
BIOSCIENCES
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MOLECULAR BIOLOGY

DNA EXTRACTION

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VIRAL ACID NUCLEIC EXTRACTION

ATP™ Plasmid Mini Kit

Description

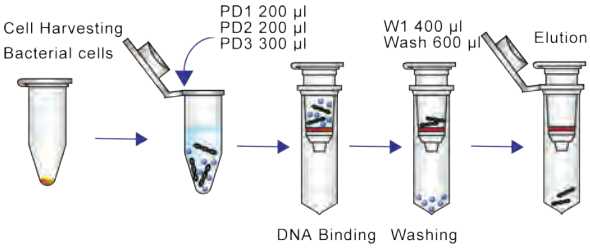
ATP™ Plasmid Mini Kit is designed for the rapid, easily-handling, and cost-effective isolation of plasmid or cosmid DNA from 1~4 ml of bacterial cultures. This procedure uses a modified method of alkaline lysis and RNase treatment for creating cleared cell lysate with minimal genomic DNA and RNA contaminants. Subsequently, the lysate is neutralized and adjusted to high-salt binding conditions adaptable to the adsorption of DNA in one step. In the presence of a chaotropic salt, the plasmid DNA in the lysate binds to the uniquely designed glass-fiber matrix in the spin column. Whereas RNA, cellular proteins, and other unwanted impurities flow through the column and are easily and efficiently removed from reaction mixture. After a brief Washing Step with ethanol-contained Wash Buffer to remove endonucleases, salts and other contaminants, the purified plasmid DNA is eluted by low-salt Elution Buffer or water. The entire procedure can be completed in 20 minutes and the purified plasmid DNA is immediately ready for restriction digestion, ligation, PCR, and sequencing. The procedure does not require DNA phenol extraction and alcohol precipitation.

Quick View

Format: Spin columns
Sample: 1~4 ml bacterial cultures
Operation: Centrifuge / vacuum manifold
Operation time: 20 minutes
Binding capacity: Up to 30 µg per Column
Expected yield: 25~35 µg for high-copy plasmid;5~15 µg per low-copy plasmid
Application: DNA Library Screening and Analysis; DNA sequencing; Transformation; PCR; Restriction Digestion

Cat Nº

ATP™ Plasmid Mini Kit	100/300 prep	TR-BA1-0001 TR-BA1-0002
ATP™ Plasmid Mini Binding Column	50 pc	TR-BA1-0008



ATP™ Plasmid Midi Kit

Description

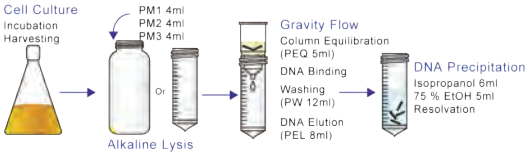
ATP™ Plasmid Midi Kits use pre-packed resin of anion-exchange column to purify plasmid or cosmid DNA from 20~200 ml bacterial cultures. In the process, the modified method of alkaline lysis and RNase treatment are used for creating cleared cell lysate with minimal genomic DNA and RNA contaminants. By a gravity-flow procedure, the plasmid DNA in crude lysate binds to the anionexchange resin in the appropriate salt and pH conditions. Whereas RNA, cellular proteins, and other unwanted impurities flow through the column and are easily and efficiently removed from reaction mixture. After a brief washing step to wash off contaminants, the purified plasmid DNA is eluted by high-salt buffer and then precipitated by isopropanol for desalting. The entire procedure can be completed in 120 minutes without ultracentrifuges, HPLC or other toxic reagents.

Quick View

Sample: 20~50 ml of bacterial culture for high-copy number plasmid
100~200 ml of bacterial culture for low-copy number plasmid
Operation: Gravity-flow
Operation time: 120 minutes
Yield: Up to 200 µg of plamsid
Application: Transfection; Microinjection; Sequencing; Restriction Enzyme Digestion; Transcription

CAT Nº

ATP™ Plasmid Midi Kit	25 prep	TR-BA1-0003
ATP™ Plasmid Midi Resin Column	10 pc	TR-BA1-0009



ATP™ Plasmid Maxi Kit

Description

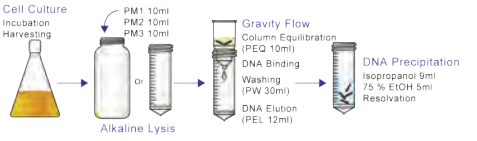
ATP™ Plasmid Maxi Kits use pre-packed resin of anion-exchange column to purify plasmid or cosmid DNA from 100~400 ml bacterial cultures. In the process, the modified method of alkaline lysis and RNase treatment are used for creating cleared cell lysate with minimal genomic DNA and RNA contaminants. By a gravity-flow procedure, the plasmid DNA in crude lysate binds to the anionexchange resin in the appropriate salt and pH conditions. Whereas RNA, cellular proteins, and other unwanted impurities flow through the column and are easily and efficiently removed from reaction mixture. After a brief washing step to wash off contaminants, the purified plasmid DNA is eluted by high-salt buffer and then precipitated by isopropanol for desalting. The entire procedure can be completed in 120 minutes without ultracentrifuges, HPLC or other toxic reagents.

Quick View

Sample: 100~200 ml of bacterial culture for high-copy number plasmid
250~400 ml of bacterial culture for low-copy number plasmid
Operation: Gravity-flow
Operation time: 120 minutes
Yield : Up to 500µg of plamsid
Application : Transfection; Microinjection; Sequencing; Restriction Enzyme Digestion; Transcription

Cat Nº

ATP™ Plasmid Maxi Kit	10/25 prep	TR-BA1-0004 TR-BA1-0005
ATP™ Plasmid Maxi Resin Column	10 pc	TR-BA1-0010



ATP™ Gel/PCR Fragment DNA Extraction Kit

Description

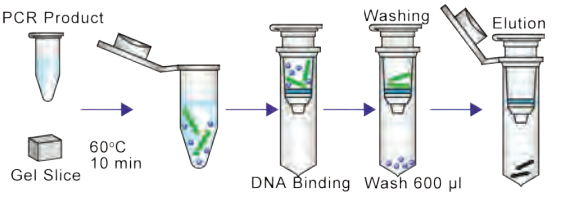
ATP™ Gel/PCR Fragment DNA Extraction Kit is designed to recover or concentrate DNA fragments (50 bp-10 kb) from agarose gel, PCR or other enzymatic reaction. The method uses a chaotropic salt, guanidine thiocyanante, to dissolve the agarose gel and denature enzymes. The DNA fragments in the chaotropic salt are then bound to the uniquely designed matrix of glass-fiber in the spin column in the optimized salt concentration and pH provided by our buffer. Whereas unwanted impurities, such as salts, enzymes, primers unincorporated nucleotides, dyes, and ethidium bromide flow through the column and are easily and efficiently removed from reaction mixture. After washing step, the purified DNA fragments are eluted by low-salt Elution Buffer or water. The entire procedure does not require DNA phenol extraction and alcohol precipitation, and could be completed in 20 minutes.

Quick View

Format: Spin column
Sample: Up to 300 mg agarose gel slice: Up to 100 µl PCR product or other enzymatic reaction
Operation: Centrifuge / vacuum manifold
DNA size: 50 bp ~ 10 kb Operation time: 20 minutes for gel extraction: 15 minutes for PCR clean up
Expected recovery : 75-85 % for gel extraction: 80-90 % for PCR clean up
Application: DNA Sequencing; Ligation; PCR;Restriction Enzyme Digestion; DNA Labeling

Cat Nº

ATP™ Gel/PCR DNA Fragment Extraction Kitt	100/300 prep	TR-BA1-0011 TR-BA1-0012
ATP™ Fragment DNA Binding Column	50 pc	TR-BA1-0017



ATP™ Genomic DNA Mini Kit (Blood/Culture Cell/Bacteria)

Description

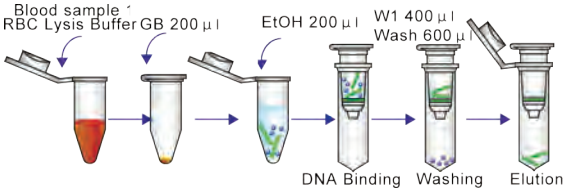
ATP™ Genomic DNA Mini Kit (Blood/Cultured Cell/Bacteria) provide a fast and economical method for purification of total DNA (including genomic, mitochondrial and viral DNA) from whole blood, plasma, serum, buffy coat, other body fluids, lymphocytes, bacterial and cultured cells. In this procedure, RBC Lysis Buffer is used to remove non-nucleated red blood cells and reduce hemoglobin contamination. The method use a chaotropic salt, guanidine hydrochloride, to lyse cells and degrade protein, than DNA in chaotropic salt is bond to glass-fiber matrix of column. After washing off the contaminants, the purified genomic DNA is eluted by low-salt Elution Buffer or water. The entire procedure can be completed in 40 minutes without phenol/ chloroform extraction and alcohol precipitation. Average yield are 6 µg of DNA from 200 µl of human whole blood and up to 50 µg of DNA from 200 µl of buffy coat, 5 x 106 lymphocyte cells, or cultured cells. Purified DNA with
approximate 20-30 kb is suitable for PCR or ther enzyme reaction.

Quick View

Format : Spin column
Sample: Up to 300 µl of whole blood Up to 107; animal cultured cells Up to 108; bacterial cultured cells Up to 107 yeast
Operation: Centrifuge / vacuum manifold
Operation time: 20~30 minutes
Application: PCR; Real-Time PCR; Southern blotting; AFLP; PADP/ AFLP

CAT Nº

ATP™ Genomic DNA Mini Kit (Blood/Cell/ Bact)	100/300 preps	TR-BA1-0018 TR-BA1-0019
ATP™ Genomic DNA Binding Column	50 pc	TR-BA1-0029



ATP™ Genomic DNA Maxi Kit (Blood/Cell Culture)

Description

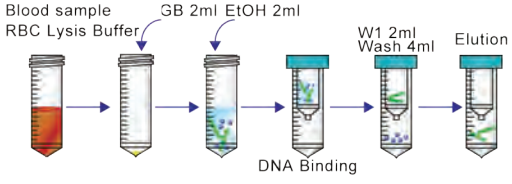
ATP™ Genomic DNA Maxi Kit (Blood/Cultured Cell) provide a fast and economical method for purification of total DNA (including genomic, mitochondrial and viral DNA) from whole blood, plasma, serum, buffy coat, other body fluids, lymphocytes, bacterial and cultured cells. In AGBM25, RBC Lysis Buffer is used to remove non-nucleated red blood cells and reduce hemoglobin contamination. In AGDM25, Proteinase K is the optimal enzyme to cell lysis for frozen blood. The method use a chaotropic salt, guanidine hydrochloride to lyse cells and degrade protein, than DNA in chaotropic salt is bond to glass-fiber matrix of column. After washing off the contaminants, the purified genomic DNA is eluted by low-salt elution buffer or water. The entire procedure can be completed without phenol/chloroform extraction and alcohol precipitation. Average yields of AGBM25/ AGDM25 are up to 140 µg of DNA from 4/10 ml of fresh/frozen blood. Purified DNA with approximate 20-30 kb is suitable for PCR or other enzyme reaction.

Quick View

Format: Maxi Spin column
Sample: Up to 4 ml of fresh blood for AGBM25
Up to 10 ml of frozen blood for AGDM25
Operation: Centrifuge / vacuum manifold
Application: PCR: Real-Time PCR: Southern Blotting: AFLP: PADP/ AFLP

CAT Nº

ATP™ Genomic Maxi Kit (Fresh Blood)	25 preps	TR-BA1-0023
ATP™ Genomic Maxi Kit (Frozen Blood)	25 preps	TR-BA1-0024



ATP™ Genomic DNA Mini Kit (Tissue)

Description

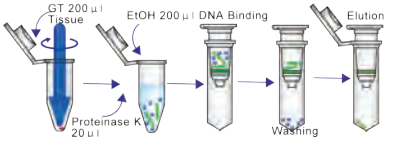
ATP™ RNA Mini Kit (Blood/Culture cell) is specially designed for purification of total RNA from fresh whole human blood and cultured cells. This method uses detergents and a chaotropic salt to lyse cells and inactivate RNase, and then RNA in chaotropic salt is bonded to the glass fiber matrix of the column. After washing off the contaminants, the purified RNA is eluted by RNase-free water. The entire procedure can be completed in 20 minutes and the purified RNA is ready for RT-PCR, Northern blotting, primer extension and cDNA library construction.

Quick View

Format: Spin column
Sample: Up to 20 mg of tissue
Operation: Centrifuge / vacuum manifold
Yield: Up to 50 µg
Elution volume: 50~200 µl
Application: PCR;Real-Time PCR; Southern blotting; AFLP; PADP/ AFLP

CAT Nº

ATP™ Genomic DNA Mini Kit (Tissue)	50/300 preps	TR-BA1-0020 TR-BA1-0021



ATP™ Genomic DNA Mini Kit (Plant)

Description

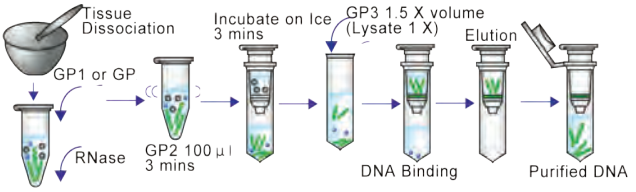
ATP™ Plant Genomic DNA Mini Kit provides a fast and simple method to isolate total DNA (genomic DNA, mitochondrial and chloroplast) from plant tissue and cells. In the process, sample is destroyed by grinding in liquid nitrogen and lysis buffer incubation. The Lysate is treated with RNase A to degrade RNA and filtrated by filter column to remove cell debris and salt precipitations. In the presence of binding buffer with chaotropic salt, the genomic DNA in the lysate binds to glass fiber matrix in the spin column. The contaminants are washed by wash buffer containing ethanol and finally, the purified genomic DNA is eluted by low-salt elution buffer or water. The protocol does not require DNA phenol extraction and alcohol precipitation. The entire procedure can be completed in 60 minutes.

Quick View

Format: Spin column
Sample: 100 mg plant tissue
Operation: Centrifuge / vacuum manifold
Yield: 5-30µg
Elution volume: 50~200 µl
Application : PCR; Real-Time PCR; Southern Blotting; AFLP; PADP/ AFLP

CAT Nº

ATP™ Genomic Mini Kit (plant)	50 preps	TR-BA1-0022



ATP™ Genomic DNA Maxi Kit (Plant)

Description

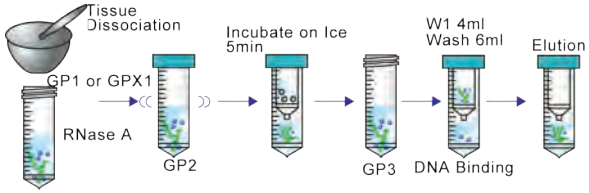
ATP™ Plant Genomic DNA Mini Kit provides a fast and simple method to isolate total DNA (genomic DNA, mitochondrial and chloroplast) from plant tissue and cells. In the process, sample is destroyed by grinding in liquid nitrogen and lysis buffer incubation. The Lysate is treated with RNase A to degrade RNA and filtrated by filter column to remove cell debris and salt precipitations. In the presence of binding buffer with chaotropic salt, the genomic DNA in the lysate binds to glass fiber matrix in the spin column. The contaminants are washed by wash buffer containing ethanol and finally, the purified genomic DNA is eluted by low-salt elution buffer or water. The protocol does not require DNA phenol extraction and alcohol precipitation. The entire procedure can be completed in 60 minutes.

Quick View

Format: Spin columns
Sample: 1 g plant tissue
Operation: Centrifuge / vacuum manifold
Operation time: < 60 minutes
Yield: Up to 500 µg
Application: PCR; Real-Time PCR; Southern Blotting; AFLP; PADP/ AFLP

CAT Nº

ATP™ Plant Genomic DNA Maxi Kit	25 preps	TR-BA1-0025



ATP™ Total RNA Mini Kit (Blood/Culture Cell/Bacteria)

Description

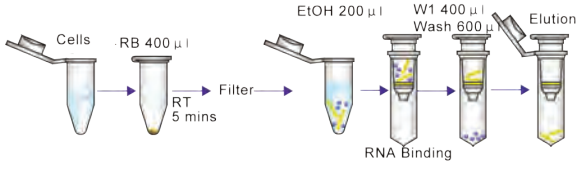
ATP™ RNA Mini Kit (Blood/Culture cell) is specially designed for purification of total DNA (including: genomic, mitochondrial and viral DNA) from fresh whole human blood, plasma, serum, buffy coat, other body fluids, lymphoctes, bacteria and cultured cells. This method uses detergents and a chaotropic salt to lyse cells and inactivate RNase, and then RNA in chaotropic salt is bonded to the glass fiber matrix of the column. After washing off the contaminants, the purified RNA is eluted by RNase-free water.

Quick View

Format: Spin columns
Sample: Up to 300 µl of whole blood; Up to 106; animal cultured cells Up to 108
bacterial cultured cells
Operation: Centrifuge / vacuum manifold
Operation time : 20 minutes
Yield: Up to 30 µg
Application: RT-PCR: Real-time PCR: Notthern blotting: mRNA selection: cDNA synthesis Primer extension

CAT Nº

ATP™ RNA Mini Kit (Blood/Culture cel/Bact)	50 preps	TR-BA1-0030
ATP™ RNA Binding Column	50 pc	TR-BA1-0038



ATP™ Total RNA Maxi Kit (Blood/Culture cell/Bacteria/ Tissue)

Description

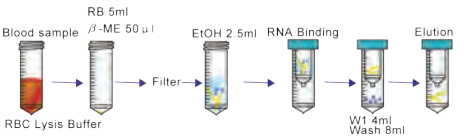
ATP™ Total RNA Mini Kit (Tissue) is specially designed for purification of total RNA from a variety of animal tissues or cells. The provided micropestle can efficiently homogenize tissue samples in the microcentrifuge tube. The method uses detergent and a chaotropic salt to lyse cells and inactivate RNase. Then RNA in the chaotropic salt is bonded to the glass fiber matrix of the column. After washing off the contaminants, the purified RNA is eluted by RNase-free water. The entire procedure can be completed in 20 minutes and the purified RNA is ready for RT-PCR, Northern blotting, primer extension and cDNA library construction.

Quick View

Format: Maxi Spin column
Sample: 100-200 mg animal tissue 107-108 cultured cell; 5 ml blood sample
Operation: Centrifuge
Operation time: 60 minutes
Elution volume: 500 µl
Yield: 500 µg
Application: RT-PCR; Real-Time PCR; Nothern Blotting; mRNA Selection; cDNA Synthesis; Primer Extension

CAT Nº

ATP™ RNA Maxi Kit (Blood/Culture cel/Bact)	10 preps	TR-BA1-0036



ATP™ Total RNA Mini Kit (Tissue)

Description

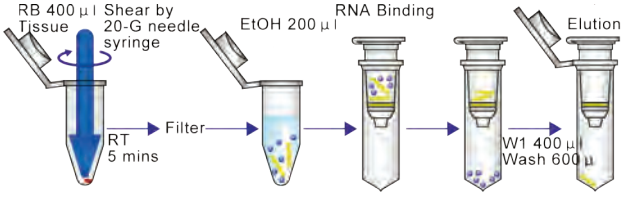
ATP™ Total RNA Mini Kit (Tissue) is specially designed for purification of total RNA from a variety of animal tissues or cells. The provided micropestle can efficiently homogenize tissue samples in the microcentrifuge tube. The method uses detergent and a chaotropic salt to lyse cells and inactivate RNase. Then RNA in the chaotropic salt is bonded to the glass fiber matrix of the column. After washing off the contaminants, the purified RNA is eluted by RNase-free water. The entire procedure can be completed in 20 minutes and the purified RNA is ready for RT-PCR, Northern blotting, primer extension and cDNA library construction.

Quick View

Format: Spin column
Sample: Up to 25 mg of tissue
Operation: Centrifuge / vacuum manifold
Recovry: Up to 25 µg
Elution volume: 50 µl
Application: RT-PCR; Real-time PCR; Notthern blotting; mRNA selection; cDNA synthesis; Primer extension

CAT Nº

ATP™ RNA Mini Kit (Tissue)	50 preps	TR-BA1-0031



ATP™ Total RNA Mini Kit (Plant)

Description

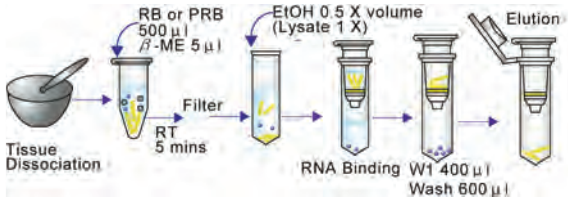
ATP™ Plant Total RNA Mini Kit provides a fast and simple method to isolate total RNA from plant tissue and cells. In the process, sample is first ground in liquid nitrogen and filtrated by filter column to remove cell debris. In the presence of binding buffer with chaotropic salt, the total RNA in the lysate binds to glass fiber matrix in the spin column. The optional DNase treatments can remove DNA residues and the contaminants are washed by wash buffer containing ethanol. Finally, the purified total RNA is eluted by RNase-free water. The protocol does not require phenol extraction and alcohol precipitation.

Quick View

Format: Spin column
Sample: 50 mg plant tissue
Operation: Centrifuge / vacuum manifold
Operation time: 60 minutes
Yield: 5-30 µg
Elution volume: 50 µl
Application :RT-PCR; Real-Time PCR; Nothern Blotting; mRNA Selection; cDNA Synthesis; Primer Extension

CAT Nº

ATP™ RNA Mini Kit (PLant)	50 preps	TR-BA1-0032



ATP™ Total RNA Maxi Kit (Plant)

Description

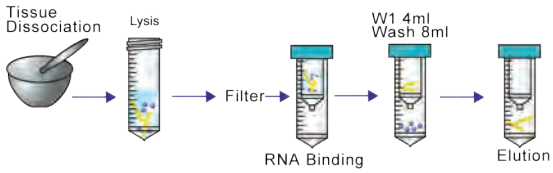
ATP™ Plant Total RNA Mini Kit provides a fast and simple method to isolate total RNA from plant tissue and cells. In the process, sample is first ground in liquid nitrogen and filtrated by filter column to remove cell debris. In the presence of binding buffer with chaotropic salt, the total RNA in the lysate binds to glass fiber matrix in the spin column. The optional DNase treatments can remove DNA residues and the contaminants are washed with an ethanol contained wash buffer. Finally, the purified total RNA is eluted by RNase-free water. The protocol does not require phenol extraction and alcohol precipitation.

