultrapure water.

GB43.500S**500 mL**





05

CLONING

CLONING KITS
ANTIBIOTICS
MISCELANEOUS

CLONING KITS

Solutions for efficient, fast and robust TA-cloning of PCR products.

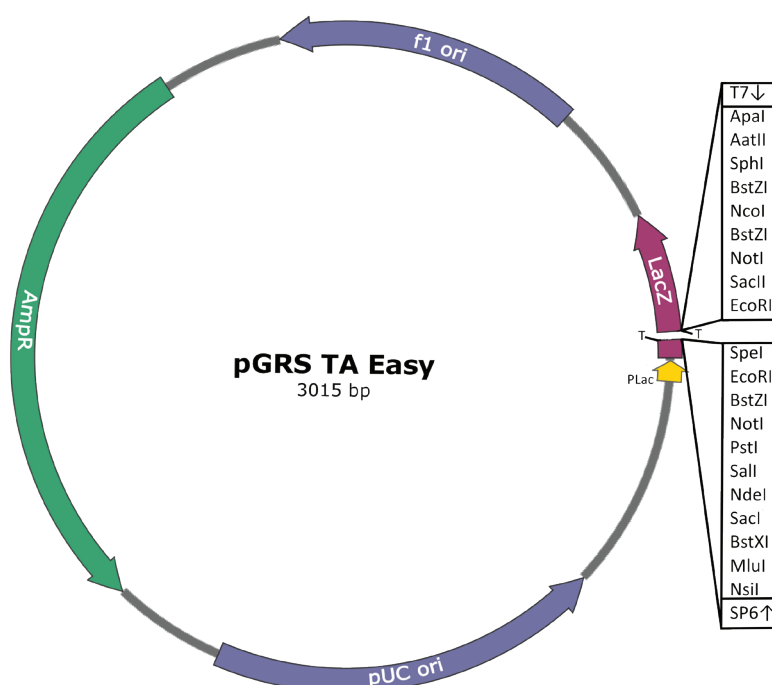
XPert TA EASY CLONING KIT

The Xpert TA Easy cloning kit is designed for the direct ligation of PCR fragments containing 3'-A overhangs (generated using non-proofreading DNA polymerases such as Taq or blends thereof) into a ready-to-use stable linearized vector.

This system offers greater efficiency than most TA vectors available (with over 700 positive colonies under optimal conditions) and with a low background (less than 4%) due to reduced self-ligation.

GC05.0010	10 rxn
GC05.0020	2 x 10 rxn

- Ready-to-use stable linearized vector
- Very efficient (>700 positive colonies under optimal conditions)
- Low background (4%) due to reduced self-ligation
- Up to 10kb inserts
- Direct cloning (no product purification needed)
- Blue-white screening
- T7/SP6 dual opposed promoters for in vitro transcription
- Flanking pUC/M13 primer binding sites for sequencing
- Flanking EcoRI and NotI recognition sites for single enzyme digestion
- Filamentous phage f1 origin of replication



ANTIBIOTICS

High purity antibiotics, used in various molecular biology experiments, including cloning.

AMPICILLIN (SODIUM SALT)

GAB03.0005	5 g
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KANAMYCIN (SULPHATE)

GAB04.0005	5 g
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CHLORAMPHENICOL

GAB05.0005	5 g
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CARBENICILLIN (DISODIUM SALT)

GAB06.0005	5 g
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TETRACYCLINE (HYDROCHLORIDE)

GAB07.0005	5 g
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GENTAMYCIN (SULPHATE)

GAB08.0005	5 g
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MISCELANEOUS

Reagents and enzymes commonly used in cloning experiments.

