SinaClon

شرکت سیناکلون BioScience

OUR AIM IS YOUR SUCCESS

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Introduction

Restriction endonucleases are produced in bacteria as a defense mechanism against invasion of foreign DNA derived from viruses. Restriction endonucleases are able to hydrolyze both strands of DNA within or very near to its recognition site. These enzymes generally require divalent metal cation (Mg^{2+}) for their activity. Most of the restriction endonucleases recognize hexanucleotide (6) target sites, but others recognize 4, 5 or even 8 nucleotides sequences. Depending on their cleavage position, restriction endonucleases produce either sticky (5' or 3' overhang) or blunt ends.

CinnaGen in collaboration with well known Companies introduce new line for restriction enzymes. Unique buffer composition eliminates need for any different colored buffer, activity chart… and digests most substrates in shorter time duration. In general 15- 30 minutes would be enough for complete digestion.
BLUE buffer designed for fast clone analysis and allow for rapid gel loading.

Features of RapidDigest Enzymes

Short incubation time: 15- 30 minutes for complete digestion.
Easy PCR product digestion: Compatible with PCR buffers.
Ready to load: for fast clone analysis.
Activity: full activity in both BLUE or colorless Unique buffer.
Compatible: with all downstream reactions.
Double or multiple digestions in the unique buffer.
One buffer for over 40 Restriction Enzymes.

It doesn't need to:

- Different buffers
- Different colors
- Compatibility tables
- Activity charts
- Enzyme dilution
- Overnight digestion

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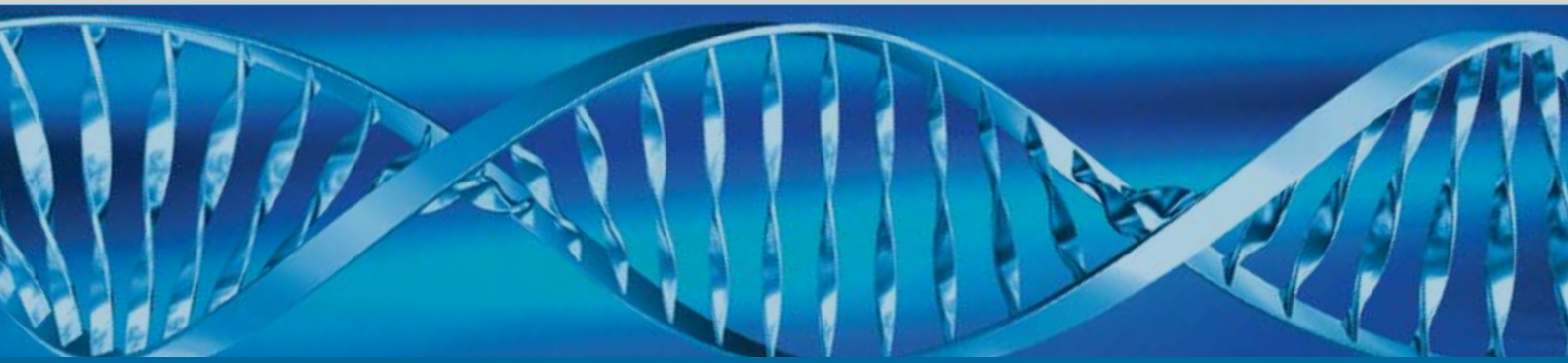

General recommended assay

1-Add below materials to 0.5ml tube:

	Plasmid/ Lambda DNA	PCR product	Genomic DNA
Water DNase free	15ul	17ul	30ul
10X RapidDigest Buffer	2ul	2ul	5ul
DNA	2ul (up to 1ug)	10ul (□0.2ug)	10ul (5ug)
RapidDigest Enzyme	1ul (1 RDU)	1ul (1 RDU)	5ul(5 RDU)
Total Volume	20ul	30ul	50ul

2- Mix gently and spin down.
3- Incubate at 37°C for 15-30 minutes[1].
4- Inactive the enzyme by heating for 20 min at 65°C[2]

1. Time of incubation may need to optimization but it could be achieved between 5 to 30 minutes. For digestion of difficult to cleave-DNA, incubation time may extend to one hour.
2. There are some alternative ways to stop the reaction:
   - o Addition of EDTA pH 8.0 <0.5M> final 20mM.
   - o Spin column DNA purification.
   - o Agarose gel extraction.
   - o Phenol- Chloroform extraction.
   - o Ethanol precipitation.

Unit Determination

One RapidDigest Unit (1 RDU) is the amount of enzyme required to completely digest 1µg of Lambda DNA in 15 minute in 1X RapidDigest buffer and in total volume 20 ul, with appropriate assay conditions (salt concentration, pH and temperature). Please note that the activity of the restriction endonuclease is substrate-dependent. The enzyme should be titrated to determine its actual activity when working with a new substrate.

Factors Influencing Restriction Endonuclease Performance Star Activity

'Star Activity' is a term used for an altered cleavage which occurs when a restriction endonuclease is under non-standard conditions. In cases like this, restriction endonuclease cleavage sequences are similar but not identical to their defined recognition sequence. Normally this can be seen with high enzyme concentrations and buffers that deviate from the recommended conditions. In most cases, star activity may be caused by high glycerol concentration in the reaction mixture or presence of other organic solvents, such as ethanol or low ioniczstrength or high pH values in reaction buffer or substitution of cofactor Mg^{2+} with other divalent cations such as Mn^{2+}.

Dam and Dcm Methylation Restriction

Dam and Dcm Methylation Restriction endonucleases are sensitive to different types of modified bases occurring in the DNA sequences. Methylation of cytosine to 5'-methylcytosine (^{m}C), adenine to N6-methyladenine (^{m}A) in or adjacent to the site recognized by a restriction endonuclease may prevent hydrolysis. All produced restriction endonucleases have been examined for sensitivity to dam and dcm. An icon marks known methylation effects in the individual listing of restriction endonucleases.

Quality Control Test

All preparations are assayed for contaminating endonuclease, 3'-exonuclease, 5'-exonuclease/
5'-phosphatase, as well as nonspecific single and double stranded DNase activities.

Over digestion Assay

The absence of detectable levels of non-specific nucleases is demonstrated by incubating different amounts of restriction endonuclease for 16 hours with 1µg of substrate DNA under optimum assay conditions. The banding pattern generated must be identical to the normal banding pattern produced at 1 hour digestion of the enzyme being tested.

Ligation and Recutting Assay

This assay is to demonstrate the absence if detectable levels of phosphatase and exonuclease. DNA fragments are produced by an excessive over-digestion of substrate DNA with each restriction endonuclease. These fragments are then ligated with T4 DNA Ligase. The ligated fragments are then recut with the same restriction endonuclease. Ligation can only be occur if the 5' and 3' terminal are left intact, and only those molecules with a perfectly restored recognition site can be re cleaved. A normal binding pattern after re cleavage indicates that both the 5' and 3' termini are intact and that the enzyme preparation is free of detectable phosphatases and exonucleases.

RapidDigest List:

Name	Unite	Cat. No.	Recognition site	Isoschizomers	Neoschizomers
RapidDigest AclI	50µl, 1RDU/µl	PR911675	AA CGTT	Acl I	
RapidDigest AcsI	25µl, 1RDU/µl	PR911676	R AATTY	Apo I	
RapidDigest Alu I	60µl, 1RDU/µl	PR911677	AG CT	AluBI	
RapidDigest AsuHP	50µl, 1RDU/µl	PR911686	GGTAG (8/7)	Hph I	
RapidDigest AvaII	100µl, 1RDU/µl	PR911710	G GWCC	Afl I, Bme18 I, Eco47 I, Sin I, VpaK11B I	
RapidDigest BamHI	750µl, 1RDU/µl	PR911671	G GATCC		
RapidDigest Bgl II	130µl, 1RDU/µl	PR911713	A GATCT		
RapidDigest BmiI	25µl, 1RDU/µl	PR911688	GGN NCC	Nla IV, PspN4I	
RapidDigest Bse3DI	30µl, 1RDU/µl	PR921725	GCAATG (2/0)		
RapidDigest BsiSI	220µl, 1RDU/µl	PR911666	C CGG	Hap II, Hpa II, Msp I	
RapidDigest BssMI	25µl, 1RDU/µl	PR911690	GATC	Mbo I /BstMB I, NdeII, Sau3AI, DpnII	
RapidDigest BstF5I	40µl, 1RDU/µl	PR911691	GGATG (2/0)	BtsCI, [FOKI]	
RapidDigest BstMCI	40µl, 1RDU/µl	PR921726	CGRY CG		
RapidDigest BstXI	100µl, 1RDU/µl	PR911692	CCANNNNN NTGG		
RapidDigest CCTC (7/6)	160µl, 1RDU/µl	PR911712	GAGCT C	Psp124B I, Sac I	Ecl136 II, EcoICR I
RapidDigest DraIII	40µl, 1RDU/µl	PR911693	CACNNN GTG	Dra III	
RapidDigest Ecor V	300µl, 1RDU/µl	PR911711	GAT ATC	Eco32 I	
RapidDigest EcoRI	1500µl, 1RDU/µl	PR911667	G AATTC		
RapidDigest FbII	30µl, 1RDU/µl	PR911694	GT MKAC	AccI	
RapidDigest FokI	125µl, 1RDU/µl	PR921723	GGATG (9/13)		BseG I,BstF5 I, BtsC I
RapidDigest FokI	125µl, 1RDU/µl	PR911668	GGATG (9/13)	BseG I,BstF5 I, BtsC I	
RapidDigest HindIII	750µl, 1RDU/µl	PR911665	A AGCTT		
RapidDigest HinfI	100µl, 1RDU/µl	PR921724	G ANTC		
RapidDigest HinfI	250µl, 1RDU/µl	PR911669	G ANTC		
RapidDigest HpyF3I (DdeI)	20µl, 1RDU/µl	PR921727	C TNAG	Bst DE I	
RapidDigest Kpn I	350µl, 1RDU/µl	PR911672	GGTAC C		Acc65 I, Asp718 I
RapidDigest MboI	30µl, 1RDU/µl	PR911664	GATC	BfuC I, Bsp143 I, BstEN II, BstMBI, Dpn II, Kzo9 II, NdeI I, Sau3AI	BstKT I
RapidDigest MboII	25µl, 1RDU/µl	PR911680	GAAGA (8/7)		
RapidDigest MnlI	25µl, 1RDU/µl	PR921728	CCTC (7/6)		
RapidDigest MnlI	25µl, 1RDU/µl	PR911696	CCTC (7/6)		
RapidDigest NcoI	60µl, 1RDU/µl	PR911662	C CATGG	Bsp19 I	
RapidDigest NdeI	50µl, 1RDU/µl	PR911700		FauND I	
RapidDigest PctI	25µl, 1RDU/µl	PR911682	GAATGC (1/-1)	Bsm I, BsamI	
RapidDigest pstI	300µl, 1RDU/µl	PR911717	CTGCA G		
RapidDigest RsaI	100µl, 1RDU/µl	PR911670	GT AC	Afa I	Csp6 I
RapidDigest Sfr303I	100µl, 1RDU/µl	PR911698	CCGC GG	Sac II, KspI, SgrBI, SstII	
RapidDigest SlaI (xhoI)	500µl, 1RDU/µl	PR911661	G TCGAC	BssH I, PaeR7 I, Sfr274 I, Tli I, Xho I	
RapidDigest SmaI	110µl, 1RDU/µl	PR911663	CCC GGG		Cfr9 I, PspA I, Xma I,
RapidDigest Ssp I	60µl, 1RDU/µl	PR911674	AAT ATT		XmaC I
RapidDigest Taq I	350µl, 1RDU/µl	PR911681	T CGA		
RapidDigest Xba I	350µl, 1RDU/µl	PR911709	T CTAGA		
RapidDigest Zsp2I	60µl, 1RDU/µl	PR911701	ATGCA T	Ava III	

Base Nomenclature:

D: A/G/T
K: G/T
N: A/C/G/T
S: C/G
W: A/T
Y: C/T
H: A/C/T
M: A/C
R: A/G

DNA Modifying Enzymes

T4 DNA Ligase

DNA Polymerases

DNA Polymerase I (E.coli)

Klenow Fragment

Large fragment of DNA polymerase I (E.coli)

Klenow Fragment (exo-),(E.coli)

T4 DNA Polymerase

Deoxyribonucleases (DNases)

Deoxyribonuclease I (DNase I) for RNA work

Ribonucleases (RNases)

Ribonuclease A, DNase and Protease free for DNA work

Ribonuclease H, (E.coli)

Ribonuclease Inhibitor RNase- Free

Proteinase K, PCR Grade

Ributinase

DNA modifying enzymes

T4 DNA Ligase
T4 DNA Ligase catalyzes the formation of phosphodiester bond between juxtaposed 5′- phosphate and 3′- hydroxyl termini in duplex DNA or RNA.
- Catalyzes the linkage of 5′ or 3′ blunt/ cohesive ends of double stranded DNA by formation of phosphodiester bond.
- Joining of oligonucletide linkers or adapters to blunt ends.
- Repair nicks formation in duplex nucleic acids.

ME4303	4000U
ME4304	20000U

DNA Polymerases
DNA polymerase I (E.coli)

DNA polymerase I is a mesophilic, DNA- dependent DNA polymerase exhibiting the 5′ to 3′ polymerase activity and ribonuclease H activity.
- Suitable for 2nd strand cDNA synthesis.

ME1301	500U
ME1302	2500U

Klenow Fragment
Large fragment of DNA polymerase I (E.coli)

Klenow fragment is the large fragment of E.coli DNA polymerase I, which lacks the 5′ to 3′ exonuclease activity of DNA polymerase I but retain both the polymerase and the 3′ to 5′ exonuclease (proofreading) activity of DNA polymerase I.

- Suitable for 2nd strand cDNA synthesis.
- Site specific mutagenesis of DNA with synthetic oligonucleotides.

ME1303	200U
ME1304	1000U

Klenow Fragment (exo-), (E.coli)

Klenow fragment (exo-) is the large fragment of E.coli DNA polymerase I, which lacks both the 3′ to 5′ and 5′ to 3′ exonuclease activities of DNA polymerase I .

- Suitable for 2nd strand cDNA synthesis.
- Labeling of DNA by the random primer method

ME1305	300U
ME1306	1500U

T4 DNA Polymerase

(Bacteriophage T4 of E.coli)
T4 DNA polymerase is a mesophilic polymerase exhibiting 5′ to 3′ polymerase activity in the presence of a single- stranded DNA template and a primer. The enzyme has very strong 3′ to 5′ exonuclease activity.

- Second strand synthesis in site- directed mutagenesis.
- Probe labeling using replacement synthesis
- Remove 3′ protruding to generate blunt ends.
- Fill in 5′ protruding termini to generate blunt ends.

ME1307	200U
ME1308	1000U

Deoxyribonucleases (DNases)

Deoxyribonuclease I (DNase I) for RNA work
DNase I is an endonuclease that digests single- and double- stranded DNA.

- Preparation of DNA free RNA.
- Removal of template DNA after in *vitro* transcription.
- Preparation of DNA free- RNA prior to RT-PCR.

PR891627C	500u,1u/ul

Ribonucleases (RNases)

Ribonuclease A,DNase and Protease free for DNA work
RNase A is an endoribonuclease that specifically degrades single- stranded RNA.
- Plasmid and genomic DNA preparation.
- Removal of RNA from recombinant protein preparations.

PR891628C	20mg/ml

RNase H (E.coli)

Endonuclease that selectively cleaves the RNA of RNA- DNA hybrids. It doesn't hydrolyze the phosphodiester bonds within single- stranded and double- stranded DNA and RNA.
- Used to remove mRNA strands before 2nd strand cDNA synthesis.
- Used to remove poly A sequences of mRNA after hybridization with oligo dt.
- Site- specific cleavage of RNA.
- Used for in vitro polyadenylation reactions.

ME3305	100U
ME3306	500U

Ribonuclease Inhibitor RNAse- Free

Ribonuclease Inhibitor RNase- free inhibits the activity of RNases A, B, C by binding them in a noncompetitive mode at a 1:1 ratio. It does not inhibit RNases 1, T1, T2, H, U1, U2, CL3 and other enzymes. Applied in procedures where RNase contamination constitutes a problem:
- In vitro transcription
- In vitro translation
- cDNA synthesis

ME4309	2500U
ME4310	4x2500U

Proteinase K, PCR Grade

Proteinase K is an endolytic protease that cleaves peptide bond.

- **Isolation of genomic DNA**
- **Removal of DNase and RNase during RNA or DNA purification**

PR891631C	1ml ,20mg/ml
PR901632C	1ml,100mg/ml

Ributinase

Ributinase is innovative enzymes blend for simultaneously protein and RNA degradation during genomic DNA isolation from different sources like: cell culture, tissues. It would be reactive in wide range of reaction condition.

PR891621C	1 ml

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DNA Polymerase and Master Mixes
Normal Taq DNA polymerase
CinnaGen SmarTaq DNA Polymerase (Recombinant)
CinnaGen Taq DNA Polymerase (Recombinant)
Vivantis Taq DNA Polymerase

Modified Taq DNA Polymerase
Max Taq DNA Polymerase (Long PCR)
AtTaq DNA Polymerase (Hot Start)
AtMax Taq DNA (Long & Hot-start)
Pfu DNA Polymerase (Recombinant)

CinnaGen Nucleotides

PCR Master Mixes
2X PCR Master Kit
2X PCR Master Mix
Reddy to use PCR master mix 2X

Real Time Master Mixes
HotTaq EvaGreen® qPCR Mix
HotTaq Probe qPCR Mix

DNA Polymerase and Master Mixes

Normal Taq DNA Polymerase
Normal Taq DNA polymerase is a thermostable recombinant DNA polymerase and it is suitable for applications requiring high temperature synthesis of DNA.