Quick View

Format : Spin column
Sample:500 mg plant tissue
Operation : Centrifuge / vacuum manifold
Operation time:60 minutes
Yield :50-300 µg
Elution volume:50 µl Application ,RT-PCR, Real-Time PCR, Notthern blotting, mRNA selection, cDNA synthesis, Primer extension

CAT Nº

ATP™ Plant RNA Maxi Kit	10 preps	TR-BA1-0037



ATP™ Viral Nucleic Acid Extraction Kit

Description

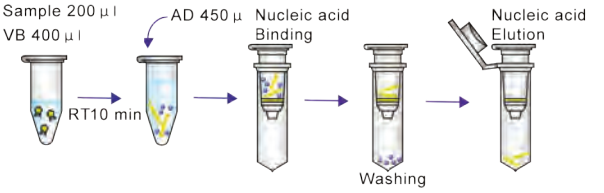
ATP™ Viral Nucleic Acid Extraction Kit is specially designed for high-throughput purification of viral RNA or DNA from cell-free samples as serum, plasma, body fluids, and the supernatant of viral infected cell culture. With the extraction method, DNA/RNA viruses are lysed quickly and efficiently by lysis buffer which is a highly concentrated solution of chaotropic salt. Nucleic acid in chaotropic salt and methanol are bond to the glass-fiber matrix of viral DNA/RNA Binding Column. Contaminations like salts, metabolites and soluble macromolecular components are removed in Washing Steps. The nucleic acids can be eluted by low-salt buffer or water and are ready-to-use in subsequent reactions. The detection limit for certain viruses depends on the sensitivity of individual PCR or RT-PCR assay. This protocol is recommended for parallel purification of viral RNA including HCV, HIV, HTLV and viral DNA including HBV and CMV.

Quick View

Format: Spin column
Sample: 200 µl of serum, plasma, body fluid and cell culture supernatant
Operation: Centrifuge / vacuum manifold
Operation time: 40 minutes
Elution volume: 50 µl

CAT Nº

ATP™ Viral Nucleic Acid Mini Kit	50 preps	TR-BA1-0033



Related Products CAT Nº

ATP™ 96-Well Plasmid mini kit	4/10 plates	TR-BA1-0006 // TR-BA1-0007
ATP™ Plasmid Mini Binding Column	50 pc	TR-BA1-0008
ATP™ Plasmid Midi Resin Column	10 pc	TR-BA1-0009
ATP™ Plasmid Maxi Resin Column	10 pc	TR-BA1-0010
ATP™ 96-Well Gel/PCR DNA Extraction Kit	4/10 plates	TR-BA1-0013 // TR-BA1-0014
ATP™ 96-Well SEQ Dye Clean Up Kit	4/10 plates	TR-BA1-0015 // TR-BA1-0016
ATP™ Fragment DNA Binding Column	50 pc	TR-BA1-0017
ATP™ 96-Well Genomic DNA Kit	4/10 plates	TR-BA1-0026 // TR-BA1-0027
ATP™ Reagent Genomic DNA Kit	for 100 ml Blood	TR-BA1-0028
ATP™ Genomic DNA Binding Column	50 pcs	TR-BA1-0029
ATP™ 96-Well Viral Nucleic Acid Kit	4/10 plates	TR-BA1-0034 // TR-BA1-0035
ATP™ RNA Binding Column	50 pcs	TR-BA1-0038
Proteinase K	11 mg/kit	TR-BA1-0039
RNase A	0.2 ml (50 mg/ml)	TR-BA1-0040
RNase A	1.5 ml (50 mg/ml)	TR-BA1-0041

PCR & qPCR

DNA POLYMERASE

PCR KITS (MASTERMIX)

qPCR KITS (MASTERMIX)

DNA BUILDING BLOCKS

TK DNA Polymerase

	High Fidelity PCR				Standard PCR	Extractonfree PCR	Hot Start PCR	
Catalog number DNA polymerase	TR-BS1-1072 SMO-HiFi	TR-BS1-1074 Q-HiFi	TR-BS1-1076 G-HiFi	TR-BS1-1078 Klen-Taq	TR-BS1-1079 Taq	TR-BS1-1087 Blood direct	TR-BS1-1090 Hot Start I	TR-BS1-1091 Hot Start II
Properties								
Fidelity (comapred to Taq)	70X	50X	70X	4X	1X	1X	1X	1X
Amplification length	12 kb	40 kb	40 kb	10 kb	8 kb	< 2 kb	8 kb	8 kb
Extension rate	1 kb/ 10 s	1 kb/ 7 s	1 kb/ 7 s	1 kb/ 20 s	1 kb/ 20 s	1 kb/ 20 s	1 kb/ 20 s	1 kb/ 20 s
Product end structure	blunt end	blunt end	blunt end	3'A/ blunt end	3'A	3'A	3'A	3'A
3'→5' exonuclease actvity	Yes	Yes	Yes	Yes	No	No	No	No
5'→3' exonuclease actvity	No	No	No	No	Yes	Yes	Yes	Yes
Units/ 50 µl reaction volume	1U	1U	1U	1.25U	1.25U	1.25U	1.25U	1.25U
Annealing temperature	Tm-5	Tm-5	Tm-5	Tm-5	Tm-5	Tm-5	Tm-5	Tm-5
Applicatons								
Routine PCR	•	•	•	•	★	•	★	★
Colony PCR					★		★	★
High fidelity	★	★	★	•				
High yield PCR	★	•	•	•	•		•	•
High reactionrate	★	★	★					
Long amplicon	•	★	★	•				
GC rich template	★	•	★					
AT rich template				•	•	•	•	•
High throughput							•	•
Multplex PCR	•	•	•		•	★	•	•
Site-directed mutagenesis	★	★	★					
Additonal Formats								
Master Mix	TR-BS1-1075	TR-BS1-1077	TR-BS1-1079		TR-BS1-1082			
Master Dye Mix					TR-BS1-1085	TR-BS1-1090		
Fluorescent Master Mix					TR-BS1-1088	TR-BS1-1091		

ExcelTaq™ Taq DNA Polymerase TR-BS1-1081 (5 U/µl, 500 U x 1)

Description

The ExcelTaq™ Taq DNA Polymerase is a recombinant thermo-stable DNA polymerase expressed and purified from an E. coli strain carrying the cloned gene. With high DNA synthesis rate and thermo-stability, ExcelTaq™ Taq DNA Polymerase is suitable for general and specialized PCR applications.

Features

- 5'→3' DNA polymerase activity
- 5'→3' exonuclease activity
- No detectable 3'→5' exonuclease (proofreading) activity
- Generates PCR products with 3'-dA overhangs
- Thermo-stable: half-life is more than 40 min at 95°C

Contents

Component	Volume
ExcelTaq™ Taq DNA Polymerase (5 U/µl)	100 µl
10X Taq Buffer	2 x 1ml

Storage Buffer

20 mM Tris-HCl (pH 8.0), 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, Stabilizer, 50% (v/v) glycerol

10X Taq Buffer

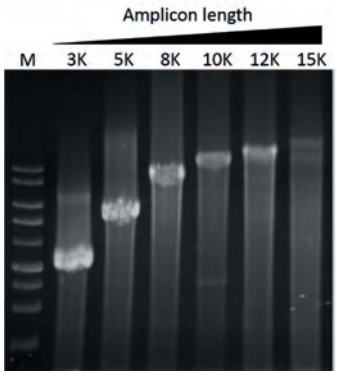
200 mM Tris-HCl (pH 8.8), 100 mM KCl, 100 mM $(NH4)_2SO_4$, 20 mM $MgSO_4$, 1% Triton X-100

Unit Definiton

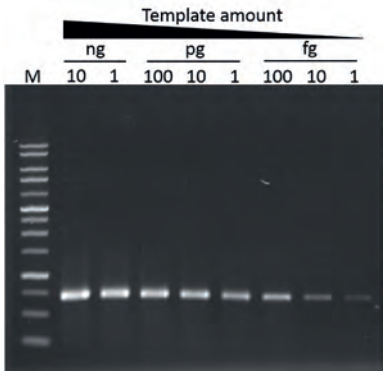
One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into an acid-insoluble material in 30 minutes at 74°C.

Storage

-20°C for 24 months



ExcelTaq™ Taq DNA Polymerase can amplify PCR products from λDNA up to 15 kb.



ExcelTaq™ Taq DNA Polymerase can amplify PCR products from as litle as 1 fg of template DNA.

ExcelTaq™ PCR Master Dye Mix TR-BS1-1085 (200 Rxn) TR-BS1-1086 (100 Rxn) TR-BS1-1087 (100 Rxn)

Description

The ExcelTaq™ PCR Master Dye Mix is a ready-to-use mixture for amplifying targeted DNA fragments. It is designed to serve as ready-to-use master mix for virtually all PCR applications. The mixture contains all essental ingredients for PCR with the exception of template and primers. This not only saves valuable time in the laboratory, but also reduces the number of pipeting and reagent handling errors. The PCR Master Dye Mix is supplied as a 5X/ 2X concentrated ready-to-use mix, that is a mixture of recombinant Taq DNA Polymerase, reaction buffer, $MgCl_2$ (TP1220 contains $MgSO_4$), dNTPs, enzyme stabilizer and PCR friendly loading dye solution containing a tracking dye (Bromophenol blue) enabling efficient amplification of template in PCR and allowing the user to prepare a PCR reagent-loading dye master mix conveniently.

Features

- 5'→3' DNA polymerase activity
- No detectable 3'→5' exonuclease (proofreading) activity
- Generates PCR products with 3'-dA overhangs
- High throughput PCR & High Yield PCR
- High reproducibility, less pipeting errors
- Load directly into electrophoresis

Contents

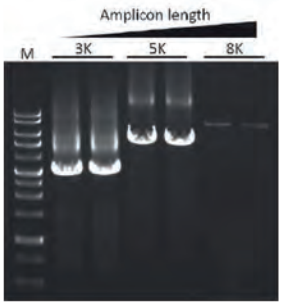
TR-BS1-1085 Component	Volume
ExcelTaq™ 5X PCR Master Dye Mix	2 x 1 ml

TR-BS1-1086 Component	Volume
ExcelTaq™ 2X PCR Master Dye Mix	2 x 1.25 ml

TR-BS1-1087 Component	Volume
ExcelTaq™ 2X PCR Master Dye Mix (MgSO4)	2 x 1.25 ml

Storage

4°C for 6 months
-20°C for 24 months



ExcelTaq™ 5X Fluorescent PCR Master Mix TR-BS1-1088(200 Rxn)

Description

The ExcelTaq™ 5X Fluorescent PCR Master Mix is a ready-to-use mixture for amplifying targeted DNA fragments. It is designed to serve as ready-to-use master mix for virtually all PCR applications. The ExcelTaq™ 5X Fluorescent PCR Master Mix is supplied as a 5X concentrated ready-to-use mixture containing all the essential ingredients for PCR with the exception of template and primers. In addition, the mixture contains a tracking dye (Bromophenol blue), and a safer fluorescent DNA staining dye, which enables the user to track the electrophoresis process in real time as well as eliminating the need for staining process. The resultant PCR reactin mixture is sufficiently dense enough to be loaded directly into 1X TAE or 1X TBE buffer for electrophoresis.

Features

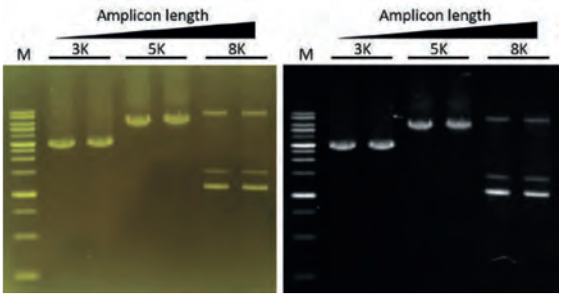
- 5'→3' DNA polymerase acitvity
- No detectable 3'→5' exonuclease (proofreading) activity
- Generates PCR products with 3'-dA overhangs
- High throughput PCR & High Yield PCR
- High reproducibility, less pipeting errors
- Load directly into electrophoresis
- DNA bands can be visualized directly under UV or 470 nm blue light illumination

Contents

Component	Volume
ExcelTaq™ 5X Fluorescent PCR Master Mix	2 x 1 ml

Storage

Protected from light
4°C for 6 months
-20°C for 24 months



Viewed with B-Box™ Viewed with UV light

ExcelTaq™ 5X Blood Direct PCR Master Mix Kit / Fluoro PCR Kit TR-BS1-1090(200 Rxn) TR-BS1-1091(200 Rxn)

Description

The ExcelTaq™ 5X Blood Direct PCR Master Mix Kit and ExcelTaq™ 5X Blood Direct Fluoro PCR Kit are designed for amplifying targeted DNA directly from whole blood, eliminating the need for a lengthy DNA isolation process. These PCR master mix kits contain all the essential components for a PCR reaction and a PCR friendly loading and tracking dye (Orange G) allowing the user to easily prepare a PCR reagent and directly loading PCR product into agarose gel for electrophoresis. The ExcelTaq™ 5X Blood Direct Fluoro PCR Kit also contains a safer fluorescent DNA staining dye allowing users to track electrophoresis in real time. The ExcelTaq™ 5X Blood Direct PCR Master Mix Kit/ Fluoro PCR Kit is capable of tolerating the presence of PCR interfering/inhibiting substances in blood and is ideal for high-throughput screening of blood samples for high reproducibility. These PCR master mix kits include a pairs of positive control primers (CCR5) that are compatible with primate blood samples.

Features

- 5'→3' DNA polymerase activity
- No detectable 3'→5' exonuclease (proofreading) activity
- Generates PCR products with 3'-dA overhangs
- High throughput PCR
- Execute PCR directly from blood samples
- High reproducibility, less pipeting errors
- Compatible with most anticoagulants
- Suitable for multplex PCR
- Fluorescent dye included (TP1260)

TR-BS1-1090
ExcelTaq™ 5X Blood Direct PCR Master Mix Kit

Contents

Component	Volume
ExcelTaq™ 5X Blood Direct PCR Master Mix	2 x 1ml
Positve Control Primers (10 μM, each)	25 μl

Storage

4°C for 6 months
-20°C for 24 months

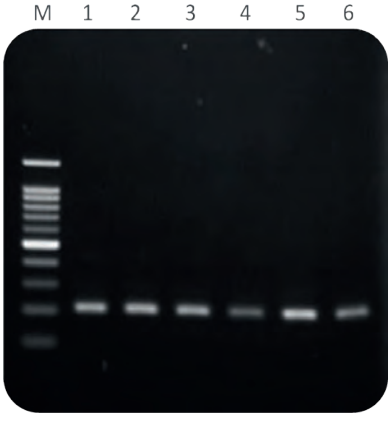
TR-BS1-1091
ExcelTaq™ 5X Blood Direct Fluoro PCR Kit

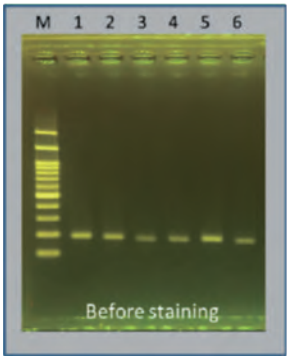
Contents

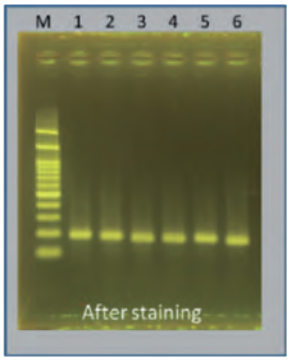
Component	Volume
ExcelTaq™ 5X Blood Direct Fluoro PCR Mix	2 x 1ml
Positve Control Primers (10 μM, each)	25 μl

Storage

4°C for 6 months
-20°C for 24 months







ExcelTaq™ 2X Q-PCR Master Mix (SYBR)
TR-BS1-1094 (200 Rxn)(SYBR, no ROX)
TR-BS1-1095 (200 Rxn)(SYBR, ROX)

Description

The ExcelTaq™ 2X Q-PCR Master Mix (SYBR) is a ready-to-use reagent with all the essential components for quantitative real-time PCR (qPCR) except primers and template. The master mix features high
sensitivity and signal intensity as well as low background and better compatibility with cDNA templates derived directly from reverse transcription reaction mixture. The ExcelTaq™ 2X Q-PCR Master Mix (SYBR) contains hot-start Taq polymerase in an optmized buffer with dsDNA specific SYBR green fluorescent dye. This master mix allows for sensitive, precise amplification, real-time tracking of the amplification process, and simultaneous quantification for targeted DNA molecules. With inert smart blue contrast dye, the ExcelTaq™ 2X Q-PCR Master Mix (SYBR) is ready-to-use and greatly reduces pipeting errors, while largely improving the reproducibility of the process. The TQ1110 ExcelTaq™ 2X Q-PCR Master Mix (SYBR, ROX)
includes ROX reference dye if recommended by the manufacturer of the qPCR system.

Features

- High sensitivity
- High signal intensity
- Better compatibility for reverse transcription
- With smart blue contrast dye as a visual aid for reaction setup
- Low background
- With ROX reference dye (TQ1110)

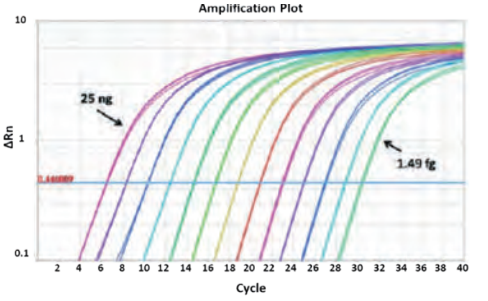
Contents

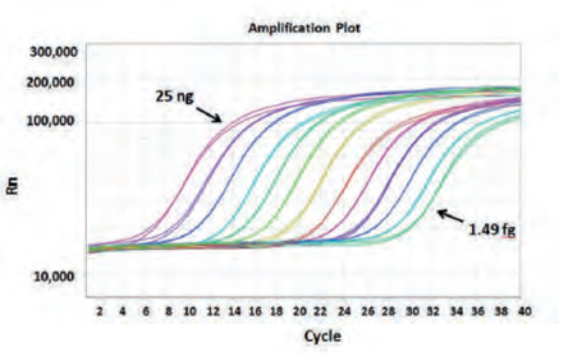
TR-BS1-1094 Component	Volume
ExcelTaq™ 2X Q-PCR Master Mix (SYBR, no ROX)	2 x 1ml

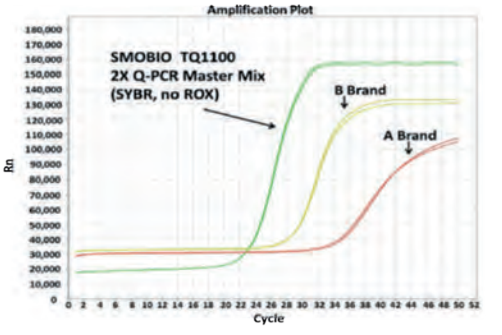
TR-BS1-1095 Component	Volume
ExcelTaq™ 2X Q-PCR Master Mix (SYBR, ROX)	2 x 1ml

Storage

Aliquot to avoid multple freeze-thaw cycles
Protect from light
-20°C for 12 months







ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR)
TR-BS1-1096 (200 Rxn)
TR-BS1-1097 (200 Rxn)

Description

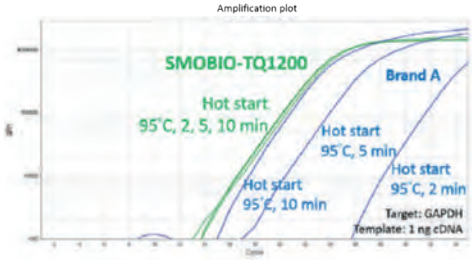
The ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR) is a ready-to-use reagent with all the essential components for quantitative real-time PCR (qPCR) except primers and templates. The master mix features high sensitivity and signal intensity as well as low background and better compatibility with fast PCR programs.

The ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR) contains hot-start Taq polymerase in an optimized buffer with dsDNA specific SYBR green fluorescent dye. This master mix allows sensitive, precise amplification, real-time tracking of the amplification process, and simultaneous quantification for targeted DNA molecules.

With inert smart blue contrast dye, the ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR) is ready-to-use and greatly reduces pipeting errors, while largely improving the reproducibility of the process. The TQ1210 ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR, ROX) includes ROX reference dye if recommended by the manufacturer of the qPCRsystem

Features

- Fast hot start
- High stability
- High sensitivity and signal intensity
- Compatble with fast PCR program
- Smart blue contrast dye as a visual aid for reaction setup
- With ROX reference dye (TQ1210)



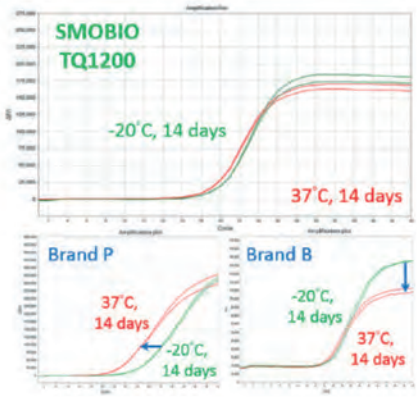
Contents

TR-BS1-1096 Component	Volume
ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR, no ROX)	2 x 1ml

TR-BS1-1097 Component	Volume
ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR, ROX)	2 x 1ml

Storage

Aliquot to avoid multple freeze-thaw cycles
Protect from light
-20°C for 12 months



ExcelTaq™ 2X Q-PCR Master Mix (TaqMan, ROX) TR-BS1-1098 (200 Rxn)

Description

The ExcelTaqTM 2X Q-PCR Master Mix (TaqMan, ROX) is a ready-to-use reagent with all the essential components for quantitative real-time PCR (qPCR) except primers, TaqMan probes and templates. The master mix includes a 5' to 3' exonuclease activity to cleave TaqMan probes that hybridize to target sequences, releasing fluorophore during probe displacement.

With TaqMan probes, the master mix features high specificity and high sensitivity.

The ExcelTaq™ 2X Q-PCR Master Mix (TaqMan, ROX) contains hot-start Taq polymerase in an optimized buffer that allows for sensitive and precise amplification, real-time tracking of the amplification process, and simultaneous quantification for targeted DNA molecules. The master mix includes ROX reference dye for the normalization of each qPCR assay. The ExcelTaq™ 2X Q-PCR Master Mix (TaqMan, ROX) is ready-to-use and greatly reduces pipeting errors, while largely improving the reproducibility in the process.