T4 DNA LIGASE (5U/ μ L)

GC03.1000	1000 U
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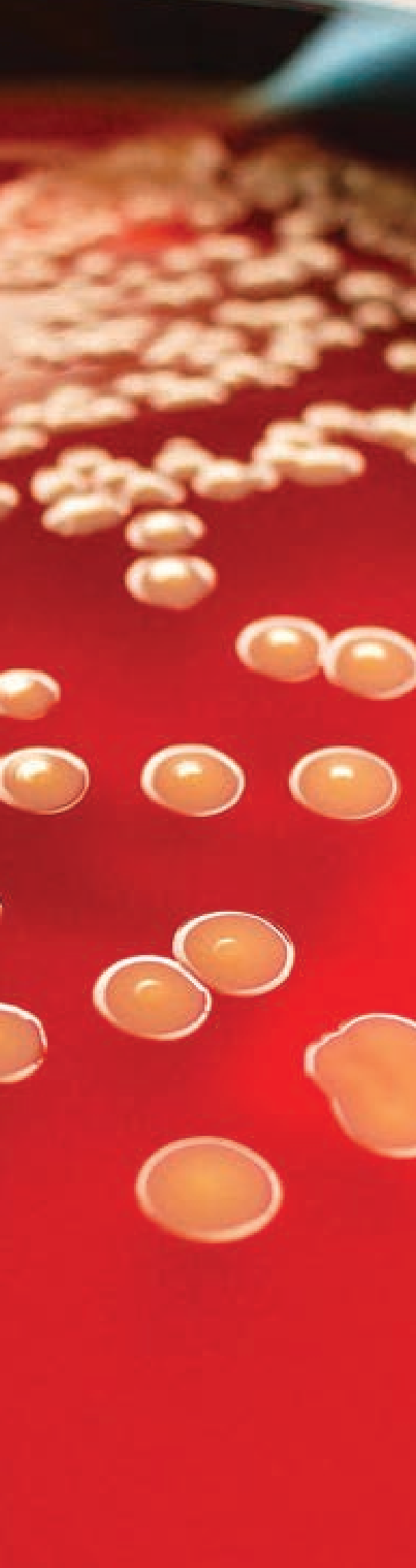
IPTG (max 5ppm dioxane)

GAB01.0005	5 g
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X-GAL (>99% purity)

GAB02.0001	1 g
GAB02.0005	5 g





06

CULTURE MEDIA



AUTO-INDUCTION MEDIA

STANDARD MEDIA

MEDIA COMPONENTS

AUTO-INDUCTION MEDIA

Dehydrated powders, supplemented with glucose and alpha lactose, for the induction of protein expression under the control of IPTG-inducible promoters in *E.coli*.

- **No cell density monitoring needed** – induction will start automatically at high cell density
- **Automatic induction of protein expression** – no need to add IPTG (already included in the medium)
- **Saves money, time and work** – saves money as there is no need to buy IPTG; saves time and work as there is no need to be monitoring the culture and taking samples.

With Auto-Induction Media, instead of the laborious monitoring of cell density, researchers can inoculate and leave the culture as is, knowing that expression will start at high cell density, automatically. There is no need to monitor the cell density and there is no conventional induction with IPTG. Each medium contains, per L: .5g Glucose, 2g alpha-lactose, 0.15g MgSO_4 , 3.3g $(\text{NH}_4)_2\text{SO}_4$, 7.1g Na_2HPO_4 , 6.8g KH_2PO_4 .

LB BROTH (AIM)

GCM17.0500	500 g
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• Tryptone: 10g/L | Yeast Extract: 5g/L

2X YT BROTH (AIM)

GCM18.0500	500 g
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• Tryptone: 16g/L | Yeast Extract: 10g/L

TERRIFIC BROTH (AIM)

GCM19.0500	500 g
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• Tryptone: 12g/L | Yeast Extract: 24g/L

SUPER BROTH (AIM)

GCM20.0500	500 g
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• Tryptone: 35g/L | Yeast Extract: 20g/L

STANDARD MEDIA

Dehydrated powder for the preparation of broth or agar plates, for the growth of bacteria or yeast in molecular biology applications.