- Thermostable
- 5′ to 3′ polymerization
- Lack of 3′ to 5′ exonuclease activity
- Recommended amplification up to 8-10 kb
- Ultrapure recombinant protein.
- No nucleases and nicking nucleases were detected.
- No bacteria genomic contamination was detected

CinnaGen SmarTaq DNA Polymerase (Recombinant)

CinnaGen SmarTaq DNA Polymerase is purified from E.coli expressing a cloned Thermus aquaticus DNA polymerase gene with 5′-3′ polymerase activity of dNTPs. CinnaGen SmarTaq DNA Polymerase is heat stable and synthesizes DNA at elevated temperatures from single standard templates in the presence of a primer.
Supplied with: 10XPCR Buffer 100mM Tris-HCl (pH 8.8 at 25°C), 500mM KCl, 10X PCR Buffer (with 750mM Tris-HCl (pH 8.8 at 25°C), 200mM $(NH_4)_2SO_4$, 0.1% Tween 20 and 50mM $MgCl_2$.
Source: E.coli cells with a cloned gene from Thermus aquaticus.

TA8108C	100 U (5 u/µl)
TA8109C	500 U (5 u/µl)
PR901651C	2500u (5 u/µl)

CinnaGen Taq DNA Polymerase (Recombinant)

CinnaGen Taq DNA Polymerase is purified from E.coli expressing a cloned Thermus aquaticus DNA polymerase gene with 5′-3′ polymerase activity of dNTPs. CinnaGen Taq DNA Polymerase is heat stable and synthesizes DNA at elevated temperatures from single standard templates in the presence of a primer.
Source: E.coli cells with a cloned gene from Thermus aquaticus. Supplied with: 10XPCR Buffer 100mM Tris-HCl (pH 8.8 at 25°C), 500mM KCl 20 and 50mM $MgCl_2$.

TA7505C	100U(5 u/µl)
TA7506C	500U(5 u/µl)
PR901650	2500U (5 u/µl)

Vivantis Taq DNA Polymerase

Vivantis Taq DNA polymerase is a thermostable DNA polymerase. It is suitable for applications requiring high temperature synthesis of DNA.
Reaction buffer:
10XVi Buffer A (without $MgCl_2$): 500mM KCl, 100mM Tris- HCl (pH9.1 at 20°C) and 0.1% Triton™ X100.
10X Vi Buffer S: 160mM $(NH_4)_2SO_4$, 500mM Tris- HCl(pH9.2 at 22°C), 17.5mM $MgCl_2$ and 0.1% triton™ X-100

- **Recommended amplification up to 8-10 kb**

PL1201	200U (5 u/µl)
PL1202	500U (5 u/µl)

Modified Taq DNA Polymerase

Max Taq DNA Polymerase (Long PCR)
Max Taq DNA Polymerase is a modified and optimized thermostable enzyme blend containing Taq DNA Polymerase, Pfu DNA Polymerase and enhancing factors. It exhibits the 3' to 5' proofreading activity, resulting in considerably higher fidelity than possible with unmodified Taq DNA Polymerase.

- Combination of Taq and P*fu* DNA _ 3' to 5' proofreading activity
- Generate a mixture of blunt end and 3' dA overhang amplification product
- Fast and accurate
- Exhibits wider tolerance for Mg2+, Salt concentration, pH, Template contaminations
- For large fragment, recommended amplification up to, 20kb
- Improve results for critical template (eg. GC rich regions)
- Excellent for multiplex amplification.
- Increased amplification product yields and purity.

PL2201	200U(5 u/µl)
PL2202	500U(5 u/µl)

At Taq DNA Polymerase (Hot Start)

AtTaq DNA Polymerase (Hot Start) is a complex of specific anti- taq monoclonal antibody with top quality thermostable Taq DNA polymerase for "Hot Start" amplification, resulting in greatly enhanced amplification specificity, sensitivity and yield. It has no exonuclease activity and allows you to assembly of amplification at room temperature.

- Increased specificity by reduced amplification artifacts like primer-dimer formation.
- "Hot-Start" PCR, up to 8kb amplification.
- Complex of *Taq* DNA Polymerase and anti-*Taq* Monoclonal Ab.
- Enhanced specificity, sensitivity and yield.
- Carefully selected anti- *Taq* providing protection against non specific primer extension from room temperature to 70°C.

PL3201	200U (5 u/µl)
PL3202	500U (5 u/µl)

AtMax Taq DNA polymerase (Long & Hot-start)

AtMaxDNA Polymerase (Hot Start) is a mixture of thermostable Taq DNA polymerase, proofreading Pfu DNA polymerase, specific anti- taq monoclonal antibody for automatic "Hot Start" amplification resulting in greatly enhanced amplification specificity, sensitivity and yield.

- Combination of *Taq,* anti- Taq antibody and *Pfu* DNA
- 3' to 5' proofreading activity
- Generate a mixture of blunt end and 3' dA overhang amplification product
- Fast and accurate
- Exhibits wider tolerance for Mg2+, Salt concentration, pH, Templat e contaminations
- For large fragment, recommended amplification up to, 20kb
- Improve results for critical template (eg. GC rich regions)
- Excellent for multiplex amplification.
- Increased amplification product yields and purity.

PL4201	200U (5 u/µl)
PL4202	500U (5 u/µl)

Pfu DNA Polymerase (Recombinant)

In addition of 5´ 3´ DNA Polymerase activity, Pfu DNA Polymerase also has 3´ 5´ exonuclease (proofreading) activity and it is about tenfold more accurate than Taq DNA polymerase and exhibits the lowest error rate of any thermostable DNA polymerase. Pfu Polymerase is useful tool for high fidelity PCR, RT-PCR, Blunt-end PCR cloning.

Reaction buffer:

10XVi Buffer A (without $MgCl_2$): 500mM KCl, 100mM Tris- HCl (pH9.1 at 20°C) and 0.1% Triton™ X100.

10XVi Buffer S: 160mM $(NH_4)_2SO_4$, 500mM Tris- HCl (pH9.2 at 22°C), 17.5mM MgCl2 and 0.1% triton™ X-100

- 3′ to 5′ proofreading activity.
- 10-fold higher fidelity than Taq.
- Recommended for use in high fidelity amplification and cloning blunt.
- Normal Pfu -for amplification of up to 8kb (recommended).
- Blunt-ended PCR products.

PL5201	100U(5 u/µl)
PL5202	500U(5 u/µl)

Properties of DNA Polymerases

	Taq	Pfu	MaxTaq
Half-life	50 cycles	>50 cycles	>50 cycles
Addition 3′ A	Yes	No	Yes
3′-> 5′ Exonuclease act (proofreading act)	No	Yes	Yes
Thermostability	40 min at 95°C	>40 min at 95°C	> 40 min at 95°C
Extension Rate at 72°C, (nt/sec)	35-100	Lower than Taq	Similar to *Taq*
Error rate	1- 2x 10^{-5}	1x 10^{-6}	5x10^{-5}
Fidelity		8-10x >Taq	2- 3x > than Taq

CinnaGen Nucleotides, molecular biology grade:

dNTP Mixes:

dNTP Mixes are aqueous solutions at pH 7.0 containing dATP, dCTP, dGTP and dTTP, each at a final concentration of either 10mM.

- PCR applications
- cDNA synthesis
- Primer extension
- DNA sequencing
- DNA labeling reactions

DN7603C	0.1ml
DN7604C	0.5ml

PCR Master Mixes

PCR Master Mix
Master Mix is an optimized ready to use concentrated DNA amplification mixture containing Taq DNA Polymerase, reaction buffer, dNTPs and $MgCl_2$.

General Features of PCR master mixes
- Convenient, Ready to use
- Fast, Reduce number of pipetting
- Reproducible, Decrease Contamination and error rate
- TA cloning compatible, Generates 3'dA overhangs
- Stable, freeze- thaw cycles up to 20 cycles

Modified Taq DNA Polymerase

2X PCR Master Mix is an optimized premixed with 2X concentrated solutions of Taq DNA polymerase, reaction buffer, MgCl2 and dNTPs. 2X PCR Master Mix contains all components for PCR, except DNA template and primers. Composition of 1X solution: 0.5 M Tris-HCl, , 1.5 mM $MgCl_2$ – 200 µM dATP, 200 µM dCTP, 200 µM dGTP and 200 µM dTTP and 0.04 Units/ul Taq.
Generated PCR products would have 3´ single A-over-hang products and can be used for TA cloning.
This kit supplied with: control DNA and primers, distilled water and mineral oil. It is sufficient for 400 or 80 amplification reaction of 25µl.

PR8250C	400 Tests/25ul
PR8251C	80 Tests/25ul

2X PCR Master Mix

2X PCR Master Mix is an optimized premixed with 2X concentrated solutions of Taq DNA polymerase, reaction buffer, $MgCl_2$ and dNTPs. 2X PCR Master Mix contains all components for PCR, except DNA template and primers. Composition of 1X solution: 0.5 M Tris-HCl, , 1.5 mM $MgCl_2$ – 200 µM dATP, 200 µM dCTP, 200 µM dGTP and 200 µM dTTP and 0.04 Units/ul Taq.
Generated PCR products would have 3´ single A-over-hang products and can be used for TA cloning.
This mix supplied with distilled water and it is sufficient for 80 amplification reaction of 25µl.