Features

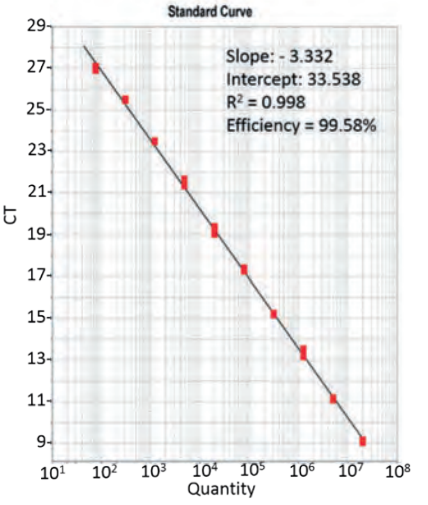
- High sensitivity
- High specificity
- With ROX reference dye

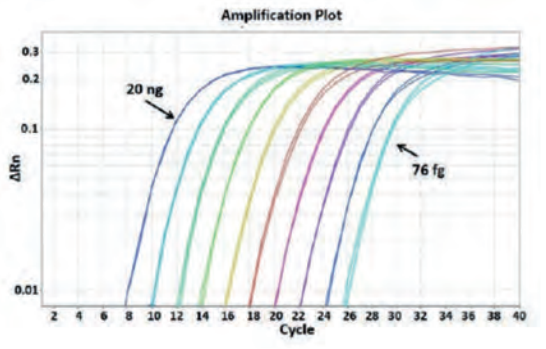
Contents

Component	Volume
ExcelTaq™ 2X Q-PCR Master Mix (TaqMan, ROX)	2 x 1ml

Storage

Aliquot to avoid multple freeze-thaw cycles
Protect from light
-20°C for 12 months





CAT Nº

Description	Volume	Reference
SMO-HiFi TM DNA Polymerase	1 U/µl, 100 U × 1	TR-BS1-1074
SMO-HiFi TM DNA Polymerase	50 Rxn	TR-BS1-1075
Q-HiFi TM DNA Polymerase	1 U/µl, 100 U × 1	TR-BS1-1076
Q-HiFi TM DNA Polymerase	50 Rxn	TR-BS1-1077
G-HiFi TM DNA Polymerase	1 U/µl, 100 U × 1	TR-BS1-1078
G-HiFi TM DNA Polymerase	50 Rxn	TR-BS1-1079
ExcelTaq™ Klen-Taq DNA Polymerase	5 U/µl, 500 U × 1	TR-BS1-1080
ExcelTaq™ Taq DNA Polymerase	5 U/µl, 500 U x 1	TR-BS1-1081
ExcelTaq™ PCR Master Mix	200 Rxn	TR-BS1-1082
ExcelTaq™ PCR Master Mix	100 Rxn	TR-BS1-1083
ExcelTaq™ PCR Master Mix ($MgSO_4$)	100 Rxn	TR-BS1-1084
ExcelTaq™ PCR Master Dye Mix	200 Rxn	TR-BS1-1085
ExcelTaq™ PCR Master Dye Mix	100 Rxn	TR-BS1-1086
ExcelTaq™ PCR Master Dye Mix	100 RWxn	TR-BS1-1087
ExcelTaq™ 5X Fluorescent PCR Master Mix	200 Rxn	TR-BS1-1088
ExcelTaq™ Blood Direct DNA Polymerase	5 U/µl, 500 U x 1	TR-BS1-1089
ExcelTaq™ 5X Blood Direct PCR Master Mix Kit / Fluoro PCR Kit	200 Rxn	TR-BS1-1090
ExcelTaq™ 5X Blood Direct PCR Master Mix Kit / Fluoro PCR Kit	200 Rxn	TR-BS1-1091
ExcelTaq™ Hot Start I DNA Polymerase	5 U/µl, 500 U x 1	TR-BS1-1092
ExcelTaq™ Hot Start II DNA Polymerase	5 U/µl, 500 U x 1	TR-BS1-1093
ExcelTaq™ 2X Q-PCR Master Mix (SYBR) (SYBR, no ROX)	200 Rxn	TR-BS1-1094
ExcelTaq™ 2X Q-PCR Master Mix (SYBR) (SYBR, ROX)	200 Rxn	TR-BS1-1095
ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR) (SYBR, no ROX)	200 Rxn	TR-BS1-1096
ExcelTaq™ 2X Fast Q-PCR Master Mix (SYBR) (SYBR, ROX)	200 Rxn	TR-BS1-1097
ExcelTaq™ 2X Q-PCR Master Mix (TaqMan, ROX)	200 Rxn	TR-BS1-1098

DNA BUILDING BLOCKS

Description	Reference
Deoxynucleotde (dNTP) Mix, 10 mM each (40 mM total), 200 µl	TR-BS1-1062
Deoxynucleotde (dNTP) Mix 10 mM each (40 mM total), 200 µl x 5	TR-BS1-1063
Deoxynucleotde (dNTP) Mix, 25 mM each (100 mM total), 500 µl	TR-BS1-1064
Deoxynucleotde (dNTP) Mix 25 mM each (100 mM total), 500 µl x 6	TR-BS1-1065
dATP Solution - Sodium Salt (100 mM), 25 ml	TR-BS1-1066
dATP Solution - Sodium Salt (100 mM), 100 ml	TR-BS1-1067
dTTP Solution - Sodium Salt (100 mM), 25 ml	TR-BS1-1068
dTTP Solution - Sodium Salt (100 mM), 100 ml	TR-BS1-1069
dCTP Solution - Sodium Salt (100 mM), 25 ml	TR-BS1-1070
dCTP Solution - Sodium Salt (100 mM), 100 ml	TR-BS1-1071
dGTP Solution - Sodium Salt (100 mM), 25 ml	TR-BS1-1072
dGTP Solution - Sodium Salt (100 mM), 100 ml	TR-BS1-1073

rt-PCR & RNA

cDNA SYNTESIS (REVERSE TRANSCRIPTASE)

RT-PCR & rt-qPCR KITS

RNase INHIBITOR

ExcelRT™ Reverse Transcriptase TR-BS1-1099 (200 U/µl, 20,000 U) TR-BS1-1100 (100 Rxn) TR-BS1-1101 (100 Rxn)

Description

The ExcelRT™ Reverse Transcriptase is a recombinant Moloney Murine Leukemia Virus (M-MLV) reverse transcriptase – an RNA dependent DNA polymerase capable of generating first strand cDNA using an RNA template. It is designed to reduce RNase H activity and create better thermal stability. The ExcelRT™ Reverse Transcriptase is able to routinely synthesize first strand cDNA > 8 kb at 37~50°C.

Additional Kit Format

The ExcelRT™ Reverse Transcription Kits contain all components to synthesize high quality first strand cDNA. The kits contain ExcelRT™ Reverse Transcriptase, RNAok™ RNase Inhibitor, oligo (dT)20 and random hexamers, which are used to synthesize cDNA from poly(A) tailed mRNA and total RNA, respectively. The RP1400 ExcelRT™ Reverse Transcription Kit II is supplied with Oligo (dT)/Random Primer Mix that is optimal for highly efficient synthesis of short chain cDNA suitable for real-time PCR.

Features

- High yield
- Thermostable, up to 50°C, during first strand synthesis
- High processivity, generating cDNA up to 8 kb
- Reduced RNase H ribonuclease activity
- No detectable 3'→ 5' exonucleolytc proofreading function
- Thermal stable for at least 4 weeks when stored at 4°C
- Suitable for real-time PCR
- Contains all components for reverse transcription (TR-BS1-1100 and TR-BS1-1101)
- Time saving for short chain cDNA synthesis (TR-BS1-1101)

Contents

TR-BS1-1099
ExcelRT™ Reverse Transcriptase

Component	Volume
ExcelRT™ Reverse Transcriptase (200 U/µl)	100 µl
5X RT Buffer	1 ml
0.1 M DTT	500 µl

TR-BS1-1100
ExcelRT™ Reverse Transcription Kit

Component	Volume
Reverse Transcriptase (200 U/µl)	100 µl
RNase Inhibitor (20 U/µl)	100 µl
5X RT Buffer (DTT)	500 µl
dNTPs (10 mM each)	200 µl
Oligo (dT)20 (50 µM)	100 µl
Random Hexamers (100 µM)	100 µl
DEPC-Treated H_2O	2 x 1 ml

TR-BS1-1101
ExcelRT™ Reverse Transcription Kit II

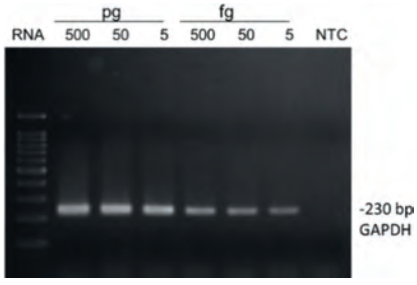
Component	Volume
RTase/RI Enzyme Mix	100 µl
5X RT Buffer (DTT/dNTP)	500 µl
Oligo (dT)/Random Primer Mix	100 µl
DEPC-Treated H_2O	2 x 1 ml

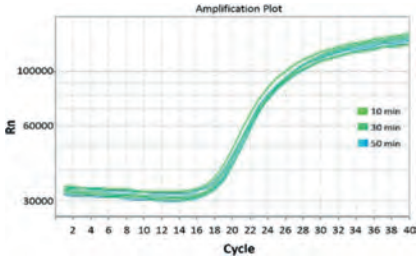
Unit definition

One unit is defined as the amount of enzyme that will incorporate 1 nM of dTTP into acid-insoluble material in 10 minutes at 37°C using Poly (A) • oligo(dT)25 as a template-primer.

Storage

-20°C for 12 months





ExcelRT™ One-Step RT-PCR Kit TR-BS1-1102 (50 Rxn)

Description

The ExcelRT™ One-Step RT-PCR Kit is designed for the reverse transcription and PCR amplification of a specific target RNA from either total RNA or mRNA. The ExcelRT ™ One-Step RT-PCR Kit provides the user an alternative to the lengthy two step process (first strand generation and amplification) by using a single mixture, single tube, one step reaction. The ExcelRT™ One-Step RT-PCR Kit contains a 2X reaction premix consisting of an optimized buffer, dNTPs, Mg 2+ and enzyme stabilizer, and a blend of recombinant reverse transcriptase and Taq DNA polymerase. The ExcelRT™ One-Step RT-PCR Kit allows the user to complete the RT-PCR process using a thermocycler in a single reaction setting and is ideal for target RNA amplification/ analysis capable of detecting even trace amounts of target RNA.

Features

- High throughput
- High reproducibility, less pipeting errors
- High sensitivity and yields

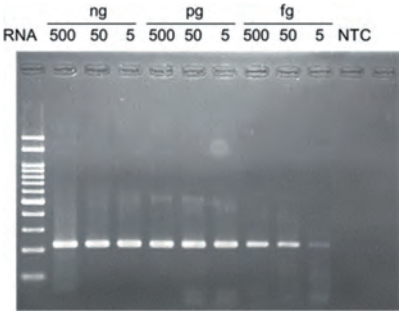
Contents

TR-BS1-1102
ExcelRT™ One-Step RT-PCR Kit

Component	Volume
2X One-Step Buffer	2 x 750 µl
Taq/RT Enzyme Mix	50 µl

Storage

-20°C for 24 months



ExcelRT™ One-Step RT-qPCR Kit (TaqMan, ROX) TR-BS1-1103 (200 Rxn)

Description

The ExcelRT™ One-Step RT-qPCR kit (TaqMan, ROX) is designed for reverse transcription and quantitative real-time analysis of a specific target RNA by one-step reaction. The ExcelRT™ One-Step RT-qPCR kit (TaqMan, ROX), consisting of One-Step RT Enzyme Mix and 2X One-Step Master Mix, is a convenient kit designed for highly efficient cDNA synthesis and highly specific real-time PCR in a single tube. The One-Step RT Enzyme Mix contains a thermostable ExcelRT™ Reverse Transcriptase and a RNAok™ RNase inhibitor. Consequently, One-Step RT Enzyme Mix can reverse transcribe RNA to cDNA at a wide temperature range from 42 to 60°C and be active against RNase A, RNase B and RNase C. By containing specialized hot-start Taq DNA polymerase, which greatly reduce primer-dimer formation and can be activated within 2 minutes, the 2X One-Step Master Mix features high specificity and is suitable for fast cycle program. This master mix includes ROX reference dye for normalization of each RT-qPCR assay.

Features

- High yield
- Reverse transcription at wide temperature range
- High specificity
- Suitable for fast cycle program
- ROX reference dye

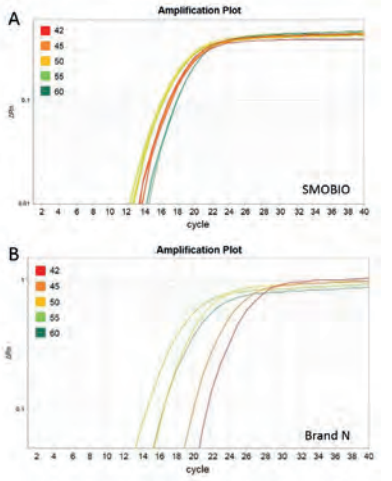
Contents

TR-BS1-1103
ExcelRT™ One-Step RT-qPCR Kit (TaqMan, ROX)

Component	Volume
One-Step RT Enzyme Mix	400 µl
2X One-Step qPCR Master Mix	2 X 1 ml

Storage

Aliquot to avoid multple freeze-thaw cycles
(stable within 30 freeze-thaw cycles)
Protect from light
-20°C for 12 months



RNAok™ RNase Inhibitor
TR-BS1-1104 (20 U/µl, 2000 U x 1)
TR-BS1-1105 (20 U/µl, 2000 U x 5)

Description

RNAok™ RNase Inhibitor is a recombinant mammalian RNase inhibitor that is purified by affinity chromatography from E. coli. This protein inhibits pancreatic-type ribonucleases, RNase A, B, and C by binding strongly to RNases in a noncompetitive mode at a 1:1 rato. RNAok™ RNase Inhibitor does not inhibit eukaryotic RNases T1, T2, U1, U2, CL3 as well as prokaryotic RNases I and H. RNAok™ RNase Inhibitor is compatible with RT-PCR enzymes such as AMV, M-MLV and ExcelRT™ Reverse Transcriptase or Taq DNA polymerase. Extensive quality control tests ensure RNAok™ RNase Inhibitor is free of unwanted contaminants that can plague other commercially available preparations of RNase inhibitors.

Application

- RT-PCR
- cDNA Synthesis
- in vitro transcription

Usage Recommendation

Add RNAok™ RNase Inhibitor to transcription, translation, and cDNA synthesis reactions at a final concentration of 1 Unit/µl.

Storage Buffer

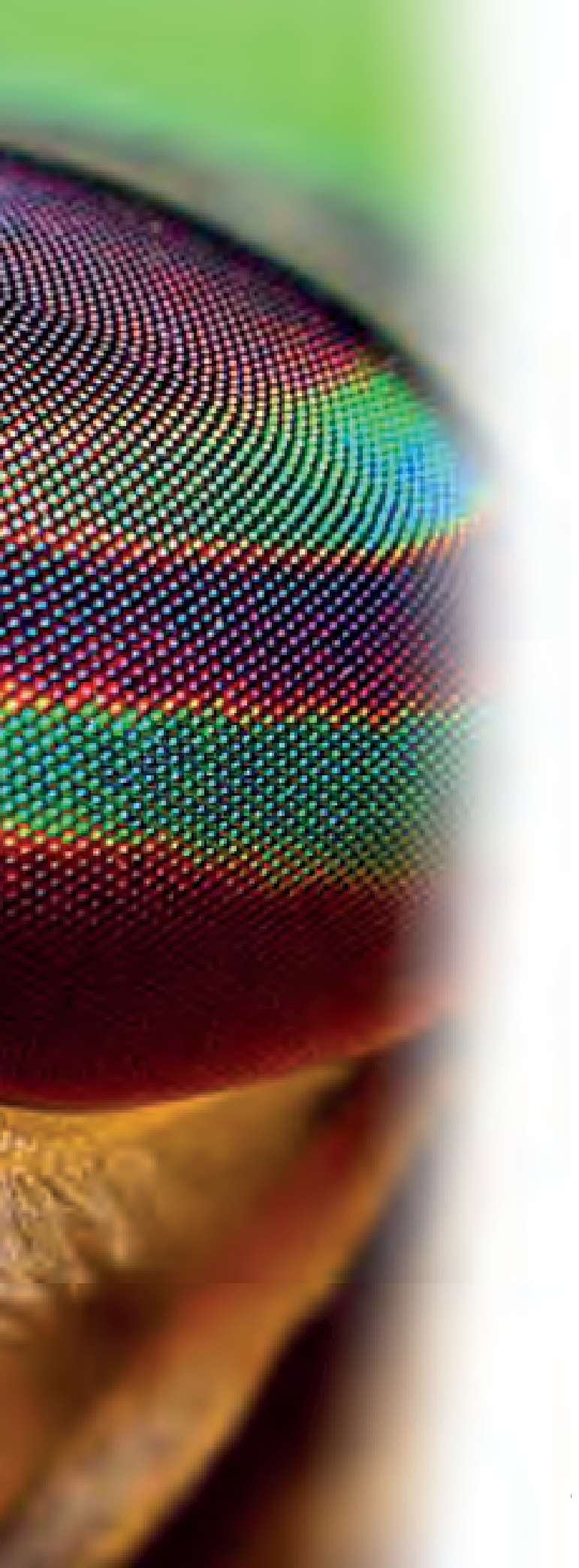
20 mM HEPES-KOH (pH 7.6), 50 mM KCl, 8 mM DTT, stabilizer, 50% (v/v) glycerol

Unit Definition

One unit is defined as the amount of RNAok™ RNase Inhibitor required to inhibit the actvity of 5 ng of RNase A by 50%.

Storage

-20°C for 24 months



NUCLEIC ACIDS SEPARATION

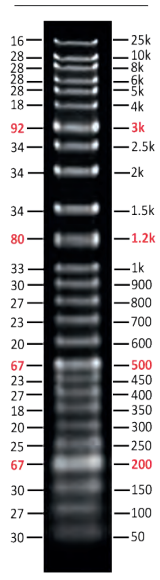
LADDERS & MARKERS

PRECATS DNA GELS

ExcelBand™ Super Range DNA Ladder (50 bp-25 kb) TR-BS1-1014 (500 µl)

Description

The TR-BS1-1014 ExcelBand™ Super Range DNA Ladder is a ready-to-use DNA ladder, which is pre-mixed with loading dye for direct gel loading. The DNA Ladder TR-BS1-1014 is composed of 26 individual DNA fragments: 25k, 10k, 8k, 6k, 5k, 4k, 3k, 2.5k, 2k, 1.5k, 1.2k, 1k, 900, 800, 700, 600, 500, 450, 400, 350, 300, 250, 200, 150, 100 and 50 base pairs derived from a mixture of PCR products and specifically digested plasmid DNA. This product contains four enhanced bands (3k, 1.2k, 500 and 200 bp) for easy reference. In addition, three tracking dyes, Xylene cyanol FF, Bromophenol blue and Orange G which mimic the migration of 4,000 bp, 500 bp and 50 bp dsDNA during electrophoresis are added for real time monitoring.



1.2% Agarose Gel
1X TBE Buffer

Source

Phenol extracted PCR products and dsDNA digested with specific restriction enzymes, equilibrated in 10 mM Tris-HCl (pH 8.0) and 10 mM EDTA

Range

50 ~ 25,000 bp

Concentration

88.7 µg/500 µl

Recommended loading volume

5 µl/well

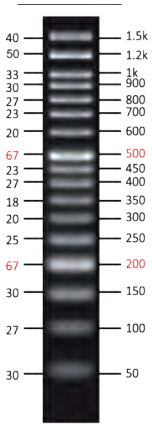
Storage

Room temperature for 6 months
4°C for 12 months
-20°C for 36 months

ExcelBand™ 50 bp DNA Ladder TR-BS1-1008 (500 µl)

Description

The TR-BS1-1008 ExcelBand™ 50 bp DNA Ladder is a ready-to-use DNA ladder, which is pre-mixed with loading dye for direct gel loading. The TR-BS1-1008 DNA ladder is composed of 17 individual DNA fragments: 1.5k, 1.2k, 1k, 900, 800, 700, 600, 500, 450, 400, 350, 300, 250, 200, 150, 100 and 50 bp derived from a mixture of PCR products and specifically digested plasmid DNA. This product contains two enhanced bands (500 bp and 200 bp) for easy reference. In addition, the low range Orange G tracking dye mimics the migration of a 50 bp dsDNA during electrophoresis, and allows for real time monitoring.



2% Agarose Gel
0.5x TAE Buffer

Source

Phenol extracted PCR products and dsDNA digested with specific restriction enzymes, equilibrated in 10 mM Tris-HCl (pH 8.0) and 10 mM EDTA.

Range

50 ~ 1,500 bp
Concentration
54 µg/500 µl

Recommended loading volume

5 µl/well

Storage

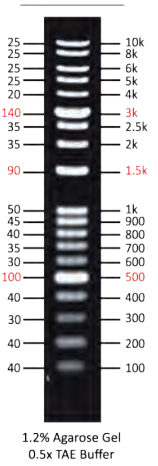
Room temperature for 6 months
4°C for 12 months
-20°C for 36 months

ExcelBand™ 1 KB Plus (0.1-10 kb) DNA Ladder TR-BS1-1012 (500 µl)

Description

The TR-BS1-1012 ExcelBand™ 1 KB Plus (0.1-10 kb) DNA Ladder is a ready-to use DNA ladder, which is pre-mixed with loading dye for direct gel loading.

The DNA Ladder TR-BS1-1012 is composed of 19 individual DNA fragments: 10k, 8k, 6k, 5k, 4k, 3k, 2.5k, 2k, 1.5k, 1k, 900, 800, 700, 600, 500, 400, 300, 200, and 100 bp derived from a mixture of PCR products and specifically digested plasmid DNA. This product contains three enhanced bands (3 kb, 1.5 kb and 500 bp) for easy reference. In addition, three tracking dyes, Xylene cyanol FF, Bromophenol blue and Orange G which mimic the migration of 4,000 bp, 500 bp and 50 bp dsDNA during electrophoresis are added for real time monitoring.



1.2% Agarose Gel
0.5x TAE Buffer

Source

Phenol extracted PCR products and dsDNA digested with specific restriction enzymes, equilibrated in 10 mM Tris-HCl (pH 8.0) and 10 mM EDTA.