LB AGAR (LENNOX)

• Tryptone: 10g/L | Yeast Extract: 5g/L | NaCl: 5g/L | Bacteriological Agar: 15g/L

GCM01.0500	500 g
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LB BROTH (LENNOX)

• Tryptone: 10g/L | Yeast Extract: 5g/L | NaCl: 5g/L

GCM02.0500	500 g
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LURIA AGAR (MILLER'S LB AGAR)

• Tryptone: 10g/L | Yeast Extract: 5g/L | NaCl: 10g/L | Bacteriological Agar: 15g/L

GCM03.0500	500 g
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LURIA BROTH (MILLER'S LB BROTH)

• Tryptone: 10g/L | Yeast Extract: 5g/L | NaCl: 10g/L

GCM04.0500	500 g
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LURIA AGAR (MILLER'S MODIFICATION)

• Tryptone: 10g/L | Yeast Extract: 5g/L | NaCl: 0.5g/L | Bacteriological Agar: 15g/L

GCM05.0500	500 g
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LURIA BROTH (MILLER'S MODIFICATION)

• Tryptone: 10g/L | Yeast Extract: 5g/L | NaCl: 0.5g/L

GCM06.0500	500 g
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TERRIFIC BROTH

• Tryptone: 12g/L | Yeast Extract: 24g/L | K_2HPO_4 : 12.54g/L | KH_2PO_4 : 2.31g/L

GCM07.0500	500 g
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MODIFIED TERRIFIC BROTH

• Tryptone: 12g/L | Yeast Extract: 24g/L | K_2HPO_4 : 9.4g/L | KH_2PO_4 : 2.2g/L

GCM08.0500	500 g
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2X YT MEDIUM

GCM09.0500

500 g

- Tryptone: 16g/L | Yeast Extract: 10g/L | NaCl: 5g/L

2X YT AGAR

GCM10.0500

500 g

- Tryptone: 16g/L | Yeast Extract: 10g/L | NaCl: 5g/L | Bacteriological Agar: 15g/L

SOB MEDIUM

GCM11.0500

500 g

- Tryptone: 20g/L | Yeast Extract: 5g/L | NaCl: 0.5g/L | $MgCl_2$: 0.96g/L | KCl: 0.186g/L

SOC MEDIUM

GCM12.0500

500 g

- Tryptone: 20g/L | Yeast Extract: 5g/L | NaCl: 0.5g/L | $MgCl_2$: 0.96g/L | Glucose: 3.60g/L | KCl: 0.186g/L

YPD BROTH

GCM13.0500

500 g

- Peptone: 20g/L | Yeast Extract: 10g/L | Dextrose: 20g/L

YPD AGAR

GCM14.0500

500 g

- Peptone: 20g/L | Yeast Extract: 10g/L | Dextrose: 20g/L | Bacteriological Agar: 15g/L

YNB**WITHOUT AMINO ACIDS AND WITHOUT AMMONIUM SULFATE**

GCM15.0500

500 g

- YNB: 1.7g/L

YNB**WITHOUT AMINO ACIDS AND WITH AMMONIUM SULFATE**

GCM16.0500

500 g

- YNB: 1.7g/L | Ammonium Sulfate: 5g/L

MEDIA COMPONENTS

Components for the preparation of commonly used culture media in molecular biology applications.

PEPTONE

GCM21.0500	500 g
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BACTERIOLOGICAL PEPTONE

GCM22.0500	500 g
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TRYPTONE

GCM23.0500	500 g
------------	-------

YEAST EXTRACT

GCM24.0500	500 g
------------	-------

BACTERIOLOGICAL AGAR

GCM25.0500	500 g
------------	-------

DEXTROSE

GCM26.0500	500 g
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SUCROSE

GCM27.0500	500 g
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07

PROTEIN RESEARCH

PROTEIN ELECTROPHORESIS
STAINING & STRIPPING
PROTEASE INHIBITORS
PROTEIN MARKERS

PROTEIN ELECTROPHORESIS

High purity solutions and reagents for the preparation of polyacrylamide gels for protein electrophoresis.

ACRYLAMIDE/BISACRYLAMIDE SOLUTION (19:1)

The concentration of this product (30% or 40%) is determined by the total (T) weight of both acrylamide and bisacrylamide (T= 30g or T=40g, per 100ml), in which the mix ratio is 19:1 resulting in a cross-linking (C) of 5%.
A ratio of 19:1 is suitable for the separation of small peptides.