PR8252C	1ml, 80Tests/25ul

Reddy to use PCR master mix 2X

Reddy 2X PCR Master Mix is an optimized premixed with 2X concentrated solutions of Taq DNA polymerase, reaction buffer, $MgCl_2$ and dNTPs. Reddy 2X PCR Master Mix contains all components for PCR, except DNA template and primers.
Reddy to load PCR master mix is ready to load mix with RED loading dye which compatible with PCR and all downstream applications so the it allows for direct loading of PCR products in gel.
Composition of 1X solution: 0.5 M Tris-HCl, , 1.5 mM $MgCl_2$ – 200 µM dATP, 200 µM dCTP, 200 µM dGTP and 200 µM dTTP and 0.04 Units/ul Taq.
Generated PCR products would have 3´ single A-over-hang products and can be used for TA cloning.
This mix supplied with distilled water and it is sufficient for 80 amplification reaction of 25µl.

PR901638C	1ml, 80 Tests/25ul

Real Time PCR Master Mixes

HotTaq EvaGreen® qPCR Mix
HotTaq EvaGreen® qPCR Mix is optimized for real-time quantitative PCR assays. The mix includes HotTaq DNA polymerase, ultrapure dNTPs, MgCl2, EvaGreen® dye (and ROX dye according to system requirements). Only template primers and water need to be added. HotTaq DNA polymerase is activated by a 15 min incubation step at 95°C. This prevents extension of non-specifically annealed primers and primer-dimer formed at low temperatures during qPCR setup.
HotTaq EvaGreen® qPCR Mix is available with ROX or no ROX dye.

BT11101C	HotTaq EvaGreen® qPCR Mix (ROX) 1 mL (250 Tests)
BT11102C	HotTaq EvaGreen® qPCR Mix (no ROX) 1 mL (250 Tests)

2X PCR Master Mix

HotTaq Probe qPCR Mix is optimized for real-time quantitative PCR assays and contains all the components necessary to perform qPCR, with the exception of template, primers, and probe. The qPCR Mix contains optimized components and Hot-Taq DNA polymerase supplied in a proprietary reaction buffer that enables detection of low copy number targets. HotTaq DNA polymerase is activated by a 15 min incubation step at 95°C. This prevents extension of non-specifically annealed primers and primer-dimers formed at low temperatures during qPCR setup. HotTaq Probe qPCR Mix is available with ROX or no ROX dye.

BT11001C	HotTaq Probe qPCR Mix (ROX) 1 mL (250 Tests)
BT11002C	HotTaq Probe qPCR Mix (no ROX) 1 mL (250 Tests)

Molecular Cloning

CinnaGen TA Cloning kit

pTG19-T PCR cloning vector

T4 DNA Ligase

Lambda DNA

Lambda DNA (dam-) (dcm-)

pBR322 DNA

pUC18

pUC19

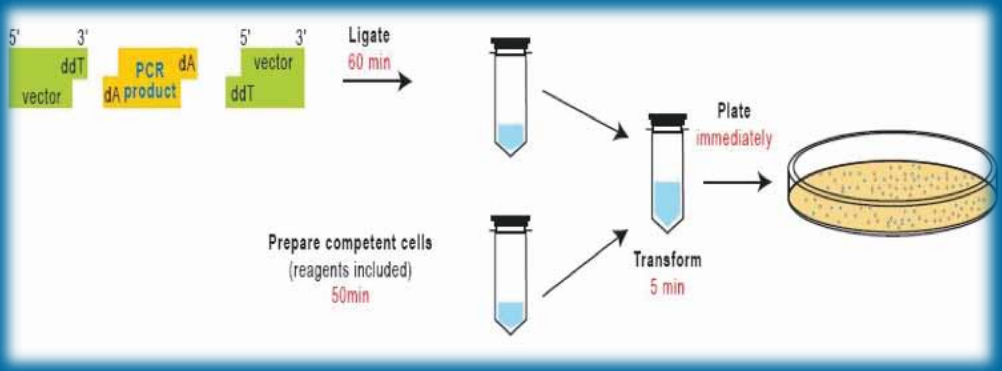
IPTG

X- Gal

Molecular Cloning

Cinnagen TA Cloning kit
Cinnagen TA Cloning kit is designed for rapid and efficient cloning of PCR products with 3’-dA overhangs. The kit use linearized pTG19-T vector with 3’-dT overhangs to prevent vector recircularization, therefore resulting in high percentage of recombinant clones and low background.
Convenience – ready-to-use linearized 3’-dT overhang pTG19-T vector in this kit allows rapid clone selection by:

- LacZ gene for blue/white selection.
- M13 primer sites for PCR screening and sequencing.
- BamHI restriction enzyme can be used to release the insert from the pTG19-T vector.



PCR product cloning procedure

CLONING PRINCIPLE

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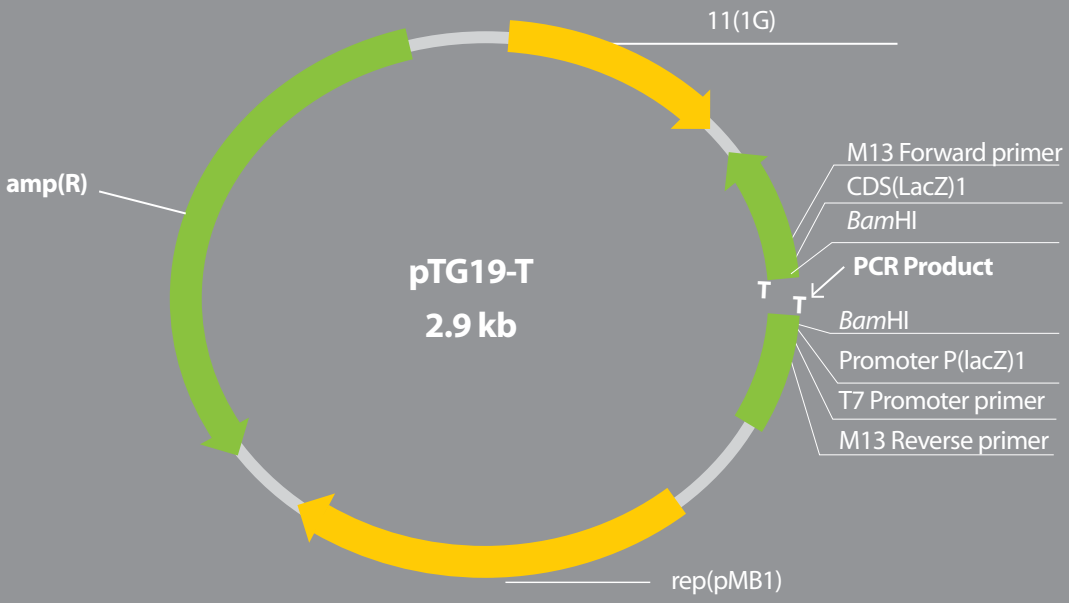
Terminal transferase activity of certain thermophilic DNA polymerases, including Thermus aquaticus (Taq) polymerase adds a single adenosine to the 3'-ends of a double stranded DNA molecule so, most PCR fragments which amplified by non proofreading thermostable DNA polymerases like Taq polymerase possess single 3'-A overhangs.
The use of a linearized “T-vector” which has single 3'-T overhangs on both ends allows direct, high-efficiency cloning of PCR products, facilitated by complementarily between the PCR product 3'-A overhangs and vector 3'-T overhangs.
This method requires the use of T4 DNA ligase to covalently link the compatible ends of the DNA fragment and the linearized plasmid to forming a single cyclic molecule that is capable of autonomous replication in host component E.coli.
This procedure doesn’t need enzymatic modification and primers designed with restriction sites for PCR reaction.

Cinnagen TA cloning kit has five different stages:
1-PCR product generation by Taq DNA polymerase
2- PCR product ligation in pTG19-T PCR cloning vector
3- Transform of vector in to the component E.coli.
4- Colony selection by Blue and white method.
5- Identification of positive colonies

You may confirm presence and orientation of your cloned fragment by PCR, restriction or sequencing methods.



Genetic elements of pTG19cloning vector

PR911643 TA cloning KIT, 20app

pTG19-T PCR cloning vector

The pTG19-T vector is designed for rapid and efficient cloning of PCR products with 3'-dA overhangs. The linearized pTG19-T vector with 3'-dT overhangs prevent vector recircularization, therefore resulting in high percentage of recombinant clones and low background.

- Convenience – ready-to-use linearized 3'-dT overhang pTG19-T vector.
- Efficient – more than 80% of the recombinant clones contain the target DNA.
- Rapid clone selection:
- *lacZ* gene for blue/white selection,
- M13 primer sites for PCR screening and sequencing.
- *BamHI* restriction enzyme can be used to release the insert from the pTG19-T vector.

TA010 PCR cloning vector, 20app

T4 DNA Ligase

T4 DNA Ligase catalyzes the formation of phosphodiester bond between juxtaposed 5′-phosphate and 3′- hydroxyl termini in duplex DNA or RNA.