Range

100 ~ 10,000 bp

Concentration

87 µg/500 µl

Recommended loading volume

5 µl/well

Storage

Room temperature for 6 months
4°C for 12 months
-20°C for 36 months

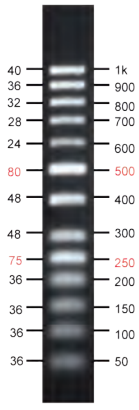
Cat Nº

Description	Concentration	Reference
ExcelBand™ 50 bp DNA Ladder	54 µg/500 µl	TR-BS1-1008
ExcelBand ™ 100 bp DNA Ladder	52.2 µg/500 µl	TR-BS1-1009
ExcelBand™ 100 bp+3K DNA Ladder	56 µg/500 µl	TR-BS1-1010
ExcelBand™ 1 KB (0.25-10 kb) DNA Ladder	50 µg/500 µl	TR-BS1-1011
ExcelBand™ 1 KB Plus (0.1-10 kb) DNA Ladder	87 µg/500 µl	TR-BS1-1012
ExcelBand™ XL 25 kb DNA Ladder, Broad Range (up to 25 kb)	51.6 µg/500 µl	TR-BS1-1013
ExcelBand™ Super Range DNA Ladder (50 bp-25 kb)	88.7 µg/500 µl	TR-BS1-1014

AccuBand™ 50 bp DNA Ladder II TR-BS1-1015 (500 µl)

Description

AccuBand™ 50 bp DNA Ladder II is composed of 13 individual DNA fragments, presenting 1k, 900, 800, 700, 600, 500, 400, 300, 250, 200, 150, 100 and 50bp sharp bands respectively. This product contains 2 enhanced bands (500 bp and 250 bp) for easy band identification. AccuBand™ 50 bp DNA Ladder II is ready-to-use, containing loading buffer with a tracking dye (Orange G). AccuBand™ 50 bp DNA Ladder II provides a sufficient amount of DNA for clear observation of all DNA bands ranging from 50 bp to 1 kb, either in agarose gel or in polyacrylamide gel electrophoresis.



2% agarose gel
0.5X TAE

Source

Phenol extracted PCR products and dsDNA digested with specific restriction enzymes, equilibrated in 10 mM Tris-HCl (pH 8.0) and 10 mM EDTA

Range

50 ~ 1000 bp

Concentration

55.5 µg/500 µl

Recommended loading

volume
5 µl/well

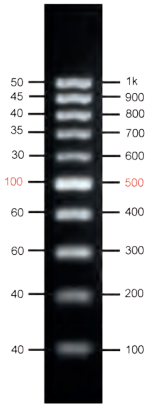
Storage

Room temperature for 6 months
4°C for 12 months
-20°C for 36 months

AccuBand™ 100 bp DNA Ladder II TR-BS1-1017 (500 µl)

Description

AccuBand™ 100 bp DNA Ladder II is composed of 10 individual DNA fragments, presenting 1k, 900, 800, 700 600, 500, 400, 300, 200 and 100 bp sharp bands respectively.
This product contains 1 enhanced band (500 bp) for easy identification of bands. AccuBand™ 100 bp DNA Ladder II is ready-to-use, containing loading buffer with dual color tracking dye (Orange G and Xylene Cyanol FF). AccuBand™ 100 bp DNA Ladder II provides a sufficient amount of DNA for clear observation of all DNA bands ranging from 100 bp to 1 kb, either in agarose gel or in polyacrylamide gel electrophoresis.



2% agarose gel
0.5X TAE

Source

Phenol extracted PCR products and dsDNA digested with specific restriction enzymes, equilibrated in 10 mM Tris-HCl (pH 8.0) and 10 mM EDTA

Range

100 ~ 1000 bp

Concentration

50 µg/500 µl

Recommended loading

volume
5 µl/well

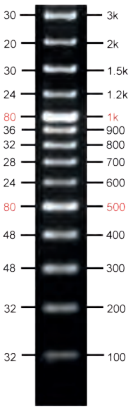
Storage

Room temperature for 6 months
4°C for 12 months
-20°C for 36 months

AccuBand™ 100 bp+3K DNA Ladder II TR-BS1-1018 (500 µl)

Description

AccuBand™ 100 bp+3K DNA LadderII is composed of 14 individualDNA fragments, presenting 3k, 2k,1.5k, 1.2k, 1k, 900, 800, 700 600, 500, 400, 300, 200 and 100 bpsharp bands respectively. This product contains 2 enhanced bands (1k and 500 bp) for easy band identification. AccuBand™ 100 bp+3K DNA Ladder II is ready-to-use, containing loading buffer with dual color tracking dyes (Orange G and xylene Cyanol FF). AccuBand™ 100 bp+3K DNA Ladder II provides a sufficient amount of DNA for clear observation of all DNA bands ranging from 100 bp to 3 kb, either in agarose gel or in polyacrylamide gel electrophoresis



2% agarose gel
0.5X TAE

Source

Phenol extracted PCR products and
dsDNA digested with specific restriction enzymes, equilibrated in 10 mM
Tris-HCl (pH 8.0) and 10 mM EDTA

Range

100 ~ 3000 bp

Concentration

54.4 µg/500 µl
Recommended loading

volume

5 µl/well

Storage

Room temperature for 6 months
4°C for 12 months
-20°C for 36 months

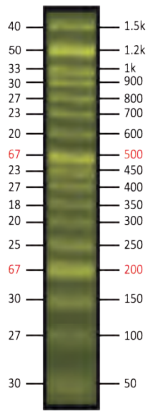
Cat Nº

Description	Concentration	Reference
AccuBand™ 50 bp DNA Ladder II, 500 µl	55.5 µg/500 µl	TR-BS1-1015
AccuBand™ 100 bp DNA Marker II	45.5 µg/500 µl	TR-BS1-1016
AccuBand™ 100 bp DNA Ladder II	50 µg/500 µl	TR-BS1-1017
AccuBand™ 100 bp+3K DNA Ladder II	54.4 µg/500 µl	TR-BS1-1018

FluoroBand™ 50 bp Fluorescent DNA Ladder TR-BS1-1019 (500 µl)

Description

The TR-BS1-1019 FluoroBand™ 50 bp Fluorescent DNA Ladder is a ready-to-use DNA ladder, which is pre-mixed with high sensitivity DNA binding fluorescent dye and loading dye for direct gel loading. The DNA Ladder TR-BS1-1019 is composed of 17 individual DNA fragments: 1.5k, 1.2k, 1k, 900, 800, 700, 600, 500, 450, 400, 350, 300, 250, 200, 150, 100, and 50 bp derived from a mixture of PCR products and specifically digested plasmid DNA. These bands can be visualized when illuminated with 470 nm blue or UV light. This product contains two enhanced bands (500 bp and 200 bp) for easy reference. In addition, the low range Orange G tracking dye which mimics the migration of a 50 bp dsDNA during electrophoresis is added for real time monitoring. Real time observation of electrophoresis is also possible if a compatible light source is fited to the electrophoresis tank.



2% Agarose Gel
0.5x TAE Buffer

Source

Phenol extracted PCR products and dsDNA digested with specific restriction enzymes, equilibrated in 10 mM Tris-HCl (pH 8.0) and 10 mM EDTA

Range

50 ~ 1,500 bp

Concentration

54 µg/500 µl

Recommended loading volume

5 µl/well

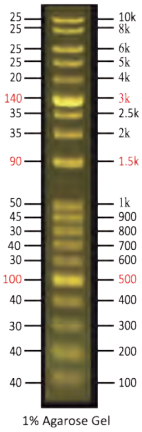
Storage

Room temperature for 6 months
4°C for 12 months
-20°C for 24 months

FluoroBand™ 1 KB Plus (0.1-10 kb) Fluorescent DNA Ladder TR-BS1-1023 (500 µl)

Description

The TR-BS1-1023 FluoroBand™ 1 KB Plus (0.1-10 kb) Fluorescent DNA Ladder is a ready-to-use DNA ladder, which is pre-mixed with high sensitivity DNA binding fluorescent dye and loading dye for direct gel loading. The DNA Ladder TR-BS1-1023 is composed of 19 individual DNA fragments: 10k, 8k, 6k, 5k, 4k, 3k, 2.5k, 2k, 1.5k, 1k, 900, 800, 700, 600, 500, 400, 300, 200, and 100 bp derived from a mixture of PCR products and specifically digested plasmid DNA; these bands can be visualized when illuminated with 470 nm blue or UV light. This product contains three enhanced bands (3 kb, 1.5 kb and 500 bp) for easy reference. In addition, three tracking dyes, Xylene cyanol FF, Bromophenol blue and Orange G which mimic the migration of 4,000 bp, 500 bp and 50 bp dsDNA during electrophoresis are added for real time monitoring. Real time observation of electrophoresis is also possible if a compatible light source is fited to the electrophoresis tank.



1% Agarose Gel
0.5x TAE Buffer

Source

Phenol extracted PCR products and dsDNA digested with specific restriction enzymes, equilibrated in 10 mM Tris-HCl (pH 8.0) and 10 mM EDTA.

Range

100 ~ 10,000 bp

Concentration

87 µg/500 µl

Recommended loading volume

5 µl/well

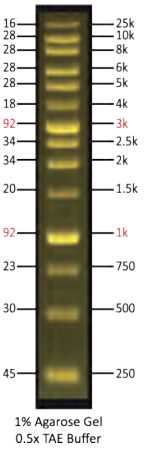
Storage

Room temperature for 6 months
4°C for 12 months
-20°C for 24 months

FluoroBand™ XL 25 kb Fluorescent DNA Ladder, Broad Range (up to 25 kb) TR-BS1-1024 (500 µl)

Description

The TR-BS1-1024 FluoroBand™ XL 25 kb Fluorescent DNA Ladder is a ready-to-use DNA ladder, which is pre-mixed with high sensitivity DNA binding fluorescent dye and loading dye for direct gel loading. The DNA Ladder TR-BS1-1024 is composed of 14 individual DNA fragments: 25k, 10k, 8k, 6k, 5k, 4k, 3k, 2.5k, 2k, 1.5k, 1k, 750, 500, and 250 bp derived from a mixture of PCR products and specifically digested plasmid DNA; these bands can be visualized when illuminated with 470 nm blue or UV light. This product contains two enhanced bands (3 kb and 1 kb) for easy reference. In addition, two tracking dyes, Xylene cyanol FF and Bromophenol blue which mimic the migration of 4,000 bp and 500 bp dsDNA during electrophoresis are added for real time monitoring. Real time observation of the electrophoresis is also possible if a compatble light source is fited to the electrophoresis tank.



1% Agarose Gel
0.5x TAE Buffer

Source

Phenol extracted PCR products and dsDNA digested with specific restriction enzymes, equilibrated in 10 mM Tris-HCl (pH 8.0) and 10 mM EDTA

Range

250 ~ 25,000 bp

Concentration

51.6 µg/500 µl

Recommended loading volume

5 µl/well

Storage

Room temperature for 6 months
4°C for 12 months
-20°C for 24 months

Cat Nº

Description	Concentration	Reference
FluoroBand™ 50 bp Fluorescent DNA Ladder	54 µg/500 µl	TR-BS1-1019
FluoroBand™ 100 bp Fluorescent DNA Ladder	52.2 µg/500 µl	TR-BS1-1020
FluoroBand™ 100 bp+3K Fluorescent DNA Ladder	56 µg/500 µl	TR-BS1-1021
FluoroBand™ 1 KB (0.25-10 kb) Fluorescent DNA Ladder	50 µg/500 µl	TR-BS1-1022
FluoroBand™ 1 KB Plus (0.1-10 kb) Fluorescent DNA Ladder	87 µg/500 µl	TR-BS1-1023
FluoroBand™ XL 25 kb Fluorescent DNA Ladder, Broad Range(up to 25 kb)	51.6 µg/500 µl	TR-BS1-1024

ExcelDye™ 6X DNA Loading Dye

Is a pre-mixed buffer for loading and tracking DNA samples during electrophoresis on agarose or polyacrylamide gels. It contains different composition of three dyes (Xylene cyanol FF, Bromophenol blue, and Orange G) for tracking DNA migration

Description	Volume	Reference
ExcelDye™ 6X DNA Loading Dye, Orange	5ml x 2	TR-BS1-1025
ExcelDye™ 6X DNA Loading Dye, Green	5 ml x 2	TR-BS1-1026
ExcelDye™ 6X DNA Loading Dye, Blue	5ml x 2	TR-BS1-1027
ExcelDye™ 6X DNA Loading Dye, Tri-colo	5ml x 2	TR-BS1-1028

FluoroDye™ DNA Fluorescent Loading Dye, (Green,6X)

Description	Volume	Reference
FluoroDye™ DNA Fluorescent Loading Dye, (Green,6X)	1 ml	TR-BS1-1029
FluoroDye™ DNA Fluorescent Loading Dye, (Green,6X)	1ml x 5	TR-BS1-1030

FluoroStain™ DNA Fluorescent Staining Dye (Green, 10,000X)

Description	Volume	Reference
FluoroStain™ DNA Fluorescent Staining Dye (Green, 10,000X)	500 µl	TR-BS1-1031
FluoroStain™ DNA Fluorescent Staining Dye (Green, 10,000X)	500 µl x 5	TR-BS1-1032

FluoroVue™ Nucleic Acid Gel Stain (10,000X)

Description	Volume	Reference
FluoroVue™ Nucleic Acid Gel Stain (10,000X)	500 µl	TR-BS1-1033
FluoroVue™ Nucleic Acid Gel Stain (10,000X)	500 µl x 5	TR-BS1-1034

CLONING

PCR CLONING VECTORS

E. coli TRANSFORMATION KIT

GetClone™ PCR Cloning Vector TR-BS1-1005 (20 Rxn) TR-BS1-1006 (20 Rxn)

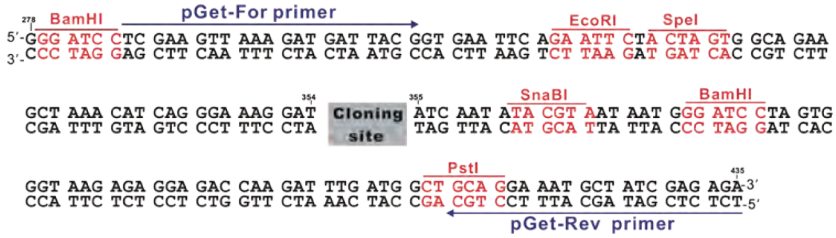
Description

The GetClone™ PCR Cloning Vector is a positive selection system for high efficiency cloning of blunt end DNA or amplicons. This cloning vector contains a lethal gene which can be disrupted by ligation of a blunt end DNA insert at the cloning site. Only colonies with inserted vectors are able to propagate, eliminating the need for IPTG and X-Gal for blue/white screening. The GetCloneTM pGet II vector includes ampicillin and kanamycin resistance genes that can meet the needs of most users.

Features

1. Cloning efficiency greater than 90%
2. IPTG and X-Gal not required
3. Accepts a wide range of insert/vector ratos 0.5:1 to 12:1
4. Accepts insert sizes of 6 bp to 12 kb
5. The phosphorylaton of PCR fragments is not required.
6. Accepts blunt end amplicon or DNA fragment (not for stcky ends)
7. Resistance to ampicillin and kanamycin (pGet II)

Cloning sites of GetClone™ PCR Cloning Vector (for both TR-BS1-1005 and TR-BS1-1006)



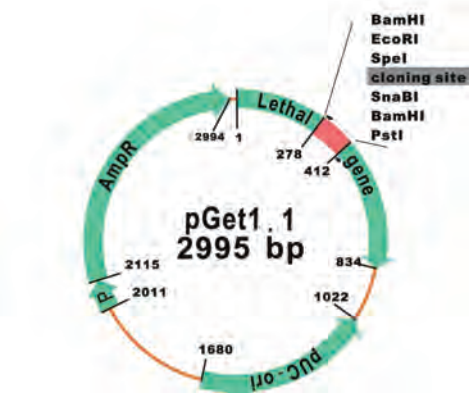
TR-BS1-1005 (50 ng/ul) GetClone™ PCR Cloning Vector

Contents

Component	Volume
pGet1.1 Vector	23 µl
pGet-For Primer (10 µM)	100 µl
pGet-Rev Primer (10 µM)	100 µl

Storage

-20°C for 24 r



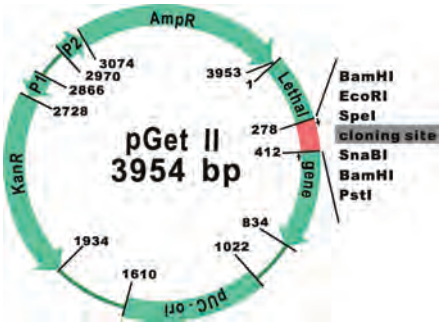
TR-BS1-1006 (25 ng/ul) GetClone™ PCR Cloning Vector II

Contents

Component	Volume
pGet II Vector	23 µl
pGet-For Primer (10 µM)	100 µl
pGet-Rev Primer (10 µM)	100 µl

Storage

-20°C for 24 months



Champion™ *E.Coli* Transformation Kit TR-BS1-1007 Flexible/High Eficency/Fast and Easy

Description

Champion™ E. coli Transformation Kit provides an easy method for rapid preparation of chemically competent cells with high transformation efficiency from fresh culture, overnight culture, or even directly from bacterial colonies on the plate. The competent cell preparation method eliminates the requirement of time-wasting wash step. In addition, preparation of competent cells from overnight culture or directly from bacterial colonies provides flexibility to cloning experiments. The resultant competent cells can be immediately used or stored at -70°C for one year.

This kit includes a specialized SMO-Broth™ medium and a unique Champion™ CC Buffer for culturing and preparing competent cells efficiently. Following the simple and quick competent cell preparation protocol from fresh culture, the transformation efficiency is typically ranged from 108 to 109 transformants/μg of pUC19 plasmid DNA, but varies depending on the E. coli strains.

The resultant competent cells can be further transformed using time-saving transformation protocol, eliminating the requirement of heat-shock and recovery steps.

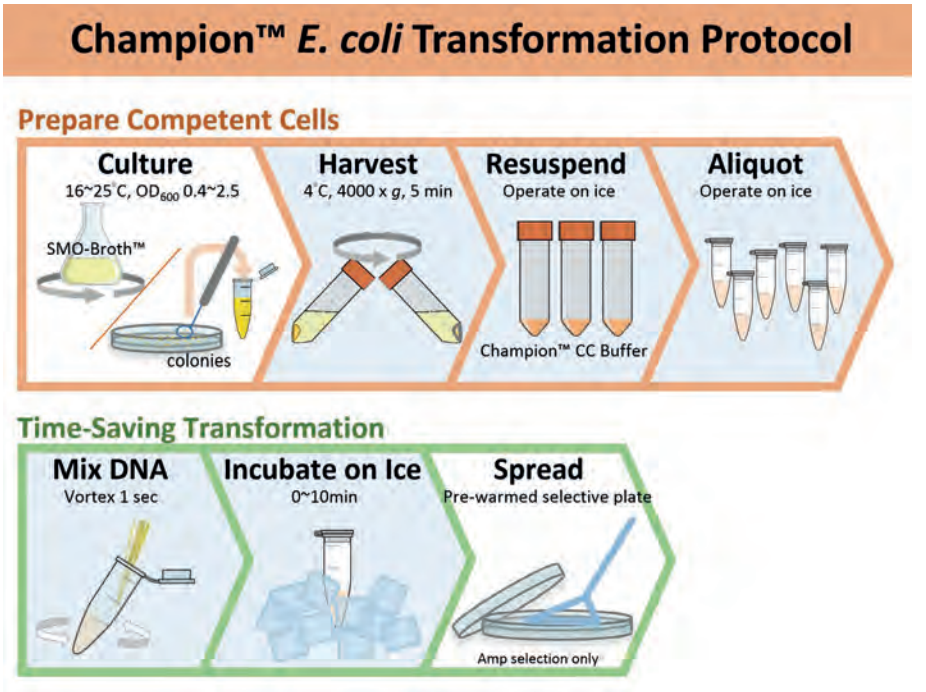
Kit Contents

Component	Volume
Champion™ CC Buffer	20 ml
SMO-Broth™	100 ml x 2
pUC19 Control Plasmid (10,4 μg/μl)	5 μl
Instruction Manual	1
Champion™ Competent Cell Preparation Card	1

Storage

4°C for 12 months

- Flexible – fresh culture, overnight culture, 4°C stored liquid culture or even colonies on agar plate can be used for transformation.
- Fast and Easy – only few steps for preparation; suitable for time-saving transformation
- High efficiency – up to 10 cfu/μg
- Personalization – suitable for most E. coli strains



OLIGOS & PROBES SERVICE

DNA OLIGOS

PROBES

NGS(Next Generation Sequence)
SPECIAL OLIGOS

MIPS

EXPRESSION, EDITING & GENE SYNTHESIS

- CR:tracRNA
- sgRNA
- customRNA
- HDR repair knok-inSeq
- SiRNA
- miRNA

DNA OLIGOS

- Custom DNA oligo synthesis from 2 to 300 bases
- Your choice of plate, strip or tube for optimal flexibility
- Standard DNA oligos are shipped within 24 hours
- Purified & modified oligos within 4 business days
- Over 300 modifications available

Synthesis & Scales

With Biolegio synthesis programs result in an average coupling efficiency above 99,5%. With this efficiency we are able to synthesize DNA oligos up to 300 bases. Synthesis is performed under low salt conditions, which avoids the need for additional purification for most basic molecular biology applications, such as PCR, sequencing, hybridization studies and antisense studies.
Biolegio offers four different synthesis scales for DNA oligos: 10 nmol, 40 nmol, 200 nmol and 1000 nmol. For each synthesis scale there is a restriction regarding the length of the oligo.