30%	GB16.3019	500 mL
40%	GB16.4019	500 mL

ACRYLAMIDE/BISACRYLAMIDE SOLUTION (29:1)

The concentration of this product (30% or 40%) is determined by the total (T) weight of both acrylamide and bisacrylamide (T= 30g or T=40g, per 100ml), in which the mix ratio is 29:1 resulting in a cross-linking (C) of 3.3%.
A ratio of 29:1 is commonly used for the separation of "normal sized" proteins.

30%	GB16.3029	500 mL
40%	GB16.4029	500 mL

ACRYLAMIDE/BISACRYLAMIDE SOLUTION (37.5:1)

The concentration of this product (30% or 40%) is determined by the total (T) weight of both acrylamide and bisacrylamide (T= 30g or T=40g, per 100ml), in which the mix ratio is 37.5:1 resulting in a cross-linking (C) of 2.7%.
A ratio of 37.5:1 is used for separating high molecular weight proteins.

30%	GB16.3037	500 mL
40%	GB16.4037	500 mL

APS (AMMONIUM PERSULPHATE)

Commonly used reagent for the preparation of polyacrylamide gels for electrophoresis. In aqueous solutions APS forms oxygen free radicals, which initiate the polymerization of acrylamide and bisacrylamide to form a gel matrix.

GS20.0025	25 g
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TEMED

Commonly used catalyst, together with APS (ammonium persulphate), for the preparation of polyacrylamide gels for electrophoresis.

GS21.0025	25 mL
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STAINING & STRIPPING

High purity solutions for staining and for antibody stripping applications.

GRS STRIPPING SOLUTION

Designed for removing antibodies from developed membranes after Western Blotting, allowing for multiple detection with other sets of antibodies (reprobing). The solution does not contain DTT or β -mercaptoethanol, thus leaving disulfide bridges intact

GB20.0500	500 mL
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PONCEAU S SOLUTION

Allows for the rapid and reversible detection of proteins on nitrocellulose and PVDF membranes for the verification of the transfer efficiency of Western Blotting before proceeding with incubation with primary antibody.

GB21.0500	500 mL
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COOMASSIE BRILLIANT BLUE

Coomassie Brilliant Blue G-250 (CBB) is widely used for visualizing proteins after electrophoresis. For in-gel staining of proteins. Suitable for acrylamide and agarose gels.

GS22.1000	1 L
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PROTEASE INHIBITORS

Mix of several compounds that inhibit protease activity, used to protect against undesired protein digestion during and after cell lysis.

GRS PROTEASE INHIBITOR COCKTAIL (WITH EDTA)

Comprises 100mM PMSF, 2mM Bestatin, 0.3mM Pepstatin A, 0.3mM E-64, and 100mM EDTA, dissolved in DMSO containing a small amount of deionized water.

GPI01.0001	1 mL
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PROTEASE INHIBITOR COCKTAIL

Comprises 100mM PMSF, 2mM Bestatin, 0.3mM Pepstatin A, 0.3mM E-64, dissolved in DMSO containing a small amount of deionized water.

GPI02.0001	1 mL
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PROTEIN MARKERS

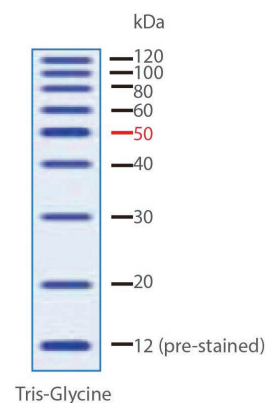
Set of unstained and pre-stained ready-to-use protein markers for SDS-PAGE and Western Blotting.

Recommended loading of 3-5 μL for protein electrophoresis.