- Catalyzes the linkage of 5′ or 3′ blunt/ cohesive ends of double stranded DNA by formation of phosphodiester bond.
- Joining of oligonucleotide linkers or adapters to blunt ends.
- Repair nicks formation in duplex nucleic acids.

ME4303	4000U
ME4304	20000U

Lambda DNA

Lambda DNA is linear double- stranded lambda bacteriophage with 48502 base pairs.

- Preparation of DNA molecular weight standards.
- Cloning
- Assays of restriction enzymes

NN1402	Lambda DNA , 500ug

Lambda DNA (dam-) (dcm-)

Lambda DNA (dam-) (dcm-) Linear double stranded Dam and Dcm methylation- free lambda Bacteriophage DNA.

- Preparation of DNA molecular weight standards.
- Cloning
- Assays of restriction enzymes

NN1401	Lambda DNA (dam-) (dcm-), 500ug

pBR322 DNA

pBR322 DNA is a closed circular, medium copy and double- Stranded plasmid with 4361 base pairs with molecular weight 2.83×10^6

- Cloning
- Preparation of DNA molecular weight standards.

NN1404	pBR322, 100ug

pUC18

pUC18 DNA is a closed circular, high copy plasmid with 2686 base pairs with molecular weight $1.74x10^6$

- Cloning
- Preparation of DNA molecular weight standards.

NN1405	pUC18, 50ug

pUC19

pUC19 DNA is a closed circular, high copy plasmid with 2686 base pairs with molecular weight $1.74x10^6$

- Cloning
- Preparation of DNA molecular weight standards.

NN1405	pUC19, 50ug

IPTG

IPTG (isopropyl-beta-D-thiogalactopyranoside) is a highly stable synthetic analog of lactose. It inactivates the lac repressor and induces synthesis of beta -galactosidase, an enzyme that promotes lactose utilization. The IPTG is used to induce the expression of cloned genes which are under control of the lac operon. It is used in conjunction with X-Gal to determine the *lac* phenotype in blue/white colony screening in cloning experiments.

- Blue/ White colony screening.
- Induces the expression of cloned genes that are under control of the *lac* promoter.

PR911706	IPTG (Isopropyl-beta-D-thiogalactopyranoside), 1g

X- Gal

X-Gal (5-bromo-4-chloro-3-indolyl-β-Dgalacto-pyranoside) is an inert chromogenic substrate for β-galactosidase which hydrolyzes X-Gal into colorless galactose and 4-chloro-3-brom-indigo, forming an intense blue precipitate. Induction of the *lacZ* gene with IPTG leads to the hydrolysis of X-Gal and to the development of blue colonies.

- Blue/ White colony screening.
- Detection and visualization of beta galactosidase reporter gene.

PR911706	X-Gal (5-Bromo-4-Chloro-3-Indolyl-beta-D-galactopyranoside), 100mg

Nucleic Acid Extraction kits
CinnaGen and Vivantis Extraction Kits and solutions
CinnaPure-DNA (whole blood, serum and plasma)
CinnaPure-DNA (Cell culture, Tissues, Gram negative Bacteria and CSF)
CinnaPure-DNA (Gram Positive Bacteria)
CinnaPure DNA- FFPE Tissue (Kit for the isolation of genomic DNA from
formalin-fixed, paraffin-embedded tissues)
CinnaPure ONE (Kit for simultaneous isolation of genomic DNA and total RNA from the same sample)
CinnaPure Viral
DNA extraction kit (DNP TM)
DNA Extraction Solution (DNG-plusTM)
Phenol (Equilibrated, pH 8)
Plant DNA Extraction Kit
Plasmid Extraction kit
Clean up kits
PCR Clean-up kit
Gel DNA recovery kit
AmbiClean Kit (PCR & Gel)
CinnaGen and Vivantis RNA Extraction Kits and Solutions
CinnaPure-RNA (Cell culture, Tissues, Serum and Plasma)
RNX™- Plus solution
Blood total RNA extraction kit
Proteinase K, PCR Grade
Ributinase
Lysozyme
Glycogen, molecular grade (20mg/ ml)
RBC lysis buffer

Nucleic Acid Extraction and Purification
CinnaGen and Vivantis DNA Extraction Kits and solutions

CinnaPure-DNA (whole blood, serum and plasma)

It is column based and contains all ingredients for quick preparation of pure DNA from blood, serum and plasma less than 15 minutes. This kit presents remarkable features of timesaving, easy, prompt and high yield DNA purification. Basis of the technology is the binding of DNA to matrices including silica membrane filters in presences of high salts concentration and reversibly elution in low salt condition like elution buffer. Obtained DNA is suitable for downstream applications including PCR. Kit supplied with: Lysis buffer, wash buffer I and II and elution buffer.

- No bacteria genomic contamination was detected

PR881612C	50 Preps

CinnaPure-DNA (Cell culture, Tissues, Gram negative Bacteria and CSF)

It is column based and contains all ingredients for preparation of pure DNA from cell suspension and homogenized sample. This kit presents remarkable features of timesaving, easy, prompt and high yield DNA purification. Basis of the technology is the binding of DNA to matrices including silica membrane filters in presences of high salts concentration and reversibly elution in low salt condition like elution buffer. Obtained DNA is suitable for downstream applications including PCR. Kit supplied with: Pre lysis buffer, Ributinase or innovative enzyme blend for simultaneously protein and RNA degradation, Lysis buffer, wash buffer I and II and elution buffer.

PR881613C	50 Preps

CinnaPure-DNA (Gram Positive Bacteria)

It is column based and contains all ingredients for preparation of pure DNA from gram positive bacteria. This kit presents remarkable features of timesaving, easy, prompt and high yield DNA purification. Basis of the technology is the binding of DNA to matrices including silica membrane filters in presences of high salts concentration and reversibly elution in low salt condition like elution buffer. Obtained DNA is suitable for downstream applications including PCR. Kit supplied with: Special Pre lysis buffer for gram positive bacteria, lysozyme, Ributinase or innovative enzyme blend for simultaneously protein and RNA degradation, Lysis buffer, wash buffer I and II and elution buffer.

PR881614C	50 Preps

CinnaPure DNA- FFPE Tissue

(Kit for the isolation of genomic DNA from formalin-fixed, paraffin-embedded tissues)

It is column based and contains all ingredients for preparation of pure DNA from formalin-fixed, paraffin-embedded tissues, FFPET. This kit presents remarkable features of timesaving, easy, prompt and high yield DNA purification.
Basis of the technology is the binding of DNA to matrices including silica membrane filters in presences of high salts concentration and reversibly elution in low salt condition like elution buffer. Obtained DNA is suitable for PCR. Kit supplied with: Special Pre lysis and lysis buffers which significantly increase tissue degradation and DNA leakage during incubation, high concentrated Ributinase (100mg/ml Proteinase K) or innovative enzyme blend for simultaneously protein and RNA degradation, Lysis buffer, wash buffer I and II and elution buffer.

PR911683C	25 Preps

CinnaPure ONE
(Kit for simultaneous isolation of genomic DNA and total RNA from the same sample)

It is column based and contains all ingredients for simultaneous and rapid purification of DNA/ RNA from the single biological samples.
This kit presents remarkable features of timesaving, easy, prompt and high yield nucleic acids (NA) purification.
Basis of the technology is the binding of nucleic acids (NA) to matrices including DNase& RNase free silica membrane filters in presences of high salts concentration and reversibly elution in low salt condition like Nuclease free elution water. Obtained nucleic acids (NA) is suitable for PCR and cDNA synthesis. Kit supplied with: Pre lysis buffer, Lysis buffer, DNaseI, wash buffer I and II and elution buffer.

PR911684C	50 Preps

CinnaPure Viral
(Kit for simultaneous isolation of DNA and RNA from serum or plasma)

It is column based and contains all ingredients for simultaneous and rapid purification of DNA/ RNA serum, plasma or virus-infected cell culture supernatant.
This kit presents remarkable features of timesaving, easy, prompt and high yield nucleic acids (NA) purification.
Basis of the technology is the binding of nucleic acids (NA) to matrices including DNase& RNase free silica membrane filters in presences of high salts concentration and reversibly elution in low salt condition like Nuclease free elution water. Obtained nucleic acids (NA) is suitable for PCR and cDNA synthesis. Kit supplied with: Lysis buffer, wash buffer I and II and elution buffer.

PR921733	50 Preps

DNA extraction kit (DNP™)

Guanidine salt base and a complete kit for DNA extraction from: 100µl of whole blood (fresh, frozen or dried spots), 100µl Sera (for viral DNA extraction), Homogenized sputum (for detection of M. tuberculosis), CSF, Cell Culture (3- 5x106 of cultured cells), 25-30mg of mammalian tissue, Bacterial Cultures (10-20mg of bacteria for PCR application), Buccal or Vaginal Swab. DNA obtained by this method can be used for all molecular biology procedures (PCR, restriction digestion, cloning, Southern blot, DNA sequencing, etc.) This kit supplied with: Protease and protease buffer, lysis solution, precipitation solution, wash buffer and DNA solvent.