Purifications

Reverse-phase cartridge purifications
Level of purity typically 80%.
HPLC Reverse-phase purification
Level of purity typically 90%
PAGE Purification
Level of purity typically 95-99%

Long Oligos Synthesis

B-pure protocol enables high-quality oligonucleotides up to 300 bases

Coupling efficiency

up to 99,9%

Maximum DNA oligo length in relation to synthesis scale

Synthesis scale	Max. oligo length
10 nmol standard oligo	40 bases
40 nmol standard oligo	200 bases
200 nmol standard oligo	300 bases
1000 nmol standard oligo	300 bases

(oligos longer than 80 bases are synthetized with our B-pure protocol)

Guaranteed yeald for non-labelled, non purified oligos up to 40 bases

Synthesis scale	Min. oligo yeald
10 nmol standard oligo	10 nmol
40 nmol standard oligo	20 nmol
200 nmol standard oligo	95 nmol
1000 nmol standard oligo	400 nmol

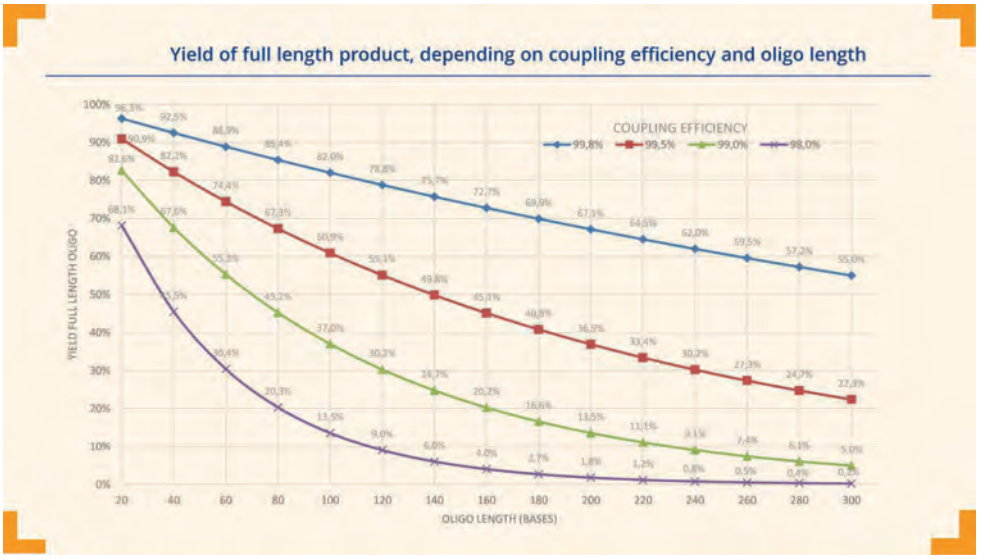
Ordering

DNA oligos in tubes

DNA oligos in 96- or 384-well plates

Premixed oligos (oligos dispensing service)

Oligo prepaid service



Modified Oligo Synthesis

- Over 300 modifications available
- available for diferents backbones (DNA,RNA 2'-O-Me,LNA)
- Dificult/Special designs, e.g. long haiprin oligo structures with 2 or 3 modifications

FLUOROPHORES

Modifications	5'	Internal	3'
6-FAM™	•		•
HEX™	•		•
TET™	•		
6-TAMARA™	•		•
Cyanine 3	•		•
Cyanine 5	•		•
ATTO™ Dye	•	•	•
Yakima Yellow™	•		
Dyomic™ Dyes	•	•	•
JOE™	•		•
Texas Red™	•		•
Quasar 570,647,705™	•		•
LC Replacement Dye	•		•
NED™ Replacement Dye	•	•	•
PET™ Replacement Dye	•	•	•
VIC™ Replacement Dye	•	•	•
Alexa Fluor™ Dyes	•	•	•
Calfluor™ Dyes	•		
ROX™	•	•	•
Fluorescein dT		•	

QUENCHERS

Modifications	5'	internal	3'
Black Hole Quencher 0	•		•
Black Hole Quencher 1	•		•
Black Hole Quencher 2	•		•
Black Hole Quencher 3	•		•
Black Hole Quencher 1dT		•	
Black Hole Quencher 2 dT		•	
Black Berry Quencher 650			•
Deep Dark Quencher 1			•
Deep Dark Quencher 2			•
Dabcyl™			•
TAMARA™	•		•
Eclipse	•		•

SPACERS

Modifications	5'	internal	3'
PC Spacer (Photocleavable)	*	*	*
Spacer C3/9/C12/18	*	*	*
d Spacer	*	*	*
3' Spacer C3-methyl	*	*	*

OTHER

Modifications	5'	Internal	3'
Phosphorilation	•		•
Amino Modifier C6	•	•	•
Amino Modifier C12	•		
Amino Modifier C3/C7			•
Thiol Modifier	•		•
Thiol Modifier S-S	•		•
Biotin	•	•	
Biotin TEG			•
Biotin Photocleavable	•		
Uracil™	•	•	•
Inosine	•	•	•
2'-O-Methyl RNA	•	•	•
Phosphorothiation (S-Oligos)		•	
DIG	•	•	•
Azide	•	•	•
Alkyne	•	•	•
Aldehyde	•		
Nitroindole	•	•	•
Methyl dC	•	•	•
DBCO-TEG	•		
Hexynyl	•		
Acrydite	•		

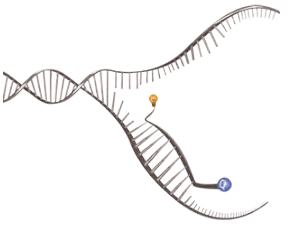
PCR Probes for REAL-TIME PCR

- Cost-effective alternatives for VIC, NED, PET and the MGB-moiety
- Wide variety of fluorophores - quencher combinations
- Order your primers and Real-time PCR probes premixed with the oligo dispensing service

Real-Time PCR probes
We have different kinds of Real-Time PCR probes. You can modify the DNA probe of your choice with our wide collection of quenchers and fluorescent dyes. Choose from a broad range of (alternative) modifications for all types of Real-Time PCR (qPCR) platforms.

Twice Dyed Probes

Twice dyed probes (TDP's) are Biolegio's version of dual-labeled probes. Our twice dyed probes are highly sensitive, dual-labeled DNA probes. We offer a wide variety of quenchers and fluorescent reporter dyes for all types of Real-Time PCR platforms.



All Twice Dyed Probes include synthesis of maximum 40 nt, 5' modification, 3' quencher and HPLC purification.

- Wide variety quenchers and dyes available
- Cost-effective replacement for MGB probes: XS-probes
- Competitive priced alternative VIC, NED and PET dyes

XS-probes - MGB probe alternative

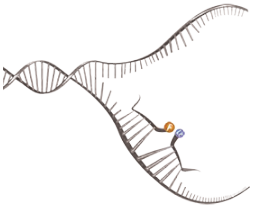
In addition to our twice dyed probes, Biolegio is offering the XS-probe. XS-probes mimic the features of the Minor Groove Binder (MGB probe) moiety: it gives greater stability to the hybridized probe. This raises its melting temperature. As a result, XS-probes can be effective at lengths shorter than traditional dual-labeled probes.

All Twice Dyed Probes include synthesis of maximum 40 nt, 5' modification, 3' quencher and HPLC purification.

- Cost-effective replacement for MGB probes
- Design shorter probes and increase your specificity
- Premixed assay delivery possible with the oligo dispensing service

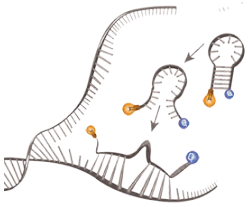
LightCycler FRET Probes

A LightCycler FRET probe system is a pair of single-stranded fluorescent-labeled oligonucleotides. They are sequence specific and highly sensitive.



Molecular beacons

Molecular beacons are highly sensitive, structured probes. They are used for sequence-specific detection in quantitative Real-Time PCR. Ideal for discriminating single nucleotide polymorphisms (SNPs).



Double Quenched Probes: 2Q-Probes

For optimal Quenching characteristics, use the 2Q-probes with an extra internally positioned Quencher to lower bacground and increase signal detection.

Synthesis scales and yield

Biolegio offers three different synthesis scales for your probes: 40 nmol, 200 nmol and 1000 nmol

Yeald for Real-Time Pcr Probes

Synthesis scale	yield
40 nmol probe	5-10 nmol
200 nmol probe	20-25 nmol
1000 nmol probe	50-60 nmol

Probes for Real-Time PCR

- Highly sensitive, dual-labelled fluorescent oligonucleotides.
- Specific probes for specific applications
- Wide variety of fluorophores-quencher combinations
- Alternative dyes available

NGS Oligo's

- **Dedicated and strictly monitored workflow for NGS oligo's**
- **Highly optimized cross contamination elimination State of the art LC-MS QC included in NGS-SP & NGS-P Services.**

Over the last decades NGS oligo technologies have evolved at a rapid pace, and concurrently so has the demand for high purity - high quality associated products like oligonucleotides. With the throughput of sequencing platforms increasing, multiplexing samples is now the common method for making sequencing increasingly economical. Even at very minimal amounts barcode cross contamination can be disastrous to a sequencing experiment. At Biolegio we dedicated ourselves to develop a workflow for NGS oligo's which has proven itself moreover for various NGS applications.

Biolegio NGS oligonucleotides are synthesized in an environment which is monitored by externally executed qPCR assays using swaps of the facility, hardware and technicians. Thus enables the detection of contaminating oligos and high risk areas.

Synthesis and Purification is performed on media used only once for every single oligonucleotide to rule out the possibility of cross contamination, therefore HPLC purification is not available for our NGS oligos. Based on the high coupling efficiency we reach due to our optimized synthesis protocols of 99,5% and higher, the purity of our NGS-S grade oligo's are fully compatible for most NGS applications.

At Biolegio we offer three NGS oligo services: NGS-S, NGS-SP and NGS-P. For all three categories we give the same attention to the synthesis workflow to exclude cross contamination on the highest level possible. You decide for the turnaround time, purity and quality control as well as documentation needs and importance of yields.

Within our NGS-SP & NGS-P service the purity and quality for every single NGS oligonucleotide is assessed using state of the art UPLC-MS to ensure purity and correct mass.

NGS Oligos Service Overview

	NGS-S (standard)	NGS-SP (Standard Plus)	NGS-P (Premium)
Quality	Highest synthesis Quality minimal reduced cross contamination	Highest Quality and Purity Maximal reduced cross contamination	Highest Quality and Purity maximal reduced cross contamination guarenteed yields up to 80 nts
Purification	Desalted	PAGE	PAGE
Purity	ca. 80%	ca. 95-99%	ca. 95-99%
Modification	Various modifications & all degenerated codes available for all NGS services		
QC	Standard	Standard + LCMS QC Report Optional	Standard + LCMS QC Report Included
Scales & Yields	Ca. Yields 40 nmol: 20-40 nmol 200 nmol: 40-100 nmol 1000 nmol: 150-300 nmol	Ca. Yields 40 nmol: 5-10 nmol 200 nmol: 20-40 nmol 1000 nmol: 50-100 nmol	Guaranteed yiealds 40 nmol: 10-20 nmol 200 nmol: 40-50 nmol 1000 nmol: 100-150 nmol
Shipment	After Order is complete	After Order is complete	Partial Shiment if necessary (e.g. resynthesis or modified shipped extra)
Documentation	Table format data sheet	Table format data sheet	Table format data sheet order overview LCMS Report per oligo (digital)
Shipping Within	20-30 NGS primes: 3 bisness days 30-60 NGS primes: 4 bisness days <100 NGS primers: 6 bisness days >100 NGS primers: on reuest	20-30 NGS primer: 6 bisness days 30-60 NGS primer: 8 bisness days <100 NGS primer: 12 bisness days >100 NGS primer: on request	20-30 NGS primer: 8 bisness days 30-60 NGS primer: 10 bisness days <100 NGS primer: 14 bisness days >100 NGS primer: on request

Molecular Inversion Probe (MIP)

- **Ideal as target enrichment technique for NGS application**
- **Extraordinary high specificity in multiplex reactions**
- **High capture reproducability**
- **Bias reduction: no fragmentation and PCR needed**
- **Straight forward and easily automatable**

What is a Molecular Inversion Probe?

A Molecular Inversion Probe is a single stranded oligonucleotide containing two annealing arms complimentary to the target of interest with a sequence gap in between. This sequence gap can target a SNP or a larger region of interest. In between the annealing arms of the MIP binding sites. Universal primers are included and other functionalities like index sequences or digestion sites can be incorporated depending on the experimental setup.

Multiple advantages

The advances in DNA analysis made a great leap forward with the emergence of Next Generation Sequencing (NGS). With these advances different target enrichment techniques have been developed to select the regions of interest for NGS analysis in a sensitive and cost-effective way. Amongst these techniques a solution phase “capture by circularization” method using “Molecular Inversion Probes” (MIPs) has gained increasing interest. Extensively used for research in Single Nucleotide Polymorphisms (SNPs) and Copy Number Variation (CNV), now the MIPs have shown multiple advantages as a Genomic partitioning technique allowing
enrichment for regions of interest at a scale that is matched by Next Generation Sequencing platforms.

MIPs Key Features

Specifity	High specificity compared to other genome partitioning techniques	Biolegio offers high quality MIPs produced with robust and sublime coupling efficiency
Multiplexing	Due to the high specificity MIPs are ideal for multiplexing reactions	MIPs are produced in the NGS workflow where cross-contamination is eliminated
Reproducability	Multiple experimental repeats with a balanced pool of MIPs exhibits high reproducability	order Biolegio MIPs at any custom concentration to facilate your workflow
ibrary prep	No need for fragmentation or PCR reducing blas.	isolate your DNA, add the MIP pool and you are ready to go! Use our flexible dispense service to recieve your oligo’s in any concentration pooled combination and any tube/plate format to optimize and standarize your workflow
Esay of use	Straight forward and automatable-workflow without the need of specialized instrumentation	see above

An Introduction to CRISPR

The capability to carry out targeted modifications straightforward and with high accuracy to the genome is transforming life science research.
In just a few short years the fast evolving technique CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats), has gained huge popularity and opens doors to a vast array of applications. Many consider this technique as a major breakthrough in the field of synthetic biology and the rate of publications emerging around CRISPR has reflected this and increased dramatically within a short period of time.

Initially discovered as an "adaptive immune system" in prokaryotes CRISPR has now been extensively used as a genome editing tool. This is mainly due to the relatively straightforward and high accuracy targeting of nucleic acid strands in addition to it's speed, ease of use and relatively low cost.

This is made possible by the use of guide RNA associated with CAS (CRISPR Associated protein) nuclease systems. Cas9 catalyzes site-specific cleavage of (double stranded) DNA when guided by two short RNA sequences – crRNA (CRISPR RNA), which is complementary to the target DNA or protospacer, and tracrRNA (transactivating RNA) which, fused with the crRNA, complexes with the Cas9 nuclease to direct and facilitate cleavage of the target DNA (4). The
RiboNucleoProtein (RNP) complex of crRNA/tracrRNA and Cas9 nuclease anneal to the target sequence next to a PAM (Protospacer Adjacent Motif) sequence.

Once the complex is bound to the target, a cut is achieved leaving several options for editing the target such as "Non-Homologous End Joining" (NHEJ) and "Homology Direct Repair" (HR)

Although challenging aspects remain, such as off-target effects, indels and discrepancies in expected gRNA specificity (5), the results are astonishing and the further development of this technique will continue to impact the field of genome engineering.

cr:tracrRNA

Optimized for SpCas9, the cr:tracrRNA Kit is designed for researchers conducting basic CRISPR genome editing experiments. The CRISPR kit contains all the necessary components to successfully anneal, transfect, target and edit a gene using CRISPR/Cas9 and synthetic guide RNA.

crRNA

You provide the 17-20nt RNA sequence that binds to the DNA 17-20nt target sequence that is opposite to the PAM sequence. An optimized 22mer Linker is added on the 3' end of your target sequence. For example, you will receive a crRNA with this format:

5'-AAUUUCACAGCUGCACAUA+Synthego Linker-3'

tracrRNA

We have optimized the 72mer tracrRNA sequence based on S. pyogenes, and provide this with a proprietary linker to duplex with the crRNA. You do not need to provide a sequence for the tracrRNA.

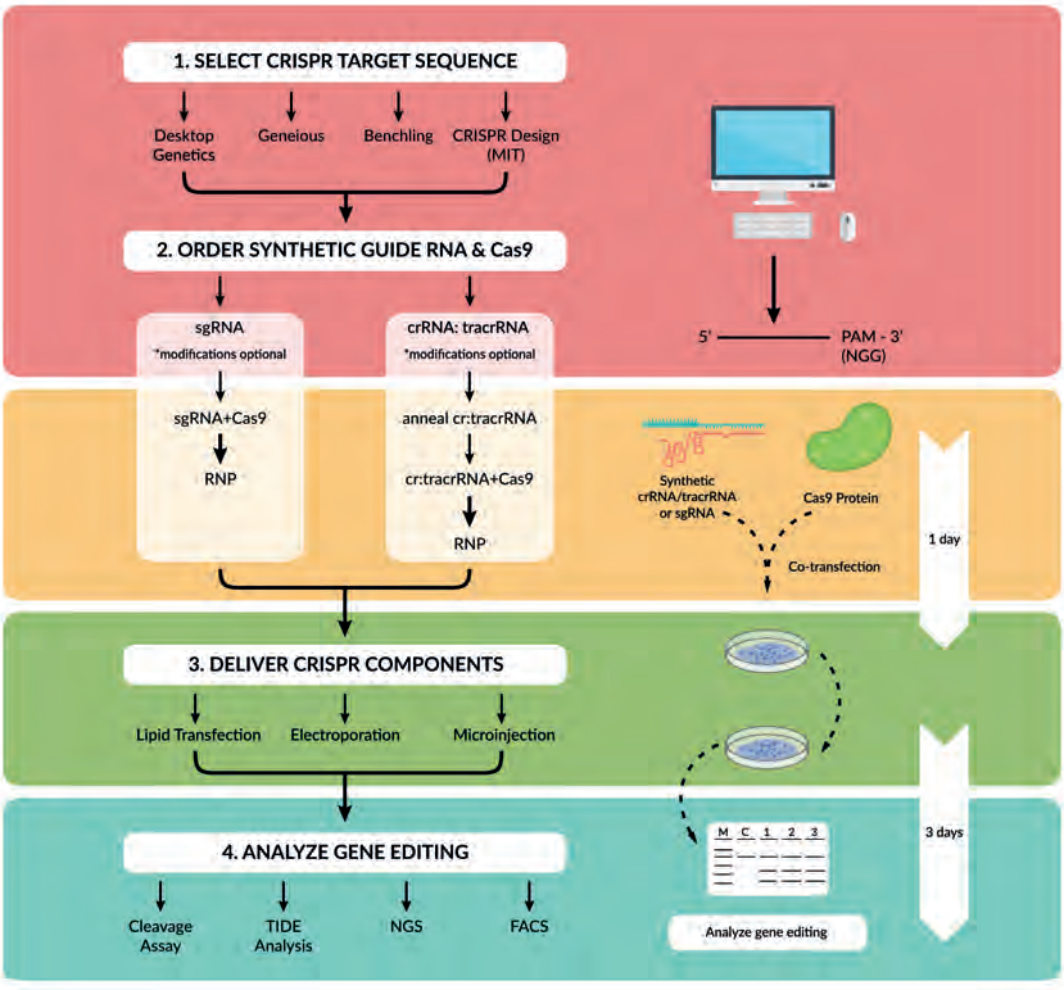
Synthetic sgRNA

Achieve up to 90% editing efficiency with the highest quality synthetic sgRNA in the market. Biolegio is the first company to deliver a production scale, full length 100-mer synthetic sgRNA product at a practical price and volume.
Unlike custom developed solutions that are expensive and can take weeks before transfection readiness, CRISPRevolution sgRNA ships up to 4X faster and 80% lower cost.

Benefits of Synthetic sgRNA

- No need to anneal crRNA:tracrRNA
  Higher efficiency and reduced lab time
- Better in vivo stability
  When duplexed with Cas9 nuclease
- Cost-effective
  Highly scalable for large numbers of experiments
- 100% DNA-free
  No risk of integrating foreign DNA into cell line
- A single oligonucleotide
  Ready for transfection out-of-the box
- Optimized for SpCas9
  Optimized 80mer scaffold for use with SpCas9

No need to anneal, the sgRNA format arrives ready for transfection. It uses a single strand of user-defined 17-20nt RNA target sequence that will bind to the DNA 17-20nt target sequence that is opposite to the PAM sequence.
An optimized 80mer Synthego Scaffold is added on the 3' end of your target sequence.



	Synthetic Guide RNA	Plasmid	IVT
Process	**sgRNA** 1. Choose target sequence 2. Order synthetic RNA **crRNA + tracrRNA** 1. Choose target sequence 2. Order Synthetic RNA 3. Anneal crRNA + tracrRNA	1. Choose target sequence 2. Design/order DNA primers 3. PCR insert 4. Ligate into plasmid 5. Transform into cells 6. Screen cells 7. Sequence verify plasmid 8. Purify plasmid DNA	1. Choose target sequence 2. Design/order DNA primers 3. Assemble guide by PCR 4. Perform IVT 5. Purify guide RNA
Time to Transfection	Ready for transfection	7-14 days	1-3 days
Transfection Labor Time	Minimal	Days of lab work	Full day of lab work
Off-target Effects	Lowest	Variable	Variable
Efficiency	Up to 90% efficiency	Variable	Variable
Consistency	Highest	Variable	Variable

Custom RNA

Custom RNA is tailored to how you want to do your research: Cpf1 (Cas12a), C2c2, S. aureus Cas9 or any novel nuclease. Or to alter the secondary structure of your tracrRNA.
Tell us the sequence you want and we'll make you the highest quality RNA – Synthego's Custom RNA is a fully custom target sequence guide RNA product for genome editing.

Custom RNA 50

Custom RNA 50 is perfect for designing short guide RNAs for nucleases that don't require long sequences, such as Cpf1. You can use it to design your own Cas9 crRNA and custom 3' linker to a tracrRNA.

- Your 76-100nt Sequence
- Material for 10-20 Transfections
- Quantity: 3 nmol by OD260
- Modified RNA Optional*
- Ships in 5-10 Business Days

Custom RNA 75

Custom RNA 75 is perfect for designing guide RNAs for nucleases that don't require guides as long as S. pyogenes Cas9. You can use it to design your own Cas9 tracrRNA and custom 5' linker to a crRNA.

- Your 51-75nt Sequence
- Material for 25-50 Transfections
- Quantity: 5 nmol by OD260
- Modified RNA Optional*
- Ships in 5-10 Business Days

Custom RNA 100

Custom RNA 100 is perfect for designing full length sgRNA (100-mer) for CRISPR at a practical scale and price point. You can custom design your entire sgRNA sequence from 76-100 nucleotides.

- Your 10-50nt Sequence
- Material for 25-50 Transfections
- Quantity: 5 nmol by OD260
- Modified RNA Optional*
- Ships in 5-10 Business Days

Custom RNA Specifications

- Custom RNA Specifications
- Product Type: Fully Synthetic RNA for CRISPR or other applications
- Purification: High-Quality Liquid Chromatography SPE
- Analysis Method: Electrospray Ionization Mass Spectrometry
- Shipping Format: Nuclease-free Tubes

HDR repair knock-in sequences

Our unrivalled expertise in synthesis of long DNA /RNA constructs give rise a multitude of advantages for CRISPR applications such like knock-in constructs containing barcodes or multiple cutting sites. Use our oligonucleotides as knock-in sequences for Homology Directed Repair applications.

IVT templates

With the longest, high quality, high purity DNA oligos commecialy available - Up to 300 bases. Our Long DNA oligos perfectly complement our already extensive CRISPR product offering and can be used as direct templates for in vitro transcription of RNA. Please contact us for further details.

Unmatched custom synthesized oligonucleotides

Oligonucleotides reside at the heart of so many molecular biology techniques and are a crucial but often overlooked component of everyday research.

CUSTOM SYNTHESIZED OLIGONUCLEOTIDES

Examples of Purposes / Description	Product	Length (nts)
Cloning / plasmid based gRNA introduction, HR knock in constructs, IVT templates, PCR, sequencing, NGS	DNA Oligonucleotides	2 - 80
Long HR knock-in constructs, up to 300 nucleotides, internal PCR controls	DNA Longmers	81 - 300
crRNA, tracrRNA, sgRNA, siRNA, Aptamers	RNA Oligonucleotides	2 - 80
Chimeric sgRNA for Cas9/sgRNA RNP's	RNA Longmers	80 - 100

Custom RNA Synthesis

RNA synthesis products have many uses, such as understanding the role of ribozymes (catalytic RNA) and cellular RNA as a target for antisense therapeutics. However the need for chemical RNA synthesis has become increasingly important since the advent of synthetic siRNA for use in siRNA-mediated RNA interference (RNAi), and the upcoming CRISPR applications.