GRS UNSTAINED PROTEIN MARKER

This marker is composed of 8 unstained proteins and 1 pre-stained protein (blue) for monitoring of electrophoresis and verification of transfer efficiency of Western Blotting onto membrane (compatible with PVDF, nylon and nitrocellulose). These unstained proteins range from 20kDa to 120kDa, whereas the pre-stained protein co-migrates with proteins of approximately 12kDa (depending on the SDS-PAGE conditions). For easy identification of each band, the 50kDa band has double intensity to serve as an internal reference.

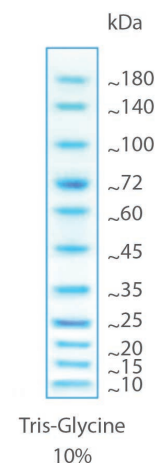
GLP10.0500	500 μL
GLP10.3500	3x 500 μL



GRS PROTEIN MARKER BLUE

Ready-to-use pre-stained protein marker suitable for monitoring protein separation during SDS-PAGE, verification of Western Blotting Transfer Efficiency onto membranes and for estimation of the molecular weight of proteins and/or polypeptides in the range of 10-180kDa. The GRS Protein Marker Blue is composed of 11 blue bands including 2 reference bands with more intense colour for easy identification (~25kDa and ~72kDa).

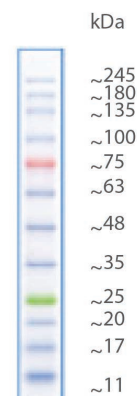
GLP02.0500	500 μL
GLP02.3500	3x 500 μL



GRS PROTEIN MARKER MULTICOLOUR

Ready-to-use pre-stained protein marker suitable for monitoring protein separation during SDS-PAGE, verification of Western Blotting Transfer Efficiency onto membranes, and for estimation of the molecular weight of proteins and/or polypeptides in the range of 10-250kDa. The GRS Protein Marker Multicolour is composed of 12 bands: 10 blue bands and 2 reference bands with different colours for easy identification (one red band (~25kDa) and one green band (~75kDa)).