DN8115C	50Preps (for whole blood 30 Preps)

DNA Extraction Solution (DNG-plus™)

Guanidine base solution for DNA extraction from different sources like whole blood, homogenized sputum buccal or vaginal swabs. It supplied as a single solution and other reagent should be at hand.

DN8117C	20ml
DN8118C	100ml

Phenol (Equilibrated, pH 8)

CinnaGen equilibrated phenol is Tris saturated and stabilized by Hydroxyquinoline. For DNA extraction purpose, pH adjusted on 8.0-8.5 at room temperature.

MR7841C	20ml

Plant DNA Extraction Kit

Plant DNA Extraction Kit is designed for rapid and efficient purification of genomic DNA from a wide variety of plant tissues. . The purification is based on the usage of denaturating agents to provide efficient lysis of tissues cells, denaturation of proteins and subsequent release of genomic DNA. Special buffers provided in the kit are optimized to enhance binding of DNA onto specially-treated glass filter membrane for efficient recovery of highly pure genomic DNA.

GF-PT-050	50 Preps
GF-PT-100	100 Preps

Plasmid Extraction kit

It is a resin based kit and inorganic salts crystals utterly simplified separation of phases. In this method, plasmid DNA captured by sorbent and after twice washing pure plasmid DNA eluted by water. This kit supplied with: Resuspension and Lysis Solutions, K acetate Solution, Co-Precipitation Solution (Inorganic Salt), Binding Buffer and Elution Buffer.

PS8405C	50Preps

Plasmid DNA extraction kit

It is column based kit and designed for rapid and efficient purification of high copy and low copy plasmid DNA from bacterial lysate. This kit uses the alkalyine lysis-SDS method to lyse cells and release plasmid DNA. Special buffers provided in the kit are optimized to enhance binding of DNA onto specially-treated glass filter membrane for efficient recovery of highly pure plasmid DNA.

GF-PL-050	50 Preps
GF-PL-100	100 Preps

PCR Clean-up kit

It is column based kit and designed for rapid and efficient clean up of DNA ranging from 100bp to 20kb. The kit efficiently removes dNTPs, short oligos fragments, mineral oil and enzyme from a PCR reaction product. Remove proteins after restriction enzyme treatment and dephosporylation and residual dye and ethidium bromide. This kit is also suited for concentrating DNA, changing buffer and desalting.

GF-PC-050	50 Preps
GF-PC-100	100 Preps

Gel DNA recovery kit

It is column based kit and designed for rapid purification of DNA bands ranging from 100bp to 10kb from all grade of agarose gel in TAE or TBE. Special buffers provided in kit are optimized to enhance binding of DNA onto especially –treated glass filter membrane for efficient recovery of highly pure DNA.

GF-GP-050	50 Preps
GF-GP-100	100 Preps

AmbiClean Kit (PCR & Gel)

It is column based kit and designed for rapid DNA recovery from agarose gel and PCR clean up of DNA bands ranging from 100bp to 20 Kb. Special buffer provide the correct salt concentration and pH for efficient recovery (80-90%) of DNA from both PCR products and agarose gel from TAE or TBE buffers. The kit efficiently removes dNTPs, short oligos fragments, mineral oil and enzyme from a PCR reaction product. Remove proteins after restriction enzyme treatment and dephosporylation and residual dye and ethidium bromide. This kit is also allows for concentrating DNA, changing buffer and desalting.

GF-GC-050	50 Preps
GF-GC-100	100 Preps

CinnaGen and Vivantis RNA Extraction Kits and Solutions

CinnaPure-RNA (Cell culture, Tissues, Serum and Plasma)

It is column based and contains all ingredients for preparation of pure RNA from cell suspension and homogenized sample. This kit presents remarkable features of timesaving, easy, prompt and high yield RNA purification. Basis of the technology is the selective binding of RNA to specific RNase free membrane in presences of high salts concentration and reversibly elution in appropriated RNase free and 0.22 µl filtered condition like elution buffer. Obtained RNA is suitable for downstream applications including cDNA synthesis and q RTPCR. Kit supplied with: optimized Lysis buffer for simultaneously protein and DNA degradation, wash buffer I and II and elution buffer.

PR891620	50 Preps

RNX™- Plus solution

RNX solution provided a reliable and advanced method for total RNA isolation from tissue, blood, bacterial cell, homogenized sample, serum or plasma (RNA viruses). Through the action of Guanidine salt in RNA extraction, simultaneously DNA and protein are precipitated in phenol phase. The obtained RNA has high quality and contains all types of RNA. It supplied as a single solution and other reagent should be at hand.

MR7713C	25ml

Blood total RNA extraction kit

Blood total RNA extraction kit is designed for rapid and efficient purification of total RNA from up to 1 ml fresh or frozen anti-coagulated whole blood. The purification is based on the usage of denaturating agents to provide efficient cell lysis, denaturation of proteins and subsequent release of RNA. Special buffers provided in the kit are optimized to enhance the binding of RNA onto a specially-treated glass filter membrane for efficient recovery of highly pure RNA.

GF-TB-025	25 Preps

Proteinase K, PCR Grade

Proteinase K is an endolytic protease that cleaves peptide bond.
. Isolation of genomic DNA
. Removal of DNase and RNase during RNA or DNA purification

PR891631C	1ml ,20mg/ml
PR901632C	1ml,100mg/ml

Ributinase

Ributinase is innovative enzymes blend for simultaneously protein and RNA degradation during genomic DNA isolation from different sources like: cell culture, tissues. It would be reactive in wide range of reaction condition.

PR891621C	1 ml

Lysozyme

Lysozyme or muramidase catalyses the hydrolysis of N-acetylmuramide linkages in bacterial cell walls. It can be used for the purification of both DNA and protein. Source: Chicken Egg White Lysozyme recommended for Gram-positive bacterial lysis.

MR7735C	500mg

Glycogen, molecular grade (20mg/ ml)

Glycogen is purified polysaccharide derived from oysters.
. Formation a visible pellet during nucleic acid purification.
. Higher efficiency than tRNA

PR892707	2x250 ul

RBC lysis buffer

Ready to use RBC Lysis solution is prepared for red blood cells lyses prior to RNA or DNA extraction from large amount of whole blood.
RBCs are selectively lysed during incubation in hypotonic condition consists detergent while intact WBCs with optimal cell viability recovered during centrifugation.

PR921729	50ml
PR921730	100ml
PR921731	1000ml

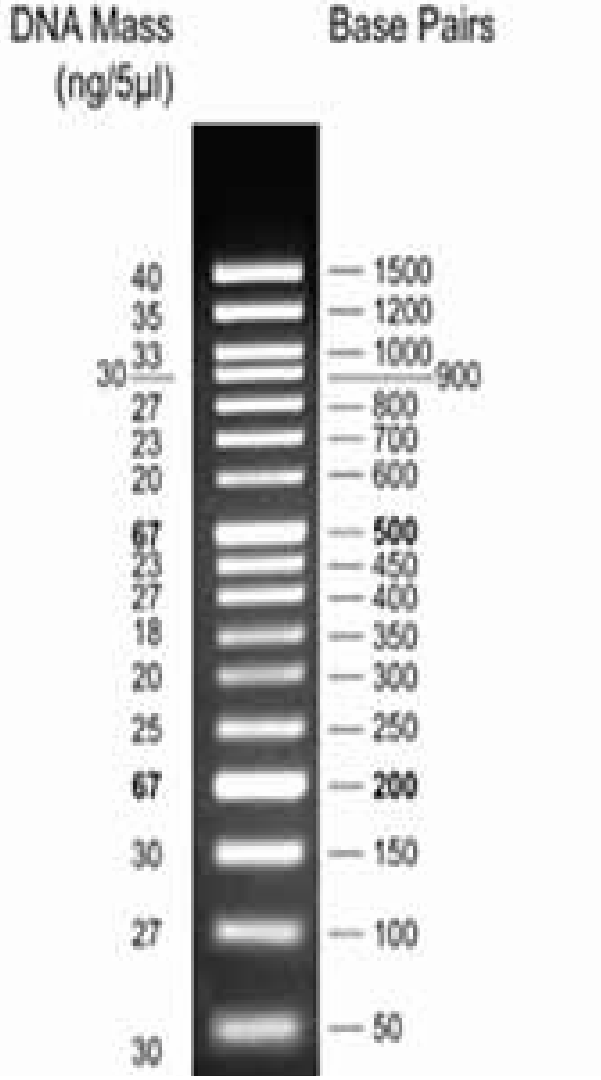
DNA ladders
50bp DNA Ladder RTU (Ready-to-Use)
100bp DNA Ladder RTU (Ready-to-Use)
100bp Plus DNA Ladder RTU (Ready-to-Use)
1Kb DNA Ladder RTU (Ready-to-Use)
1 Kb plus DNA Ladder RTU (Ready-to-Use)
Large DNA Ladder RTU (Ready-to-Use)
Protein Ladders
Prestained Protein Ladder, 10- 170
Prestained Protein Ladder, 10- 250
Blue light Stain
CinnaGen DNA Electrophoresis
6X Loading Buffer
6x Loading Dye with SDS
Ethidium Bromide
DNA safe stain
Agarose
Instant CinnaGen Agarose Tablet LE
TBE buffer, 5X
TBE 10X
CinnaGen Protein Biochemical

50bp DNA Ladder RTU (Ready-to-Use)

A unique combination of PCR products and a number of proprietary plasmids digested with appropriate restriction enzymes to yield 17 fragments, suitable for use as molecular weight standards for agarose gel electrophoresis. The DNA includes fragments ranging from 50-1,500 base pairs. The 200 and 500 base pair bands have increased intensity to serve as reference points. The approximate mass of DNA in each band is provided (0.56 µg a load) for approximating the mass of DNA in comparably intense samples of similar size.