- High quality custom synthetic RNA
- Long RNA Oligos possible

siRNA synthesis

Biolegio's siRNA is synthesized with high quality chemicals. Synthesis is performed under stringent computer controlled conditions. Internal control functions measure the base coupling efficiency and guarantee the siRNA oligo to be of the highest quality standard, as you can expect from all products of Biolegio.

siRNA-mediated RNA

Interference siRNA oligos are an easy and efficient way to achieve RNA interference (RNAi). RNAi is amechanism of gene silencing at the mRNA level. This phenomenon is triggered by small interfering (si)RNAs and micro (mi)RNAs. These RNAs are capable of inhibiting gene expression by eitherdirecting the degradation of homologous mRNA targets or inducing the repression of translation of mRNA targets, which have incomplete complementarity.

2'-OMe RNA synthesis

2'-O-Methyloligoribonucleotides are extremely useful reagents for a variety of molecular biology applications. The 2'-OMe RNA-RNA duplex is more thermally stable than the corresponding DNA-RNA one. This is not a substrate for RNase H. In addition, 2'-OMe-RNA is chemically more stable than either DNA or RNA and is resistant to degradation by RNA- or DNA-specific nucleases.
The enhanced RNase and DNase resistance, and the increased thermal stability of their duplexes and triplexes, have been examined in a number of ways. Applications range from the simple antigen type experiments to the correction of aberrant splicing. Researchers have also made use of biotinylated 2'-OMe RNA for the affinity selection of affinity depletion of ribonucleoprotein complexes, most notably in the field of RNA processing.

Synthesis scale and yield

Biolegio offers three different synthesis scales for your RNA oligos: 40 nmol, 200 nmol and 1000 nmol. The maximum length of a RNA oligo is 100 bases (largely sequence dependent).

APPROXIMATE YIELD TO SYNTHESIS SCALE (HPLC PURIFIED)

Synthesis scale	Approx. yield
40 nmol RNA/siRNA oligo	5-10 nmol
200 nmol RNA/siRNA oligo	25 nmol
1000 nmol RNA/siRNA oligo	60 nmol

ORDERING

You can order our custom synthesized product by sending a completed order form webshop at www.teknokorma.es

Webshop

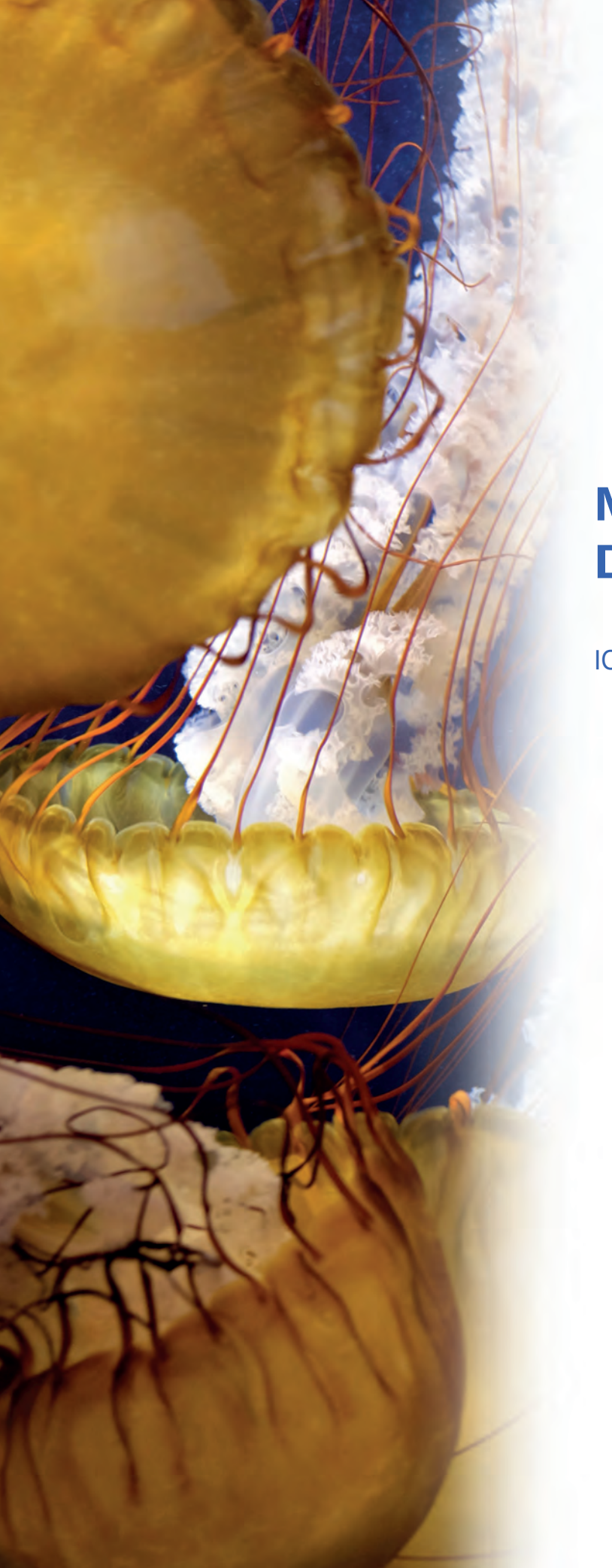
Order your oligos quick and easy in our webshop. With your own account you can directly see the prices of oligos. Have direct access to your order history. All this is packaged in an easy-to-use on-line interface. We can integrate your in-house ordering system with our webshop by using a "punch-out" protocol.

Shipping and handling

Shipping and handling details are largely dependent on the shipping location. Please contact us for more information about shipping and handling.

Delivery schedule

> Standard oligos with maximum length < 100 bases are shipped within 48 hours, order before 5:00 PM GMT.
> Purified & modified oligos are shipped within 5 business days.
> Custom DNA probes are shipped within 10 business days.
> RNA oligos are shipped within 12 business days.



MOLECULAR DETECTION

ICGENE System

Enbiotech's products are kits and instruments based on molecular biology for the research in plant pathology, veterinary and food safety fields.

The diagnostic kits contain all the components necessary for the execution of the test. They are ready-to-use and designed to simplify and drastically speed up the steps required to perform analyses.

Legionella pneumophila Kit

Specific kit for the rapid detection of Legionella pneumophila from water samples.
legionella pneumophila kit is designed for rapid nucleic acid extraction and amplification of LAMP technology. All steps are performed by using ICGENE MINI instrument (Enbiotech Cat Nº TR-BI1-2001) Kit has been tested for detection of *Legionalla pneumophila*

Kit Reagents and Components (ready to use)

Extraction Buffer	yellow cap bottles containing extraction buffer
Primer Mix	Freeze-dried primers specifics for L.pneumophila
LAMP Mix	green cap tube containing a mix including enzyme
Mineral Oil	blue cap tube containing mineral oil
Positive Control	red cap tube freeze-dried plasmid DNA ready-to-use for LAMP reaction
Negative Control	white cap tube extraction buffer
Sterile Water	clear cap tube sterile water

Legionella pneumophila Badge
contractless badge for identification of the kit containing information relating to the lot number, expiration date and provides the parameters associated with the kit

Kit Features

- All ready-to-use reagents included
- Rapid DNA extraction in 15 minutes at room temperature
- Positive and negative controls included
- Reduction of cross-contaminations
- Portable, user-friendly system suitable for applications directly in the field
- Lyophilized formulation of the reagents, suitable for deliveries at room temperature
- Reagents storage at + 4°C

Analytical Procedure

ICGENE Mini performs 3 steps:

1. Nucleic Acid Extraction
2. Gene Amplification
3. Detection and interpretation of results

After DNA extraction (in a few minutes), samples can be proceesed by LAMP amplification. For each sample, Primer mix tubes are used dispensing the recomended aliquots of the extracted DNA, LAMP mix, and mineral oil, as specified in the kit manual.

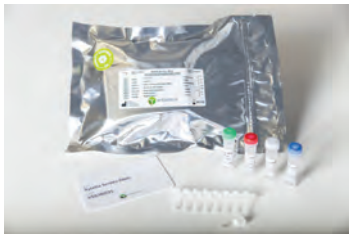
By placing the kit badge near to the ICGENE MINI device, the system recognizes the kit trough radio-frequency identification (RFID) technology and performs the analyses specially designed for L*egionella pneumophila* detection.

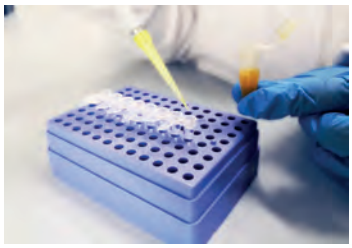
Results Interpretation

ICGENE MINI system performs automatic interpretation of the results. Data are displayed on an Android tablet connected to ICGENE MINI, trough wich it is possible to control the analitycal steps and manage the results. A sigmoid curve indicates a positive sample, whereas a straight line indicatesa negative sample for *Legionella pneumophila.* On the left of the tablet screen, a "+" symbol appears next to the sample's name in case it is positive. The analysis results are sincronized with te ICGENE portal server where they can be browsed using its web app.

Performance Criteria

Stability: the kit is stable at room temperature during transportation. Upon arrival, the kit must be stored at 4ºC following the strict storage parameters the kit is stable for 1 year.
Analytical Sensivity and Specificity: The amplification and detection system provides a detectable result of up to 28 plasmid copies/ul of *Legionella pneumophila.*





TK ICGENE System LAMP detection

Xylella fastidiosa Kit

Specific kit for the rapid detection of Xylella fastidiosa from host plants (e.g. Olea europaea, Prunus amygdalus, Nerium oleander) and insect vectors (Philaenus spumarius, Neophilaenus campestris). Xylella fastidiosa kit is designed for rapid nucleic acid extraction and amplification by LAMP technology. All steps are performed by using ICGENE MINI device (Enbiotech Cat. No. TR-BI1-2033). Kit has been tested for detection of Xylella fastidiosa subsp. pauca, X. fastidiosa subsp. fastidiosa and X. fastidiosa subsp. multiplex.

Kit Features

Ready-to-use system for total nucleic acid extraction in only few minutes without sophisticated laboratory equipment Ready-to-use reagents avoid the possibility of environmental contamination or human error.
Speed and easiness of the test (about 45 minutes)
Host plants and insects samples
All reagents are stored at 4°C
Shipping at room temperature

Identimeat Pork Kit

Specific kit for rapid detection of Sus scrofa domesticus (domestic pig) DNA from food matrices. IdentiMeatPork kit includes a rapid nucleic acid extraction and amplification by LAMP technology using the ICGENE MINI device (Enbiotech Cat. No. TR-BI1-2019). The kit has been tested for detection of pork DNA

Kit Features

Ready-to-use system for total nucleic acid extraction in only few minutes without sophisticated laboratory equipment Ready-to-use components reduce the risks related to environmental contamination or human error.
Speed and easiness of the test (about 60 minutes)
Useful for testing food matrices
Possibility of performing genetic tests directly in the field
All reagents are stable at room temperature for the shipment/ transport, however they should be stored at 4°C

Identidairy Goat Kit

Specific kit for rapid detection of goat DNA (Capra hircus) DNA in milk and dairy products, raw and cooked. The kit IdentDairyGoat includes all the reagents needed for the rapid DNA extraction and gene amplification by LAMP technology (loop-mediated isothermal amplification)* using the ICGENE MINI portable system with patented technology** (Cat No TR-BI1-2025).

The kit has been developed for the qualitative (presence/abstence) detection of goat DNA.

The kit includes a badge with Radio-frequency identification (RFID) with all kit information including lot number and expiration date. The badge allows to carry out the DNA extraction, amplification and automatic interpretation of the results for the specific detection of goat DNA.
Automatic interpretation of the results in real-time using an android tablet. Sigmoid curves indicate positive results (+), straight lines indicate negative results (o) for C. hircus.

Kit Features

All ready-to-use reagents included
Rapid DNA extraction in 15 minutes at room temperature
Positive and negative controls included
Reduction of cross-contaminations
Portable, user-friendly system suitable for applications directly in the field
Lyophilized formulation of the reagents, suitable for deliveries at room temperature
Reagents storage at + 4°C

Water

Description	nº Determinations	Cat Nº
Salmonella spp.	40	TR-BI1-2000
Legionella pneumophila	40	TR-BI1-2001
Pseudomonas aeruginosa	40	TR-BI1-2002
Clostridium perfringens [i]	40	TR-BI1-2003
Campylobacter spp.[i]	40	TR-BI1-2004
Vibrio cholerae [i]	40	TR-BI1-2005
Vibrio parahaemolyticus [i]	40	TR-BI1-2006
Vibrio vulnificus [i]	40	TR-BI1-2007
Legionella spp.	40	TR-BI1-2008

Food

Description	nº Determinations	Cat Nº
Listeria monocytogenes	40	TR-BI1-2009
Salmonella spp.	40	TR-BI1-2010
Anisakis	40	TR-BI1-2011
Campylobacter spp. [i]	40	TR-BI1-2012
STEC[i]	40	TR-BI1-2013
Clostridium perfringens	40	TR-BI1-2014

Veterinary

Description	nº Determinations	Cat Nº
Leishmania spp.	40	TR-BI1-2015
Parvovirus spp.	40	TR-BI1-2016
Babesia spp.	40	TR-BI1-2017
Canine distemper Virus [i]	40	TR-BI1-2018
Mycoplasma agalactiae	40	TR-BI1-2019

ID Meat

Description	nº Determinations	Cat Nº
IdentiMeat Pork	40	TR-BI1-2020
IdentiMeat Beef	40	TR-BI1-2021
IdentiMeat Goat	40	TR-BI1-2022
IdentiMeat Sheep	40	TR-BI1-2023
IdentiMeat Deer	40	TR-BI1-2024

TK ICGENE mini LAMP Detection Kits

ID Dairy

Description	nº Determinations	Cat Nº
IdentiDairy Cow	40	TR-BI1-2025
IdentiDairy Goat	40	TR-BI1-2026
IdentiDairy Sheep	40	TR-BI1-2027
IdentiDairy Donkey [i]	40	TR-BI1-2028
IdentiDairy Bufal [i]	40	TR-BI1-2029

ID Fish

Description	nº Determinations	Cat Nº
IdentiFish Tuna	40	TR-BI1-2030
IdentiFish Salmon	40	TR-BI1-2031
IdentiFish Sardinella	40	TR-BI1-2032
IdentiFish Sardina	40	TR-BI1-2033

Phytopathology

Description	nº Determinations	Cat Nº
Xylella fastidiosa plant	40	TR-BI1-2034
Xylella fastidiosa vector	40	TR-BI1-2035
Xylella fastidiosa Plate Biorad	96	TR-BI1-2036
Xylella fastidiosa Plate Applied Biosystem	96	TR-BI1-2037
PSA	40	TR-BI1-2038
ToLCNDV	40	TR-BI1-2039
Guignardia citricarpa	40	TR-BI1-2040
PPV	40	TR-BI1-2041
Botrytis cinerea	40	TR-BI1-2042
Monilia fructigena	40	TR-BI1-2043
Monilia fructicola	40	TR-BI1-2044
CTV	40	TR-BI1-2045
Candidatus liberibacter asiaticus[i]	40	TR-BI1-2046
Erwinia amylovora [i]	40	TR-BI1-2047
Clavibacter michiganensis subsp. sepedonicus [i]	40	TR-BI1-2048
Xanthomonas campestris pv. campestris [i]	40	TR-BI1-2049
Verticillium dahliae [i]	40	TR-BI1-2050

Equipment

Description	Cat Nº
ICGENE mini	TR-BI1-2051
ICGENE Plus [i]	TR-BI1-2052
Complete case of ICGENE and centrifuge	TR-BI1-2053
Complete ICGENE case and filtration ramp	TR-BI1-2054

[i] Available at 2020

PROTEOMICS

INMUNOASSAYS

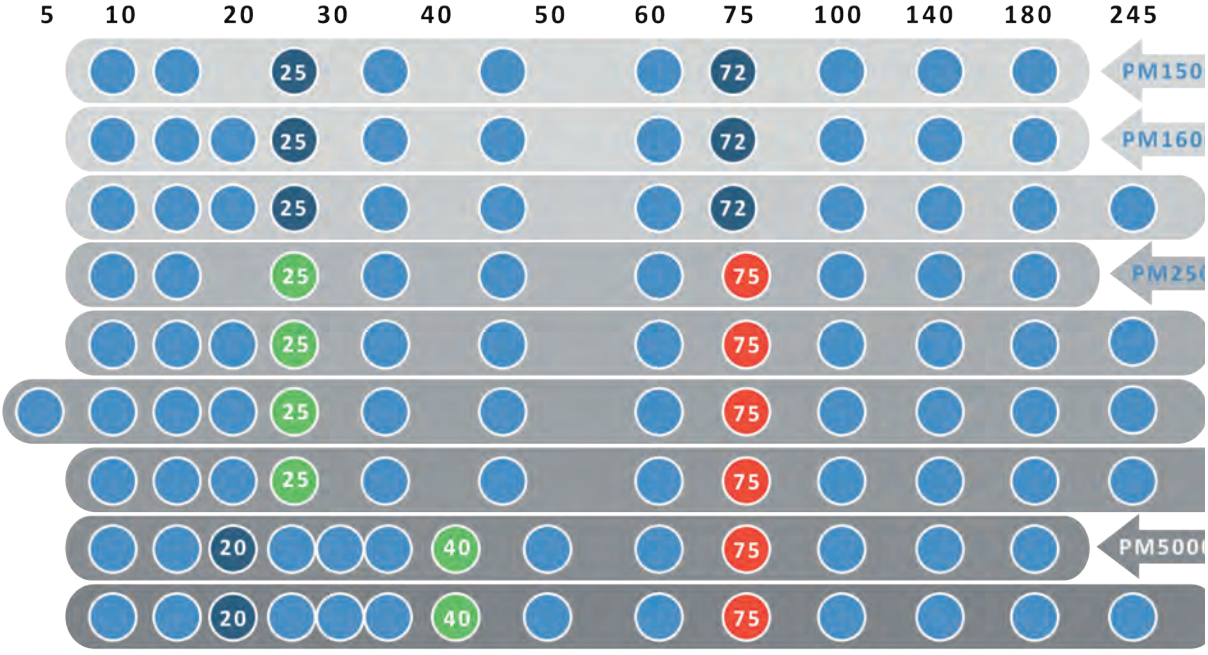
PROTEIN MARKERS AND STAIN

PreCAST GELS

TGN PreCast Gels

Bis-Tris PreCast Gels

Molecular Weight Range of Protein Markers and Ladders



Protein Marker and Ladder Information, Western Marker

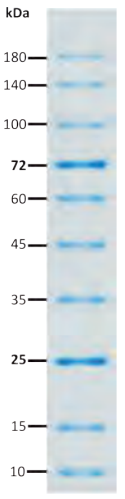
Series Name	Cat Number	MW Range	Band Number	Band Color	Enhanced (Markered) Bands
ExcelBand™	TR-BS1-1045	10-180 kDa	10	B	25, 72 kDa
ExcelBand™	TR-BS1-1046	10-180 kDa	11	B	25, 72 kDa
ExcelBand™	TR-BS1-1047	10-240 kDa	12	B	25, 72 kDa
ExcelBand™	TR-BS1-1048	10-180 kDa	10	R/G/B	25, 75 kDa
ExcelBand™	TR-BS1-1049	10-180 kDa	10	R/G/B	25, 75 kDa
ExcelBand™	TR-BS1-1051	10-245 kDa	12	R/G/B	25, 75 kDa
ExcelBand™	TR-BS1-1052	10-245 kDa	12	R/G/B	25, 75 kDa
ExcelBand™	TR-BS1-1054	5-245 kDa	13	R/G/B	25, 75 kDa
ExcelBand™	TR-BS1-1055	10-310 kDa	13	R/G/B	25, 75, 310 kDa
ExcelBand™	TR-BS1-1056	10-180 kDa	13	R/G/B	40, 75 kDa
ExcelBand™	TR-BS1-1057	10-245 kDa	14	R/G/B	40, 75 kDa
ExcelBand™	TR-BS1-1058	5-245 kDa	15	R/G/B	40, 75 kDa
YesBlot™	TR-BS1-1059	15-200 kDa	10	R/G/B	30, 80 kDa

ExcelBand™ All Blue Regular Range Protein Marker (9-180 kDa) TR-BS1-1045 (250 µl × 2)

Description

The TR-BS1-1045 ExcelBand™ All Blue Regular Range Protein Marker is a blue protein standard with 10 pre-stained proteins covering a wide range of molecular weights from 10 to 180 kDa in Tris-Glycine buffer (9 to 170 kDa in Bis-Tris (MOPS) buffer and Bis-Tris (MES) buffer). Proteins are covalently coupled with a blue chromophore, and two reference bands (at 25 kDa and 72 kDa, respectively) are enhanced in intensity when separated on SDS-PAGE (Tris-Glycine buffer).

The TR-BS1-1045 ExcelBand™ All Blue Regular Range Protein Marker is designed for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (nitrocellulose, PVDF, or nylon) and for approximating the size of proteins.



Tris-Glycine

Contents

Approximately 0.1~0.5 mg/ml of each protein in the buffer (20 mM Tris-phosphate (pH 7.5), 2% SDS, 0.2 mM DTT, 3.6 M Urea, and 15% (v/v) Glycerol).

Quality Control

Under suggested conditons, the TR-BS1-1045 ExcelBand™ All Blue Regular Range Protein Marker resolves 10 major bands in 15% SDS-PAGE (Tris-Glycine buffer) and afer Western bloting to a nitrocellulose membrane.

Storage

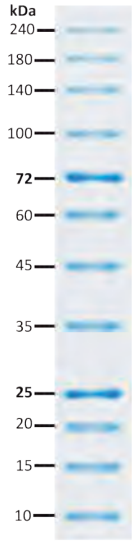
4°C for 3 months
-20°C for 24 months

ExcelBand™ All Blue Broad Range Protein Marker (9-240 kDa) TR-BS1-1047 (250 µl × 2)

Description

The TR-BS1-1047 ExcelBand™ All Blue Broad Range Protein Marker is a blue protein standard with 12 pre-stained proteins covering a wide range of molecular weights from 10 to 240 kDa in Tris-Glycine buffer (9 to 235 kDa in Bis-Tris (MOPS) buffer and Bis-Tris (MES) buffer). Proteins are covalently coupled with a blue chromophore, and two reference bands (at 25 kDa and 72 kDa, respectively) are enhanced in intensity when separated on SDS-PAGE (Tris-Glycine buffer).