GLP01.0500	500 µL
GLP01.3500	3x 500 µL

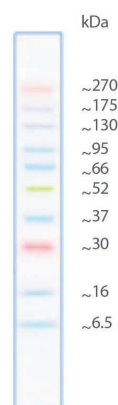


Tris-Glycine
4 - 20%

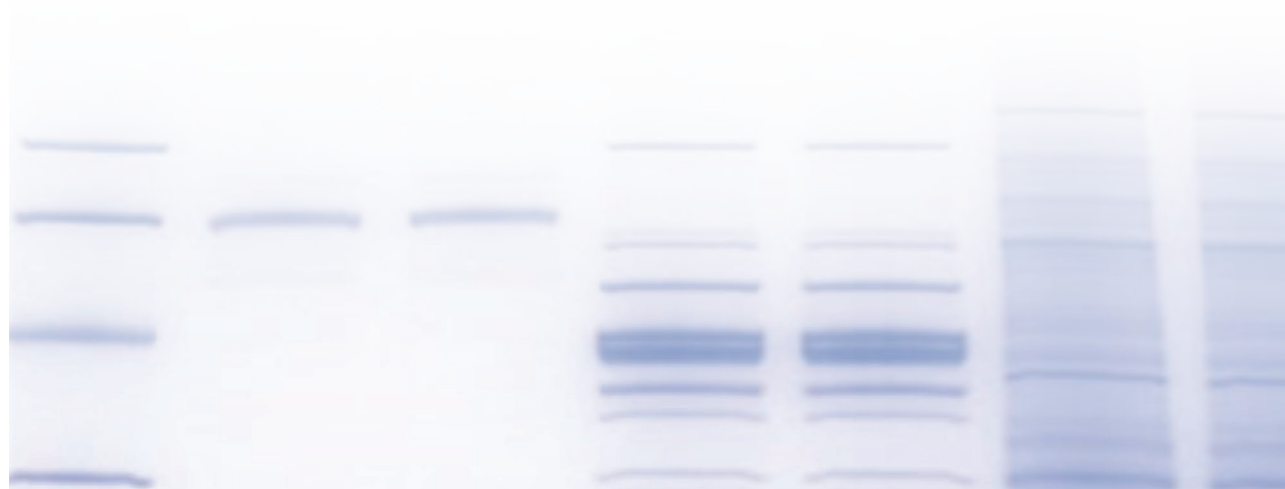
GRS PROTEIN MARKER MULTICOLOUR PLUS

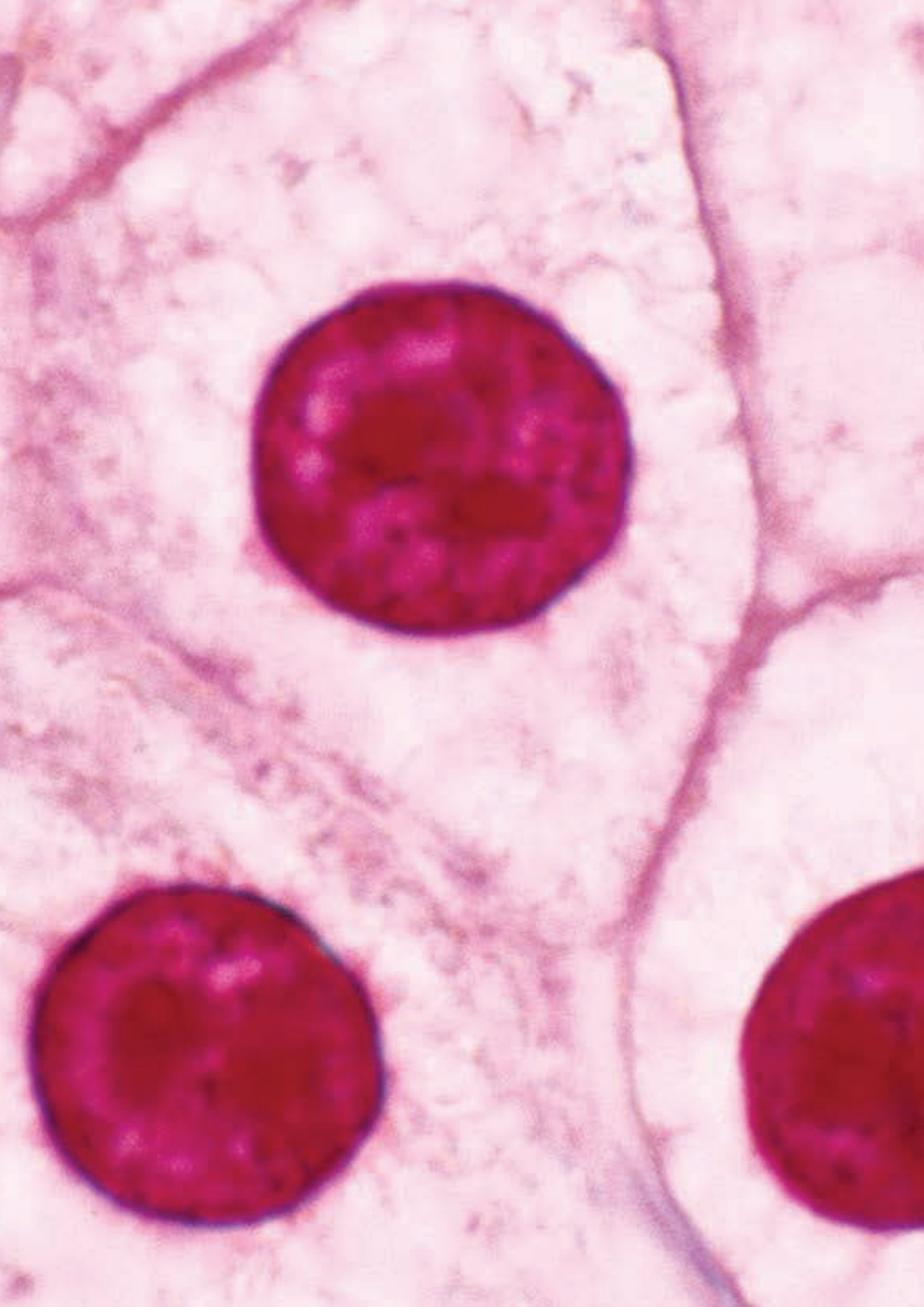
Ready-to-use three-colour protein standard suitable for monitoring protein separation during SDS-PAGE, size determination of proteins, and verification of transfer efficiency of Western Blotting onto membrane (compatible with PVDF, nylon and nitrocellulose). This marker is composed of 10 pre-stained proteins ranging from 6.5kDa to 270kDa. For easy identification of each band, it includes three reference bands of different colours that co-migrate with proteins of 30kDa (red), 52kDa (green) and 270kDa (red), respectively, when separated by 4-20% gradient SDS-PAGE using TGS Buffer.