Source

PCR products and double-stranded DNA digested with appropriate restriction enzymes, are phenol extracted and equilibrated to 10 mM Tris-HCl (pH 8.0) and 10mM EDTA.



2.5% agarose gel

Cat. No.	PR901633
Size	50µg / 500µl
Range	50-1500 bp
Number of bands	17
Concentration	100 µg/ml
Recommended Load	5 µl / well

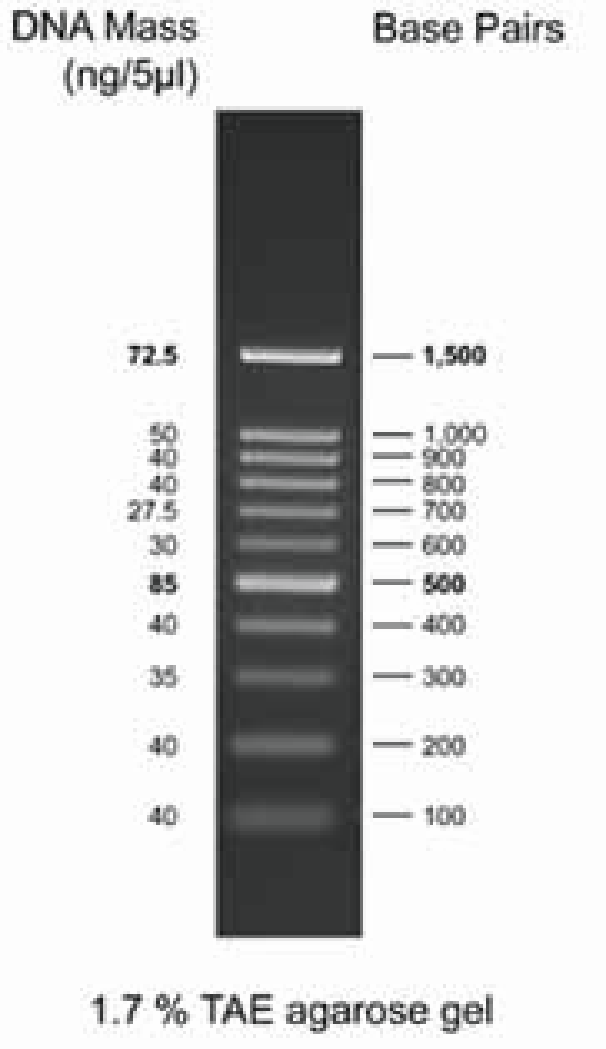
100bp DNA Ladder RTU (Ready-to-Use)

A unique combination of PCR products and a number of proprietary plasmids digested with appropriate restriction enzymes to yield 11 frag¬ments, suitable for use as molecular weight standards for agarose gel electrophoresis. The DNA includes fragments ranging from 100-1,500 base pairs. The 500 and 1,500 base pair bands have increased intensity to serve as reference points. The approximate mass of DNA in each band is provided (0.5 µg a load) for approximating the mass of DNA in comparably intense samples of similar size.

Source:

PCR products and double-stranded DNA digested with appropriate re¬striction enzymes, are phenol extracted and equilibrated to 10 mM Tris-HCl (pH 8.0) and 1mM EDTA.

Containing orange G & xylene cyanol FF as tracking dyes.



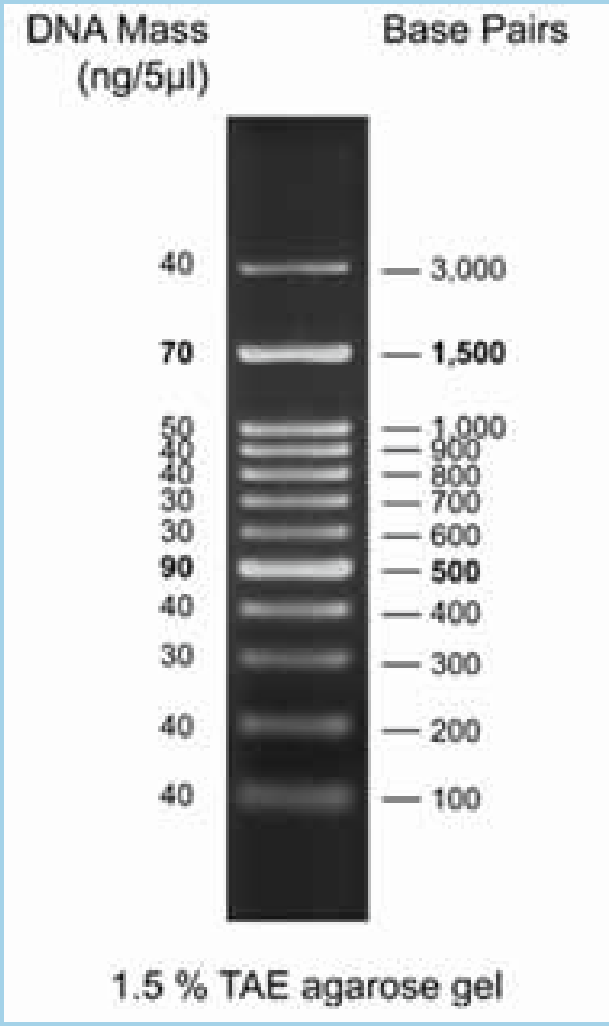
Cat. No.	PR901644
Size	50µg / 500µl
Range	100-1500 bp
Number of bands	11
Concentration	100 µg/ml
Recommended Load	5 µl / well

100bp Plus DNA Ladder RTU (Ready-to-Use)

A unique combination of PCR products and a number of proprietary plasmids digested with appropriate restriction enzymes to yield 12 fragments, suitable for use as molecular weight standards for agarose gel electrophoresis. The DNA includes fragments ranging from 100-3,000 base pairs. The 500 and 1,500 base pair bands have increased intensity to serve as reference points.
The approximate mass of DNA in each band is provided (0.54 µg a load) for approximating the mass of DNA in comparably intense samples of similar size.

Source:

PCR products and double-stranded DNA digested with appropriate re¬striction enzymes, are phenol extracted and equilibrated to 10 mM Tris-HCl (pH 8.0) and 1mM EDTA.
Containing orange G & xylene cyanol FF as tracking dyes.



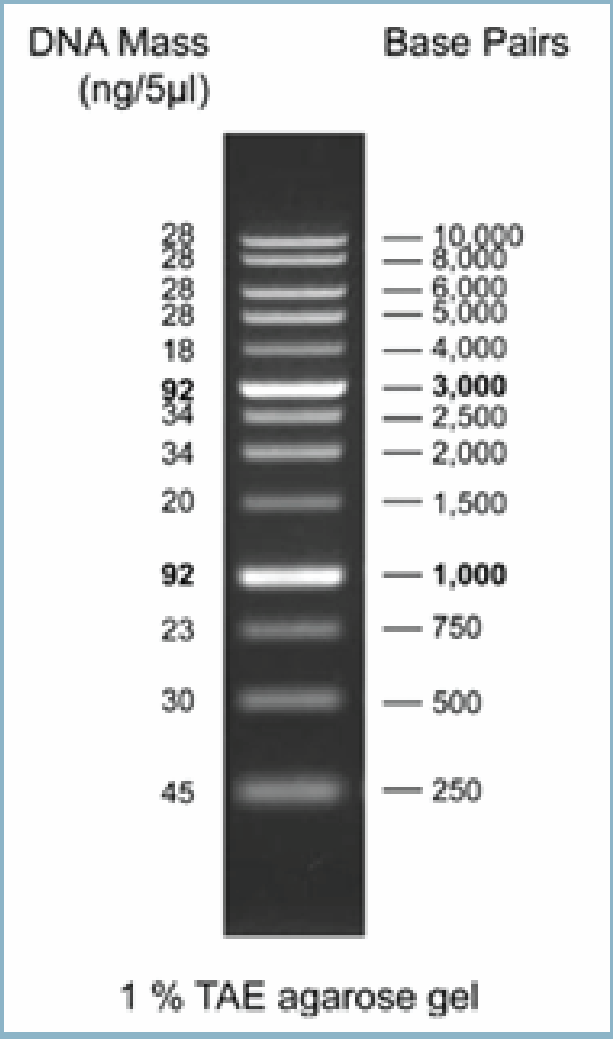
Cat. No.	PR911653
Size	50µg / 500µl
Range	100-3000 bp
Number of bands	12
Concentration	100 µg/ml
Recommended Load	5 µl / well

1Kb DNA Ladder RTU (Ready-to-Use)

A unique combination of a number of proprietary plasmids di¬gested with appropriate restriction enzymes and PCR products to yield 13 fragments, suitable for use as molecular weight standards for agarose gel electrophoresis. The DNA includes fragments ranging from 250-10,000 base pairs. The 1K and 3K bands have increased intensity to serve as reference points. The approximate mass of DNA in each band is provided (0.5 µg a load) for approximating the mass of DNA in comparably intense samples of similar size.