The TR-BS1-1047 ExcelBand™ All Blue Broad Range Protein Marker is designed for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (nitrocellulose, PVDF, or nylon) and for approximating the size of proteins.



Tris-Glycine

Contents

Approximately 0.1~0.5 mg/ml of each protein in the buffer (20 mM Tris-phosphate (pH 7.5), 2% SDS, 0.2 mM DTT, 3.6 M Urea, and 15% (v/v) Glycerol).

Quality Control

Under suggested conditions, the TR-BS1-1047 ExcelBand™ All Blue Broad Range Protein Marker resolves 12 major bands in 15% SDS-PAGE (Tris-Glycine buffer) and afer Western bloting to a nitrocellulose membrane.

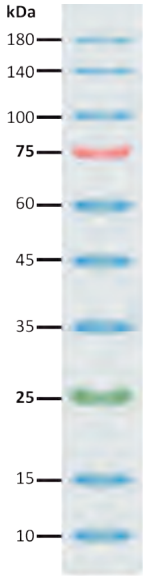
Storage

4°C for 3 months
-20°C for 24 months

ExcelBand™ 3-color Regular Range Protein Marker (9-180 kDa) TR-BS1-1048 (250 µl × 2)

Description

The TR-BS1-1048 ExcelBand™ 3-color Regular Range Protein Marker is a ready-to-use three-color protein standard with 10 pre-stained proteins covering a wide range of molecular weights from 10 to 180 kDa in Tris-Glycine Buffer (9 to 170 kDa in Bis-Tris (MOPS) buffer and 10 to 180 kDa in Bis-Tris (MES) buffer). Proteins are covalently coupled with a blue chromophore except for two reference bands (one green and one red band at 25 kDa and 75 kDa respectively) when separated on SDS-PAGE (Tris-Glycine buffer). TR-BS1-1048 ExcelBand™ 3-color Regular Range Protein Marker is designed for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (nitrocellulose, PVDF, or nylon) and for approximating the size of proteins.



Tris-Glycine

Contents

Approximately 0.1~0.4 mg/ml of each protein in the buffer (20 mM Tris-phosphate (pH 7.5), 2% SDS, 0.2 mM DTT, 3.6 M Urea, and 15% (v/v) Glycerol).

Quality Control

Under suggested conditions, the TR-BS1-1048 ExcelBand™ 3-color Regular Range Protein Marker resolves 10 major bands in 15% SDS-PAGE (Tris-Glycine buffer) and afer Western bloting to a nitrocellulose membrane.

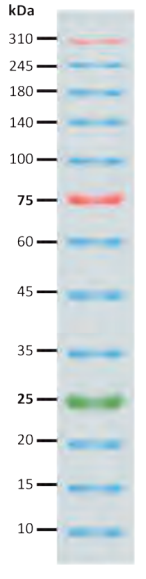
Storage

4°C for 3 months
-20°C for 24 months

ExcelBand™ 3-color Extra Range Protein Marker (10-310 kDa) TR-BS1-1055 (250 µl × 2)

Description

The TR-BS1-1055 ExcelBand™ 3-color Extra Range Protein Marker is a ready-to-use three-color protein standard with 13 pre-stained proteins covering an extra range of molecular weights from 10 to 310 kDa in Tris-Glycine Buffer (9 to 290 kDa in Bis-Tris (MOPS) buffer and 10 to 290 kDa in Bis-Tris (MES) buffer). Proteins are covalently coupled with a blue chromophore except for three reference bands (one green and two red bands at 25 kDa and 75, 310 kDa respectively) when separated on SDS-PAGE (Tris-Glycine buffer). The TR-BS1-1055 ExcelBand™ 3-color Extra Range Protein Marker is designed for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (nitrocellulose, PVDF, or nylon) and for approximating the size of proteins.



Tris-Glycine

Contents

Approximately 0.1~0.4 mg/ml of each protein in the buffer (20 mM Tris-phosphate (pH 7.5), 2% SDS, 0.2 mM DTT, 3.6 M Urea, and 15% (v/v) Glycerol).

Quality Control

Under suggested conditions, the TR-BS1-1055 ExcelBand™ 3-color Extra Range Protein Marker resolves 13 major bands in 15% SDS-PAGE (Tris-Glycine buffer) and afer Western bloting to a nitrocellulose membrane.

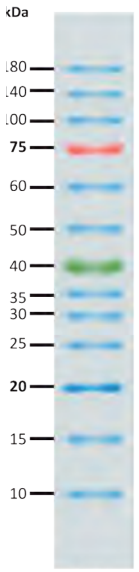
Storage

4°C for 3 months
-20°C for 24 months

ExcelBand™ 3-color Pre-Stained Protein Ladder, Regular Range (9-180 kDa) TR-BS1-1056 (250 µl × 2)

Description

The TR-BS1-1056 ExcelBand™ 3-color Pre-Stained Protein Ladder Regular Range is a ready-to-use three-color protein standard with 13 pre-stained proteins covering a wide range of molecular weights from 10 to 180 kDa in Tris-Glycine Buffer (9 to 170 kDa in Bis-Tris (MOPS) buffer and 10 to 170 kDa Bis-Tris (MES) buffer). Proteins are covalently coupled with different chromophores for easy identfication of bands, with three reference proteins carrying enhanced intensity corresponding to a blue band at 20 kDa, green at 40 kDa, and red at 75 kDa, respectively, as separated on SDS-PAGE (Tris-Glycine buffer). TheTR-BS1-1056 ExcelBand™ 3-color Pre-Stained Protein Ladder Regular Range is designed for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transferefficiency on membranes (nitrocellulose, PVDF, or nylon) and for approximating the size of proteins.



Tris-Glycine

Contents

Approximately 0.1~0.4 mg/ml of each protein in the buffer (20 mM Tris-phosphate (pH 7.5), 2% SDS, 0.2 mM DTT, 3.6 M Urea, and 15% (v/v) Glycerol).

Quality Control

Under suggested conditions, the TR-BS1-1056 ExcelBand™ 3-color Pre-Stained Protein Ladder Regular Range resolves 13 major bands in 15% SDS-PAGE (Tris-Glycine buffer) and after Western bloting to a nitrocellulose membrane.

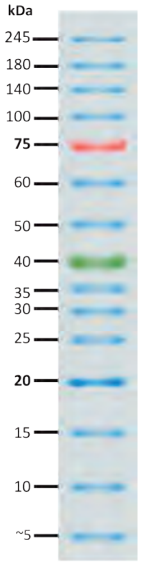
Storage

4°C for 3 months
-20°C for 24 months

ExcelBand™ 3-color Pre-Stained Protein Ladder, Broad Range (3.5-245 kDa) TR-BS1-1058 (250 µl × 2)

Description

The TR-BS1-1058 ExcelBand™ 3-color Pre-Stained Protein Ladder Broad Range is a ready-to-use three-color protein standard with 15 pre-stained proteins covering a wide range of molecular weights from 5 to 245 kDa in Tris-Glycine Buffer (3.5 to 235 kDa in Bis-Tris (MOPS) buffer and Bis-Tris (MES) buffer). Proteins are covalently coupled with different chromophores for easy identification of bands, with three reference proteins carrying enhanced intensity corresponding to a blue band at 20 kDa, green at 40 kDa, and red at 75 kDa, respectively, as separated on SDS-PAGE (Tris-Glycine buffer). The TR-BS1-1058 3-color Pre-Stained Protein Ladder Broad Range is designed for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (nitrocellulose, PVDF, or nylon) and for approximating the size of proteins.



Tris-Glycine

Contents

Approximately 0.1~0.4 mg/ml of each protein in the buffer (20 mM Tris-phosphate, pH 7.5, 2% SDS, 0.2 mM DTT 3.6 M Urea, and 15% (v/v) Glycerol).

Quality Control

Under suggested conditons, the TR-BS1-1058 ExcelBand™ 3-color Pre-Stained Protein Ladder Broad Range resolves 15 major bands in SDS-PAGE (Bis-Tris gel, MES buffer) and afer Western bloting to a nitrocellulose membrane.

Storage

4°C for 3 months
-20°C for 24 months

YesBlot™ Western Marker I TR-BS1-1059 (250 µl)

Description

The YesBlot™ Western Marker I is a ready-to-use mixture with ten IgG-binding proteins covering a wide range of molecular weights from 15 to 200 kDa in a Tris-Glycine buffer for chemiluminescent, fluorescent, chromogenic or other detection systems. In addition, the YesBlot™ Western Marker I has two reference bands with enhanced intensity (at 30 kDa and 80 kDa, respectively).

The YesBlot™ Western Marker I also has 4 pre-stained proteins (10, 25, 45 and 70 kDa) for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (nitrocellulose, PVDF, or nylon) and for approximating protein size.

Contents

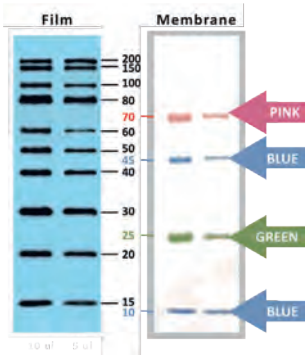
The YesBlot™ Western Marker I contains recombinant IgG binding proteins, Glycerol, SDS, and tracking dyes in a Tris-HCl buffer.

Quality Control

Under suggested conditions, the YesBlot™ Western Marker I resolves 4 pre-stained bands on the membrane and 10 bands afer secondary antbodies binding followed by chemiluminescent detection.

Storage

4°C for 3 months
-20°C for 24 months



FluoroStain™ Protein Fluorescent Staining Dye (Red, 1000X) TR-BS1-1060 (1 ml) TR-BS1-1061 (1 ml × 5)

Description

The FluoroStain™ Protein Fluorescent Staining Dye (Red, 1000X) is designed to substitute the common Coomassie Blue protein staining method, offering greater sensitivity and ease of operation. Unlike Coomassie Blue stain, the FluoroStain™ Protein Fluorescent Staining Dye binds to protein with high specificity, making destaining process an option rather than a requirement. With further reduction of background signals via destaining process, the FluoroStain™ Protein Fluorescent Staining Dye is capable of achieving detection level parallel to silver stain without specialized imaging equipment , making it one of the most sensitive dyes available. In addition to its remarkable sensitivity, the FluoroStain™ Protein Fluorescent Staining Dye brings a more reliable and safer user experience, since the stained gel can be visualized with blue-light illumination,users avoid the risk of skin/eye damage caused by UV light. For best result, we suggest using the B-BOX™ Blue Light LED epi-illuminator to visualize and analyze the gel stained with FluoroStain™ Protein Fluorescent Staining Dye. The FluoroStain™ Protein Fluorescent Staining Dye is compatible to the analysis of mass spectra, i.e. LC-MS/MS, MALDI-TOF, etc. The FluoroStain™ Protein Fluorescent Staining Dye is also for a less toxic and more environmentally-friendly procedure for protein staining, because it's designed to be used in a aqueous solution of ethanol and phosphoric acid for staining, avoiding the use of conventional methanol / acetc acid solution which is much more harmful and stimulating.

Spectral Characteristcs

When it is bound with bovine serum albumin (BSA), the fluorescent emission of FluoroStain™ Protein Fluorescent Staining Dye can be excited by UV and blue light sources, with excitation peaks around 369 and 517 nm and emission at 605 nm. In absence of BSA, FluoroStain™ Protein Fluorescent Staining Dye shows ignorable fluorescence as compared with protein-bound form, therefore giving a clear background for photographic analysis. These spectral characteristcs made this fluorescent dye compatible with a wide variety of gel reading facilities, including UV/ blue light epi- and transilluminator, argon laser and mercury-arc lamp excitation gel scanners.

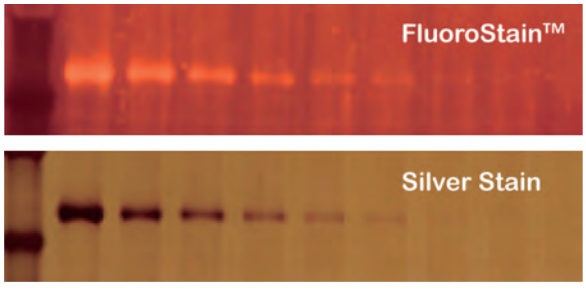
Working Reagent Preparation

1:1000 diluton in 40% ethanol and 2% H3PO4

Storage

Protected from light
-20°C for 12 months

Description	Cat. Nº
FluoroStain™ Protein Fluorescent Staining Dye (Red, 1000X), 1 ml	TR-BS1-1060
FluoroStain™ Protein Fluorescent Staining Dye (Red, 1000X), 1 ml x 5	TR-BS1-1061



GoPAGE™ Precast Gel Quick & Clear

Description

GoPAGE™ Precast Gels are a high-performance and easy-to-use precast polyacrylamide gel. GoPAGE™ Precast Gels are available in Mini (10 x 8.3 cm) and Midi (10 x 10 cm) cassete sizes, which are compatible with most popular electrophoresis systems, such as Bio-Rad®, Invitrogen Novex®, Hoefer SE260, and others. With unique formula, GoPAGE™ Precast Gels perform enhanced resolution, sharper bands, accurate results, and longer shelf life as compared with conventional Laemmli Tris-HCl gels.
GoPAGE™ Precast Gels are available in two buffer systems: GoPAGE™ Bis-Tris Precast Gels and GoPAGE™ TGN (Tris-Glycine Novel) Precast Gels.

GoPAGE™ Bis-Tris Precast Gels

Bis-Tris Gels are used in either MOPS or MES buffer for electrophoresis. GoPAGE™ Bis-Tris Precast Gels are available in gradient (4 to 12%) and fixed (8% and 12%) concentrations of polyacrylamide.

GoPAGE™ TGN Precast Gels

TGN Gels are used in Tris-Glycine buffer for electrophoresis. GoPAGE™ TGN Precast Gels are available in gradient (4 to 15%) and fixed (10%) concentrations of polyacrylamide in 12-well formats. The protein migration paterns in GoPAGE™ TGN series are similar with typical Laemmli Tris-HCl gels, and thus GoPAGE™ TGN Precast Gels are compatible to traditonal SDS-PAGE and subsequent analyses.

Features

- User-friendly gel cassete:

-Easy to use- No comb or tape to remove.
-Easy to load samples- Numbered wells; extended and fixed well separator to prevent sample carryover.
-Easy to monitor- Transparent reference lines on the gel cassete help to monitor electrophoresis.

- Unique gel formula:

-Sharpness- Enhances band sharpness
-Long shelf life- Up to 12 months when stored at 4°C

- Broad compatibility:

-Wide separation range- Available as homogeneous and adjusted gradient gels for a wide range of protein separation.
-Compatibility- Two cassete sizes suitable for most mini-gel tanks.

Product Name	Cat. Number	Cassette Size	Buffer System	Compatible Electrophoresis System
GoPAGE™ Bis -Tris Precast Gel, 12 wells, 8%	TR-BS1-1035	Mini (10 X 8.3 cm)	MOPS, MES	Bio-Rad® systems
GoPAGE™ Bis -Tris Precast Gel, 12 wells, 12%	TR-BS1-1036			
GoPAGE™ Bis -Tris Precast Gel, 12 wells, 4-12%	TR-BS1-1037			
GoPAGE™ Bis -Tris Precast Gel, 12 wells, 8%	TR-BS1-1038	Midi (10 X 10 cm)		Invitrogen Novex® systems, Hoefer SE260 systems
GoPAGE™ Bis -Tris Precast Gel, 12 wells, 12%	TR-BS1-1039			
GoPAGE™ Bis -Tris Precast Gel, 12 wells, 4-12%	TR-BS1-1040			
GoPAGE™ TGN Precast Gel, 12 wells, 10%	TR-BS1-1041	Mini (10 X 8.3 cm)	Tris-Glycine (Laemmli buffer)	Bio-Rad® systems
GoPAGE™ TGN Precast Gel, 12 wells, 4-15%	TR-BS1-1042			
GoPAGE™ TGN Precast Gel, 12 wells, 10%	TR-BS1-1043	Midi (10 X 10 cm)		Invitrogen Novex® systems, Hoefer SE260 systems
GoPAGE™ TGN Precast Gel, 12 wells, 4-15%	TR-BS1-1044			

BIOASSAYS

PEPTIDE (AA & DERIVATIVES)

CUSTOM PEPTIDE SYNTHESIS SERVICE

Peptide Synthesis Reagents

Aminoacids & Derivatives

Boc-Amino Acids

- Boc-D-Amino Acids
- Boc-L-Amino Acids

Fmoc-Amino Acids

- Fmoc-D-Amino Acids
- Fmoc-L-Amino Acids
- Fmoc-OPfp Amino Acids

Amino Acid Alcohols

Amino Acid Derivatives

Azido Amino Acids

Alkynyl Amino Acids

beta-Amino Acids

Beta Homo Amino Acids

N-Methyl Amino Acids

Click Chemistry Building Blocks

Glyco Amino Acids

Hmb and Dmb Dipeptides

Isoacyl Dipeptides

Fmoc-AA Quick Prep Bottles

Boc-AA Quick Prep Bottles

Unusual Amino Acids

Z-Amino Acids

PEG Derivatives

Fmoc Phosphorylated Amino Acids

Pseudoproline Dipeptides

Substituted Phenylalanines

Reagents

Linkers

Coupling Reagents

Fluorescent Labeling Reagents

Resins

OctaGel Resins

Rink Amide Resin

Amino Acid 2-Cl-Trt Resins

Fmoc-Amino Acid 2-Cl-Trt Resins

Fmoc-Amino Acid-Wang Resins

MAP Resins

Unsubstituted Resins

Storage Conditions

We recomend storing amino acid derivatives at -15ºC or below. Many derivatives are unstable if kept at +4ºC or at room temperature. every effort should be made to keep all amino acid derivatives protected from moisture and oxygen while stored prolongated periods.
for optimal conditions, substrate-loaded resins should be stored at +8ºC or below and should not be frozen. we recomend that all loaded resins should be used within two years.

Custom Peptide

Teknokroma offers economic, flexible custom peptide synthesis services, incorporating unusual or modified amino acids, stable isotopes, fluorescent or dye labels, and cyclic structures. all custom peptides will meet or exceed your purity requierments, from crude (without purification) To 98% or greater. All purified custom peptides are delivered with HPLC and mass spectrometric analysis.

Custom Peptide Purity Levels

Immunological Grade: suitable for forming polyclonal antibodies.

80% or Greater: tissue culture; ligand for affinity purification; non-quantitative antibody blocking experiments.

90% or Greater: in vivo studies; bioassays; markers for electrophoresis; monoclonal antibodies.

95% or Greater: ELISA; RIA; enzyme substrate.

98%: NMR; chromatography standards.

Peptide Synthesis Services

over 2500 peptides are offered.

Alkenyl Building Blocks for Stapled Peptides

N-Terminal Modifications

C-Terminal Modifications

Side Chain Modification

Cyclic Peptides

**for further information, please ask us for a specific catalog

Additional Services

We can provide the following services for an additional fee.

- Amino Acid Analysis
- Aliquoting
- TFA Removal

Large Scale Custom Peptide Production

Custom Antibodies

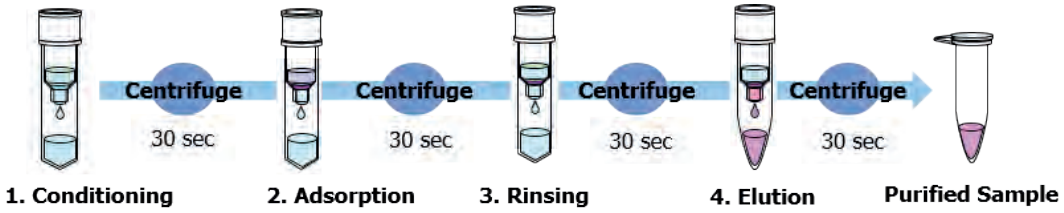
PROTEIN PURIFICATION

ANTIBODY PURIFICATION COLUMNS

PROTEOMIC RELATED PRODUCTS

MONOSPIN PRoA, MONOSPIN PRoG

MonoSpin ProA, MonoSpin ProG are immobilized with protein A or protein G onto a silica monolith offering rapid purification of antibodies



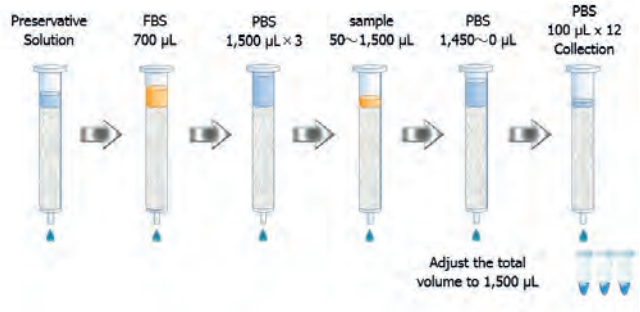
Only 10 mins antibody can be purified by centrifuge

Description	Transportation	Qty.	Cat.No.
MonoSpin ProA Column Type	Refrigerate	10pcs	TR-BG1-3000
MonoSpin ProG Column Type	Refrigerate	10pcs	TR-BG1-3001
MonoSpin ProA 96-Well Plate Type	Refrigerate	1pc	TR-BG1-3002
MonoSpin ProG 96-Well Plate Type	Refrigerate	1pc	TR-BG1-3003
MonoSpin L ProA	Refrigerate	4pcs	TR-BG1-3004
MonoSpin L ProG	Refrigerate	4pcs	TR-BG1-3005
MonoSpin ProA/G Buffer kit	Refrigerate	1/pk	TR-BG1-3006

PROTEOMIC RELATED PRODUCTS

Exosomes Purification Column EVSecond

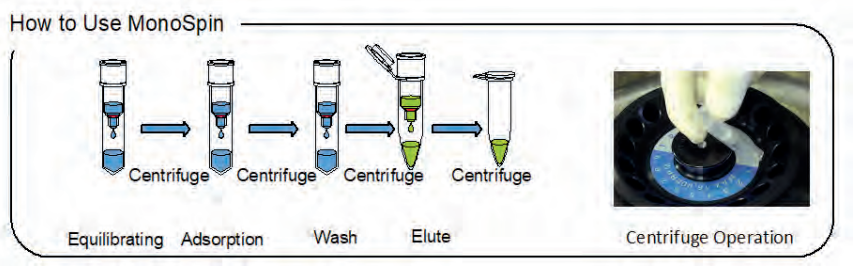
EVSecond is a size exclusion chromatography open column optimized for effective purification of exosomes.
Highly-purified exosomes can be easily collected from serum, plasma, or cell culture supernatant.