GLP03.0500	500 µL
GLP03.3500	3x 500 µL



Tris-Glycine
4 - 20%





A vertical strip on the left side of the page shows a microscopic image of cells, likely stained with a pink dye, showing various cellular structures and a prominent dark circular cell in the lower-left corner.

08

CELL BIOLOGY

CELL DETACHMENT

TRANSFECTION

SUPPLEMENTS

ANTIBIOTICS

CELL BIOLOGY SOLUTIONS

ASSAYS

CELL DETACHMENT

Solutions for detachment of cells in cell culture applications. From the most common Trypsin to the new and advantageous Accutase.

ACCUTASE

Ready-to-use non-mammalian, non-bacterial replacement for all applications of trypsin. Accutase® is a natural enzyme mixture with proteolytic and collagenolytic enzyme activity. This means it mimics the action of trypsin and collagenases. Less toxic and more gentle than Trypsin, but just as effective. Works extremely well on embryonic and neuronal stem cells.

GTC01.0100

100 mL

TRYPSIN-EDTA (0.05%) IN DPBS (1X)

Filter sterilized solution of 0.05% Trypsin from porcine pancreas in PBS (pH 7.0-7.6) with EDTA, w/o Ca²⁺, w/o Mg²⁺ and without Phenol red.

GTC02.0100

100 mL

TRYPSIN-EDTA (0.5%) IN DPBS (10X)

Filter sterilized solution of 0.5% Trypsin from porcine pancreas in 10x DPBS (pH 7.0-7.6) with EDTA, without Ca²⁺, without Mg²⁺, and without phenol red.

GTC06.0100

100 mL

TRANSFECTION

Solution used for the selection and maintenance of eukaryotic cells, stably transfected with neomycin resistance genes.

G-418 SULFATE SOLUTION

Geneticin is an aminoglycoside antibiotic from *Micromonospora rhodorangea*, related to Gentamicin, which acts by inhibiting protein synthesis. It exhibits toxicity towards both prokaryotic and eukaryotic cells, allowing for the selection and maintenance of cells harbouring the Tn5-derived neomycin resistance gene (neo) encoding amino-glycoside-3'-phosphotransferase.

GTC12.0010

10 mL

SUPPLEMENTS

Solutions commonly used as supplements in cell culture applications.

L-GLUTAMINE

Filter sterilized, 200mM L-Glutamine. Essential amino acid to be used as a serum-free supplement in cell culture media.

GTC03.0100

100 mL

STABLE L-GLUTAMINE

Filter sterilized, 200mM stabilized L-Glutamine (L-alanyl-L-Glutamine). Essential amino acid to be used as a serum-free supplement in cell culture media.

GTC04.0100

100 mL

HYBRIDOMA SUPPLEMENT (SERUM-FREE)

Chemically defined serum-free growth promoting supplement, suitable for fusion, selection and cloning of hybridoma cells.

GTC07.0050

50 mL

ANTIBIOTICS

The most widely used antibiotics for cell culture applications, including a very useful mycoplasma removal reagent.

PENICILLIN-STREPTOMYCIN

Filter sterilized, ready-to-use concentrated broad band antibiotic mixture of 10000U/ml Penicillin and 10mg/ml Streptomycin in 0.9% NaCl, effective against Gram(+) and Gram(-) bacteria.