Description	Transportation	Qty.	Cat.No
EVSecond L70	Refrigerate	10pcs	TR-BG1-3007
EVSecond	Refrigerate	10pcs	TR-BG1-3008
EVSecond	Refrigerate	25pcs	TR-BG1-3009

Tryptic Digestion Column MonoTip Trypsin HP

The MonoSpin Trypsin HP (High Performance) is a trypsin-immobilized monolithic silica delivering rapid and highly efficient tryptic digests of proteins.



Description	Transportation	Qty.	Cat.No.
MonoSpin Trypsin HP	Refrigerate	30pcs	TR-BG1-3011

PHOSPHORYLATED PEPTIDE PURIFICATION AND ENRICHMENT LINE-UP

GL Sciences' Titanium Dioxide (TiO2 or Titania) products have emerged as the most effect means of phosphopeptide enrichment of protein digests prior to LC/MS analysis, replacing IMAC as the primary means of phosphopeptide sample pretreatment.

BULK MATERIALS

Titansphere TiO Bulk Material

Particle Size: 5 µm, 10 µm
Particle Shape: Spherical
Maximum operating pressure: 19.8 MPa (198 bar)
Skelton: Titanium Dioxide Crystal
Pore Size: 100 Å (10 nm)
Surface Area: 100 m2/g
pH Range: 2 - 12
Retention Capacity: 400 ng/mg Tyr(PO_3H_2) Angiotensin II
Gravity 1.74

Description	Particle Size	Volume.	Cat.No
Titansphere TiO	5µm	500mg	TR-BG1-3012
Titansphere TiO	10µm	500mg	TR-BG1-3013

MonoTip TiO

Description	Volume	Qty	Cat.No
MonoTip TiO	200μL	24pcs	TR-BG1-3014
MonoTip TiO	200μL	96pcs	TR-BG1-3015

Titansphere Phos-TiO Bulk Material

Titansphere Phos-TiO new version bulk material, is optimized for purifying and enriching more phosphopeptide.

Description	Volume	Particle Size	Cat.No
Titansphere Phos-TiO Bulk	500mg	10μm	TR-BG1-3016

Titansphere Phos-TiO Kit (Tip Type)

As Titansphere material has high affinity to phosphopeptides, phosphopeptides can be detected by MS (Mass Spectrometry) even in the cell lysate extract that contains a trace of phosphopeptides Only 5 steps (completed in about 40 minutes) are equired for sample enrichment

kit contents

Spin Tip 24 pcs
Solution B (Lactic acid)
Waste Fluid Tube
Recovery Tube
Operation Manual

Description	Column Dimension	Qty	Cat.No
Titansphere Phos-TiO Kit	1mg/10μL	24pcs	TR-BG1-3017
Titansphere Phos-TiO Kit	1mg/10μL	96pcs	TR-BG1-3018
Titansphere Phos-TiO Kit	3mg/200μL	24pcs	TR-BG1-3019
Titansphere Phos-TiO Kit	3mg/200μL	96pcs	TR-BG1-3020

Description	Column Dimension	Qty	Cat.No
Titansphere Phos-TiO Tip	3mg/200μL	24pcs	TR-BG1-3021
Titansphere Phos-TiO Tip	3mg/200μL	96pcs	TR-BG1-3022
Titansphere Phos-TiO Tip	1mg/200μL	24pcs	TR-BG1-3023
Titansphere Phos-TiO Tip	1mg/200μL	96pcs	TR-BG1-3024

Titansphere Phos-TiO MP Kit

Titansphere Phos-TiO MP kit fractions the singly and multiply phosphorylated peptides separately, which prevents ion suppression in LC-MS/MS detection and delivers higher recovery of multiply phosphorylated peptides.

Titansphere Phos-TiO MP Kit	Titansphere Phos-TiO MP Kit (with Desalting Column Set)
Tip Column 24 pcs	Tip Column 24 pcs
Solution B	Solution B
Waste Fluid Tube	Waste Fluid Tube
Recovery Tube (2.0 mL, 1.5 mL)	Recovery Tube (2.0 mL, 1.5 mL)
Operation Manual	MonoSpin L C18
	GL-Tip SDB
	Operation Manual

Description	Column Dimension	Qty	Cat.No
Titansphere Phos-TiO MP Kit	1mg/200µL	24times	TR-BG1-3025
Titansphere Phos-TiO MP Kit	3mg/200µL	24times	TR-BG1-3026
Phos-TiO MP Kit Desalting Set	1mg/200µL	24times	TR-BG1-3027
Phos-TiO MP Kit Desalting Set	3mg/200µL	24times	TR-BG1-3028

Phosphorylated peptide Purification and Enrichment Cartridge Titansphere Phos-TiO for Large Volumn Samples

Sample	Tyr(PO3H2)-Angiotensin II	
Particle Size	10 µm	
Cartridge	50 mg/3 mL	100 mg/3 mL
Sample Loading Capacity	60 µg	120 µg

Description	Column Dimension	Qty	Cat.No
Titansphere Phos-TiO	50mg/3mL	25pcs	TR-BG1-3033
Phos-TiO MP Kit Desalting Set	100mg/3mL	24times	TR-BG1-3034

Description	Volume	Qty	Cat.No
Lactic Acid for Titansphere Phos-TiO 3mL Cartridge	15mL	1pc	TR-BG1-3035

Peptide Fraction Tip GL-Tip SCX, GL-Tip SDB-SCX

GL-Tip SCX is packed with strong cation polymer (SCX) and GL-Tip SDB-SCX are packed with styrene divinylbenzene polymer (SDB) and strong cation polymer (SCX). GL-Tip SDB-SCX is packed in a two layer format consisting an SDB and SCX media

Sample	GL-Tip SCX	GL-Tip SDB-SCX
Tip Volume	200 µL	200 µL
Sample Loading Capacity	60 µg	60 µg

Description	Qty	Cat.No
GL-Tip SDB-SCX	96pcs	TR-BG1-3036
GL-Tip SCX	96pcs	TR-BG1-3037

Peptide Desalting and Enrichment Tip GL-Tip SDB·GL-Tip GC

GL-Tip GC retain many more hydrophilic phosphopeptides than does C18; by using a combination of GL-Tip SDB and GC, almost all peptide samples can be desalted without sample losses due to lack of retention.

Description	GL-Tip SDB	GL-Tip GC
Sample	Try(PO_3H_2)-Angiotensin II	Gly-Gly-Tyr-Arg
Tip Volume	200 µL	1 mg/200 µL
Sample Loading Capacity	60 µg	30 µg

Description	**Qty**	**Cat.No**
GL-Tip SDB	96pcs	TR-BG1-3038
GL-Tip GC	96pcs	TR-BG1-3039

Centrifuge Adapter

Usable for Titansphere Phos-TiO Kit and GL-Tip series products.

Description	Column Dimension	Qty	Cat.No
Centrifuge Adapter	for 10µL,200µL Tip	24pcs	TR-BG1-3040
96WP Centrifuge Adapter	for 10µL Tip	1pc	TR-BG1-3041
96WP Centrifuge Adapter	for 10µL Tip	2pc	TR-BG1-3042
96WP Centrifuge Adapter	for 200µL Tip	1pc	TR-BG1-3043
96WP Centrifuge Adapter	for 200µL Tip	2pc	TR-BG1-3044

LABORATORY EQUIPMENT

LABORATORY EQUIPMENT

THERMOCYCLERS

CENTRIFUGUE

LIQUID HANDLING

LIVE CELL IMAGING SYSTEM

B-BOX™ EPI-ILLUMINATOR

SYNTHESIZERS

Turbo Cycler 2

TurboCycler 2 is designed specifically to enhance PCR efficiency and accuracy. It is equipped with a 7"capacitive touchscreen and a friendly graphics user interface, which makes operation highly intuitive.

Easy to Control- The sensitive 7" capacitive touchscreen enables easy operation even with laboratory gloves on.

Convenient Tools- The built-in tools allow easy Tm calculation, copy number conversion and master mix preparation

Friendly User Interface- The simple conversational graphic user interface, which has intuitive spinning wheels, makes adjustment of experiment temperature, time and cycle easy.

Efficient Remote Monitoring- The optional Wi-Fi module allows monitoring PCR run status anytime via mobile devices using the free TurboApp.

Fast heating ramp rate up to 5.5 °C/sec
Excellent temperature accuracy and uniformity (+/- 0.3 °C)
12-section gradient temperature range from 1 to 24.9 °C for PCR optimizationThe quick boot-up takes only 45 seconds

Turbocycler Lite

TurboCycler Lite offers versatile capabilities at an affordable price, making it an ideal choice for researchers' routine PCR tasks.

Intuitive Operation Experience - A sensitive capacitive touch keypad and an intuitive graphical interface

Gradient Optimization - The thermal gradient function allows fast PCR optimization for new experiments

Advanced Slow-Ramp Temperature Control - The ramp rate can be precisely controlled down to 0.1 °C/sec to meet the need for the CRISPR/Cas related assays

Fully Adjustable Lid Temperature - The temperature can be set between 35 and 120 °C for virtually any type of experiment including NGS pre-treatment

Easy Disinfection - The dust and aerosol proof keypad can be easily disinfected

Auto Restart - Power failure recovery keeps the experiment safe

Mini Turbo

MiniTurbo portable PCR thermal cycler is an ideal choice for researchers who need to proceed PCR immediately after samples collection.

Portable and Light Weight - The compact size and 1 kg weight make MiniTurbo wide applicable for use in the field, laboratories, and classrooms.

Outstanding Performance - Excellent accuracy and uniformity (+/- 0.4 °C) along with fast ramp rate allow MiniTurbo to provide the same quality performance as benchtop thermal cyclers.

Easy to Operate - All-in-one button makes the operation simple.

Fully Programmable - The open system is compatible with all programmed protocols

Tas System

Do your thermal cyclers perform at the correct temperatures? The TAS-System will tell you!

Simple, quick operation: Measure and analyse thermal cycler temperature performance in under 10 minutes, the TAS-System allows for visual comparison from test to test and enables performance tracking over the lifetime of the thermal cycler.

Flexibility: As well as its standard fixed probe plate, the TAS-System is offered with a variable probe plate option. This utilises individually interchangeable temperature probes that can be placed in any of its 96 well positions. Combined with leaded-probes, the variable probe plate offers yet further flexibility, becoming the ideal solution for testing of non-standard thermal cyclers.

Measurement integrity: Each interchangeable TAS probe is uniquely identified, allowing for the automatic detection of probe position, the application of specific calibration data for each probe, and a calibration expiry warning when relevant.

Turbo Fuge

The TurboFuge is a compact microcentrifuge with 24 or 36 place capacity and a speed up to 21,400 x g that satisfies a wide range of applications.

A Robust Metal Chamber- the solid construction of the metal chamber provides stability and ample protection from the hazard of rotor imbalance

The Autoclavable Aluminum Rotor- withstands strong acids and bases to ensure an unlimited life cycle

The Motorized Dual Lock- ensures that the lid is always safely locked when the rotor is running

Intelligent Imbalance Detection- The rotor imbalance sensor turns the centrifuge off immediately if rotor imbalance is detected

Lid Drop Protection- The lid is held at 30-40 degrees to allow easy loading and unloading of tubes.

Blue Pette

Automatic Switch-On Calibration for high accuracy and precision

Unique Force-Saving Design to reduce stress and fatigue from repetitive pipetting

360º Revolving Collar for greatest positioning comfort

9 Memory Settings to save protocol set-up time

User-Friendly Interface and easy-to-operate buttons

High Capacity Lithium Battery for high stamina continuous use

5 Speeds for Aspiration and Dispensing depending on liquid viscosity

Blueswan

Proactive Hole liquid and vapors expel from the hole

High capacity Li-Polymer Battery charging 4 h for 4500 cycles

Easy Handling Ergonomic designed buttons and grip

Control speed Easily Optimize pipetting speed by adjusting the thumb wheel

EZSCOPE 101

Live Cell, Live Show

EzScope 101 is a dedicated live cell imaging system that helps to streamline your research workflow with improved efficiency and productivity, no more hassles to remove cells from incubator for observation. EzScope 101 brings 24/7 measurements under precisely controlled conditions in a non-perturbing environment. You can observe the images anytime with walk-away convenience. Up to four samples can be monitoring simultaneously in a same incubator. This feature helps reduce repetitive action, saves time, and optimizes experiment efficiency.

Incubator Live View

Designed to be used inside the incubator, without the need to remove your cells from incubator to enhance culture quality control.

Minimizes Experimental Variations

Up to four units of EzScope can to be setup in the same incubator and controlled by one computer. This enables the monitoring of samples simultaneously, reduces errors caused by environment variations.

Exceptional Image Quality

Adopts high contract brightfield optical configuration, coupled with precise motorized focusing, and two interchangeable magnifying objective lenses.

Remote Monitoring of Experiment

Allows flexible remote monitoring the assay via Windows-based remote desktop software.

Easy Image Editor

Captures and edits images easily with EzCapture software:
Live preview for up to 4 units of EzScope
Flatfielding correction for even brightfield background
Time-lapse video output
Spatial calibration
Measure and convergence analysis

Applications

Widely used in a variety of cell-related assays, such as:

Cell growth and confluence
Cell migration and wound healing
Stem cell behaviors
Cell death assays
Spheroid development and behaviors
Cultivation of yeast
Intravital studies

TK Blue Light LED Epi-Illuminator

Illuminator
B-BOX™ Blue Light LED Epi-illuminator Phox™ Photobox

B-BOX™ is a long wavelength, blue light LED epi-illuminator. It is compact in design and robust in constructon. The B-BOX™ epi-illuminator provides an unprecedented level of safety for its user due to its non-UV light source and a low operatng voltage of only 12 Volts, as well as its capability in working with non-carcinogenic DNA/ protein dye.

Features

- Improved cloning efficiency
- Compact, lightweight, and portable (less than 1 kg (in weight)
- Safety features include 470 nm long wavelength, without any UV radiaton hazard to its user
- Compatble with non-carcinogenic, non-ethidium bromide DNA staining dye
- User friendly: Samples are easy to visualize (when using the filter plate or goggles)
- LED light source lasts up to 50,000 hours
- Superior detecton sensitvity: ≤ 0.04 ng of DNA when using FluoroStain™ DNA Fluorescent Staining Dye, ≤3 ng of protein when using FluoroStain™ Protein Fluorescent Staining Dye (as sensitve as silver stain)
- Adjustable and removable filter plate allows for gel cutng, visualizaton, and documentaton
- Built-in barrier design, for easy clean up
- Visible in bright ambient light
- Emphasizes minimal power reliance, low heat generaton, with its own built-in heat sink

Physical Specificatons

Overall Dimensions (mm): 201.4 x 200 x 38 (D x W x H)
Viewing Area (mm): 158 x 96 (D x W)
Wavelength of LEDs (nm): 470
Number of LED Units: 72 Super Flux LEDs
LED Life up to 50,000 hours
Power: 12 Volt DC , 0.72 Amp
Electrical Requirements: AC 100~240 V, 50/ 60 Hz (Adapter)
Weight (kg): 0.95kg (Net Weight)
Shipping Weight (kg): 1.0 (Gross Weight) – Adapter (0.5 kg) not included
Material: ASA for housing; Tempered glass working area
Recommended Dyes:

ExcelDye™ DNA Fluorescent Loading Dye
FluoroDye™ DNA Fluorescent Staining Dye
FluoroStain™ Protein Fluorescent Staining Dye
FluoroVueTM Nucleic Acid Gel Stain
SYBR Green I Nucleic Acid Gel Stain

Eclipse

Automatically set up AA synthesis
Smart software predicts difficult sequences and automatically suggests protocol suitable for efficient coupling
Gives flexibility to the expert chemist to modify protocol
Precise delivery of amino acids and reagents
Amino acid pre-activation
Mixing by N2 bubbling
Heating, fast coupling and deprotection available for proven delayed gradient technique
Low solvent usage
Low cost of reagents
Low waste
All reactor, amino acid containers and reagent bottles are all easily accessible from the front
Compact footprint

Apex 396HT Peptide Library Synthesizer

The Apex 396HT Peptide Library Synthesizer is the ideal peptide instrument for drug discovery, SAR studies, receptor binding studies and other applications utilizing high throughput screening of peptide libraries. The Apex 396HT automatically prepares and cleaves peptide libraries into standard 96 well titer plates ready for concentration and screening.

- two bottom-frit 96 well titer plate reactors
- two standard 36 vessel amino acid racks
- four 750 mL reagent bottles
- self-contained enclosed work space
- flexible, easy-to-use software

Focus XC

The newest addition to AAPPTec's line of peptide synthesizers
Easy-To-Use SMART Software
Scale: 0,05 to 50 mmol /reactor
Easy to use
1-6 reactors
Simultaneous synthesis
Heating / cooling / UV-monitoring
Flexible chemistry
Pre-activation
Demonstrated proven quality, reliability, and flexibility in chemistry research and production

Focus XCi

The Focus XC is designed to meet the demands of continued medical research advancements. The Focus XCi can reliably deliver volumes as low as 200 µL to support pNA, DNA and RNA synthesis. It can also be used for traditional solid phase peptide chemistry to produce small numbers of high-quality peptides in small quantities.
The Focus XCi is a fully-automated production scale synthesizer small enough to fit on a standard bench top. This instrument is capable of preparing hundreds of grams of peptide in a single synthesis. The Focus XCi is the perfect instrument for preparing peptides for cGMP and up to 100 grams of peptide production. The Focus XCi scale range is 5.0 to 50.00 mmol. Options include additional solvent/reagent lines, 8 additional amino acid containers, heating and cooling reactors, and UV detection.

Infinity 2400™ Fastest microwave peptide synthesizer in the world

up to 6 reaction vessels simultaneously
wide range of scales 0,05 to 30 mmol
over 880 couplings in one synthesis in one mmol scale
fastest microwave synthesizer / heating / cooling
accurate reagent measuring less than 0,45%
pre-activation before delivering amino acids
easy to use / easy to program / most flexible chemestry
accurate temperature control, no overheating

Sharp Freeze ™ Lyophilizer

The Sharp Freeze™ Lyophilizer is a flexible laboratory instrument with unsurpassed performance and reliability. It is easy to control through an electronic control panel on the front of the instrument. The Sharp FreezeTM is available in two models. The 350 for a -55 ˚C temperature, and the 480 to reach -80 ˚C. Both are suitable for lyophilizing HPLC fractions containing acetonitrile or organic solvents. Each model comes in four sizes; 2L, 4L, 6L and 9L. Each system can come with either a vacuum chamber, shelf tray, tree manifold, or a combination of all three.

Peptide Synthesizers

- Eclipse
- Sharp FreezeTM Lyophilizer
- Apex 396 Parallel Synthesizer
- Apex 396HT Peptide Library Synthesizer
- Focus XC
- Focus Xi
- Focus XCi
- P4-400
- Matrix 384
- Titan 357
- Vantage
- Triton

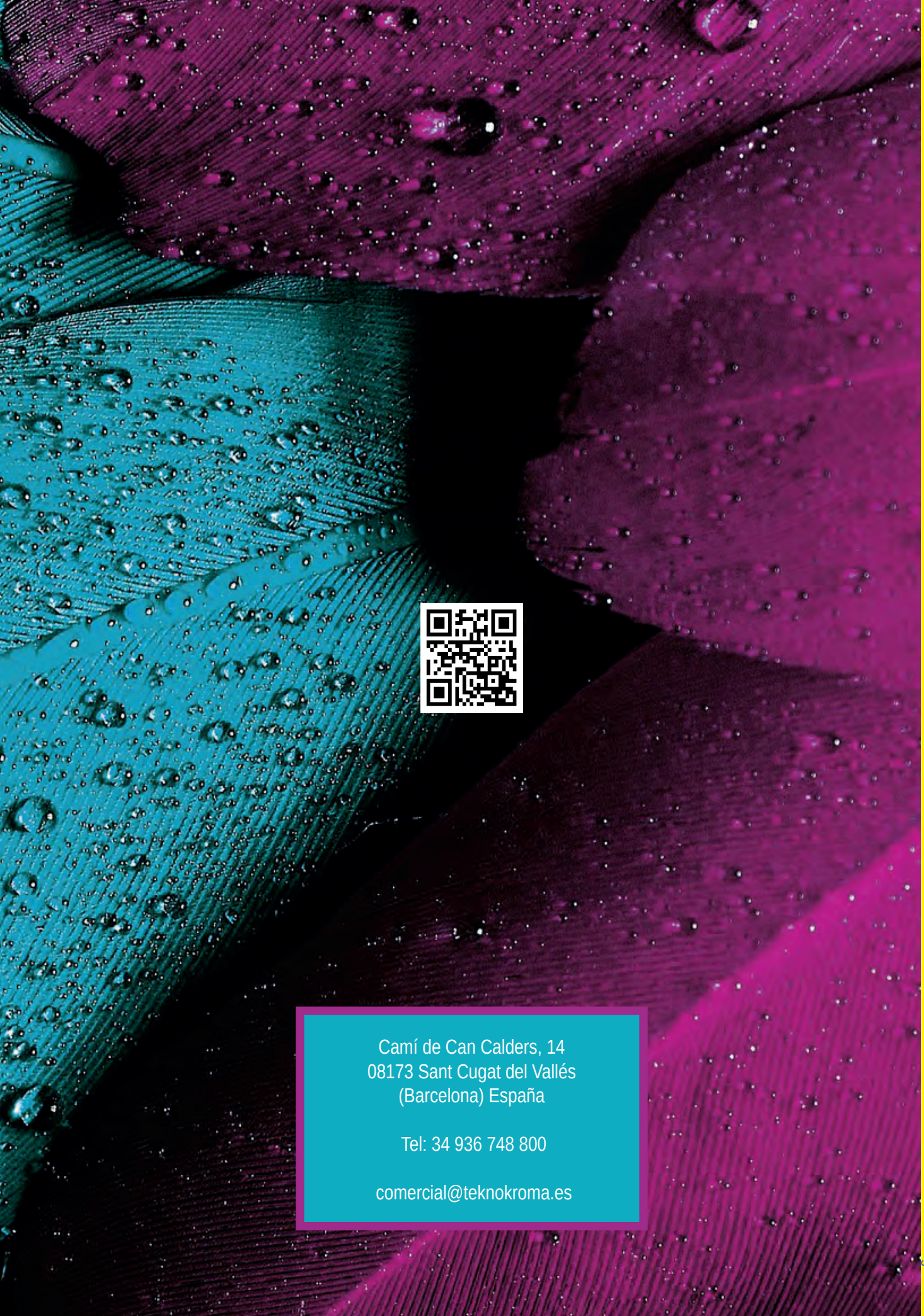
Organic Synthesizers

- Lab Mate
- Matrix 384
- The Solution
- Vantage
- Infinity 2400

DNA / PNA SynthesizersWW

- Focus XCi

Freeze Dryers & Vacuum Concentrators



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