GTC05.0100

100 mL

ANTIBIOTIC-ANTIMYCOTIC SOLUTION

mixture of Penicillin, Streptomycin, and Amphotericin B in saline solution, and is used to prevent bacterial and fungal contamination in cell cultures.

GTC10.0100

100 mL

MYCOPLASMA REMOVAL REAGENT

Highly efficient antibiotic that at low concentration exhibits toxicity towards a broad range of mycoplasma subspecies, for the treatment of mycoplasma contaminated cell cultures.

GTC11.0100

100 mL

CELL BIOLOGY SOLUTIONS

Solutions commonly used in cell culture applications.

DPBS (1X)

WITHOUT Ca, Mg, AND PHENOL RED

Filter sterilized solution of Dulbecco's PBS, without Ca^{2+} , without Mg^{2+} , and without Phenol Red.

GTC13.0500

500 mL

HEPES BUFFER SOLUTION (1M)

Widely used buffering agent in cell culture media.

In comparison with bicarbonate buffer systems, HEPES is better in maintaining physiological pH despite changes in CO_2 concentrations resulting from cellular activity.

GTC14.0100

100 mL

ASSAYS

Sensitive assays for cell biology applications

XPERT BLUE CELL VIABILITY ASSAY

The Xpert Blue Cell Viability Assay offers a simple, fast and sensitive method for the detection of cellular metabolic activity. This assay is based on the irreversible reduction of the blue, nonfluorescent and nontoxic dye Resazurin into pink and highly-fluorescent Resofurin (red) by diaphorase-type enzymes or other reductases present in mitochondria and cytosol of metabolically active cells.

GTC20.0025

25 mL (2500 assays)

GTC20.0100

100 mL (10000 assays)

XPERT ANNEXIN V-FITC APOPTOSIS DETECTION ASSAY

The Xpert Annexin V-FITC Apoptosis Detection Assay offers a simple, fast and reliable method for the fluorescent detection of apoptotic cells and quantitative determination by flow cytometry. This assay is based on binding of FITC-labeled Annexin V to phosphatidylserine sites present on the membrane surface of apoptotic cells combined with the binding of propidium iodide to cellular DNA in necrotic cells in which cell membrane integrity has been completely compromised. This allows to distinguish between viable cells, early apoptotic cells and necrotic cells.

GTC21.0100

100 assays



SOLUTIONS

Wide range of solutions, commonly used for molecular biology applications.

TAE BUFFER (10X)

GB11.0110	1 L
GB11.0510	5 L

TBE BUFFER (10X)

GB12.0110	1 L
GB12.0510	5 L

TG BUFFER (10X)

GB13.0110	1 L
GB13.0510	5 L

TGS BUFFER (10X)

GB15.0110	1 L
GB15.0510	5 L

SDS SOLUTION 10%

GB14.0110	1 L
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SDS SOLUTION (20%)	GB14.0120	1 L
PBS (20X)	GS10.0120	1 L
PBS (10X) STERILE	GS11.0110	1 L
PBST (10X)	GS12.0110	1 L
TBS (10X) STERILE	GS13.0110	1 L
HEPES (1M) pH7.3 STERILE	GS14.0110	1 L
SSC (20X) STERILE	GS16.0120	1 L
SSPE (20X) pH7.4	GS17.0120	1 L
TPE (10X)	GS18.0110	1 L
TRIS-TAURINE (20X)	GS19.0120	1 L

Whenever you need a solution, GRiSP is the solution

GRiSP CUSTOM SOLUTIONS



GRISP PRODUCES ON-DEMAND, HIGH-QUALITY SOLUTIONS, ADJUSTED TO YOUR NEEDS.
JUST CONTACT US FOR A QUOTATION, INDICATING AS MUCH DETAILS AS POSSIBLE:
VOLUME, CONCENTRATION, COMPOSITION, PH, PACKAGE TYPE (TRANSPARENT OR
AMBER, BAG-IN-BOX, ETC), MOLECULAR BIOLOGY GRADE OR OTHER, STERILE OR NOT,
AMOUNT NEEDED, ETC.

For information and quotations, please contact us via info@grisp.pt

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