Source

PCR products and double-stranded DNA digested with appropriate restriction enzymes, are phenol extracted and equilibrated to 10 mM Tris-HCl (pH 8.0) and 1 mM EDTA.



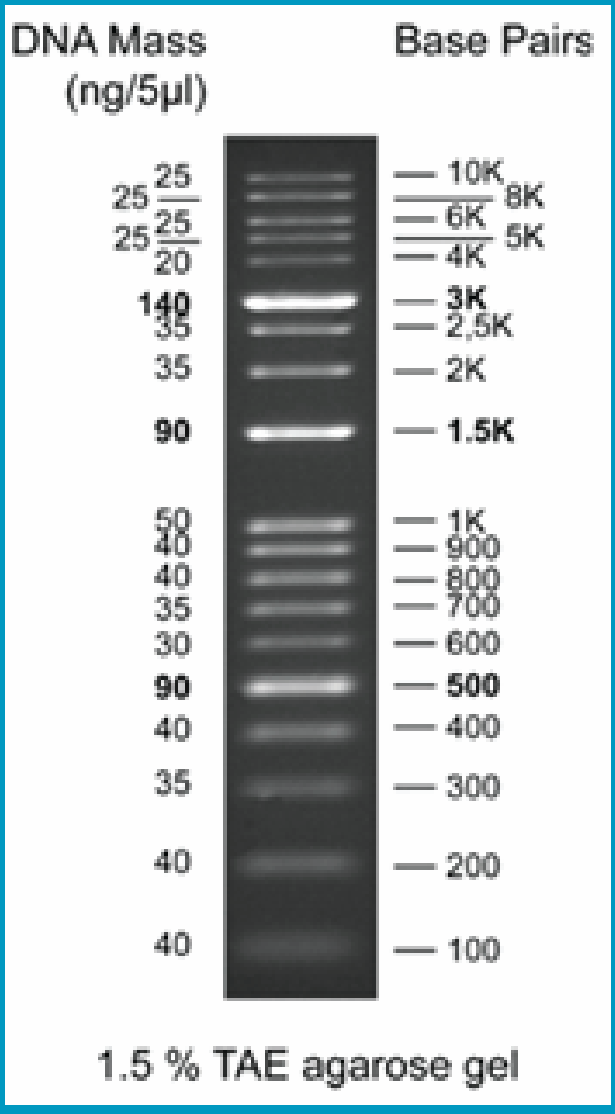
Cat. No.	PR901645
Size	50µg / 500µl
Range	250-10000 bp
Number of bands	13
Concentration	100 µg/ml
Recommended Load	5 µl / well

Containing bromophenol blue as the tracking dye.

1 Kb plus DNA Ladder RTU (Ready-to-Use)

An unique combination of a number of proprietary plasmids digested with appropriate restriction enzymes and PCR products to yield 19 fragments, suitable for use as molecular weight standards for agarose gel electrophoresis. The DNA includes fragments ranging from 100-10,000 base pairs. The 500, 1.5K and 3K bands have increased intensity to serve as reference points. The approximate mass of DNA in each band is provided (0.86 µg a load) for approximating the mass of DNA in comparably intense samples of similar size.

Source
PCR products and double-stranded DNA digested with appropriate restriction enzymes, are phenol extracted and equilibrated to 10 mM Tris-HCl (pH 8.0) and 10mM EDTA.
Containing orange G, xylene cyanol FF and bromophenol blue as tracking dyes.



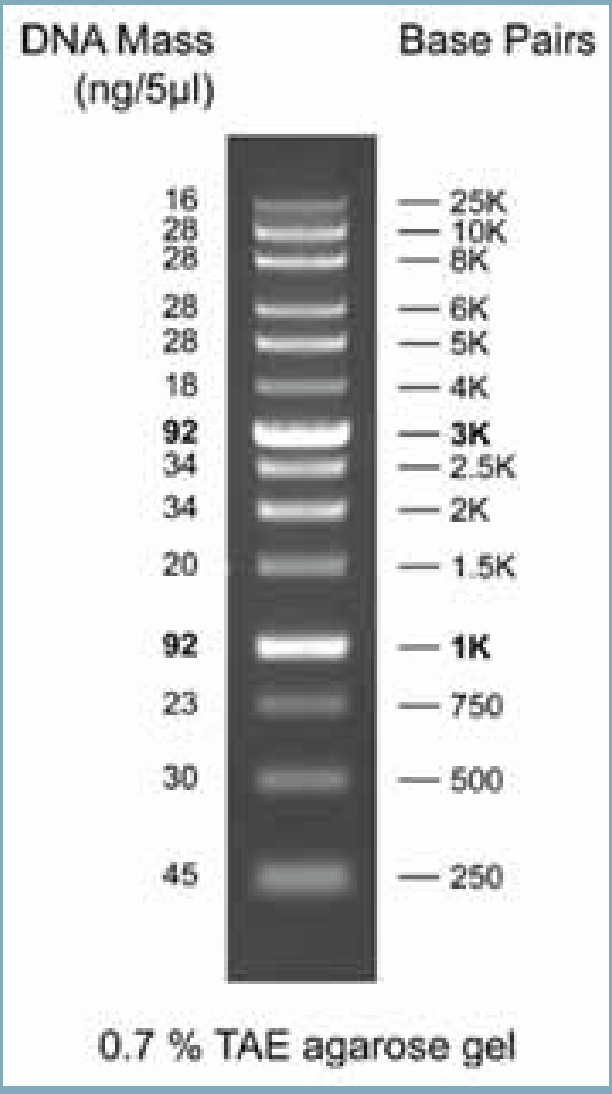
Cat. No.	PR911721
Size	80µg / 500µl
Range	100-10,000 bp
Number of bands	19
Concentration	170 µg/ml
Recommended Load	5 µl / well

Large DNA Ladder RTU (Ready-to-Use)

A unique combination of a number of proprietary plasmids digested with appropriate restriction enzymes and PCR products to yield 14 fragments, suitable for use as molecular weight standards for agarose gel electrophoresis. The DNA includes fragments ranging from 250-25K base pairs. The 1K and 3K bands have increased intensity to serve as reference points. The approximate mass of DNA in each band is provided (0.52 µg a load) for approximating the mass of DNA in comparably intense samples of similar size.

Source

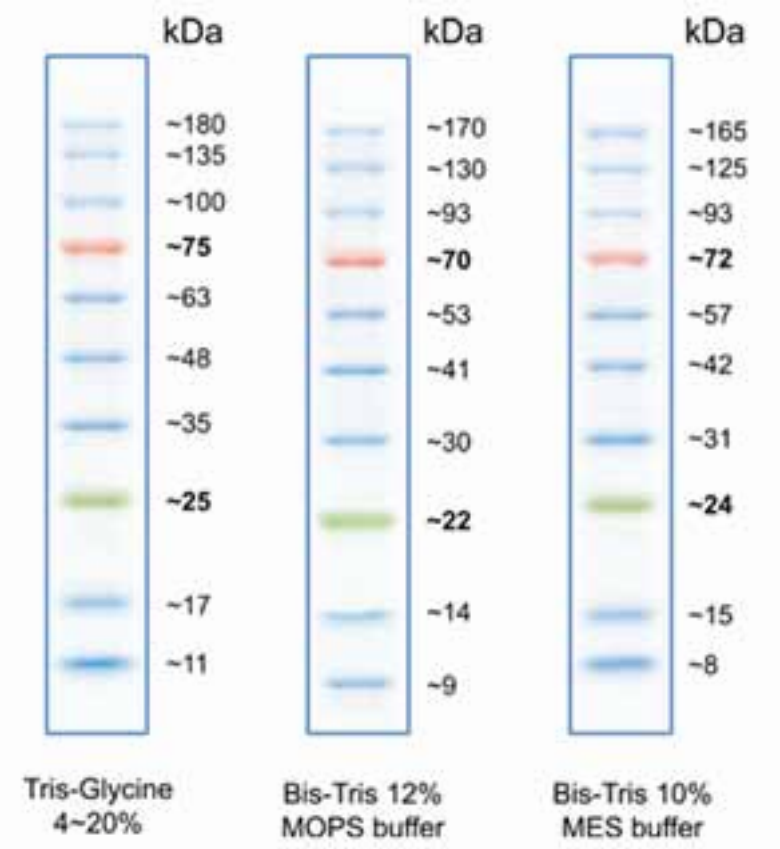
PCR products and double-stranded DNA digested with appropriate restriction enzymes, are phenol extracted and equilibrated to 10 mM Tris-HCl (pH 8.0) and 10mM EDTA.



Cat. No.	PR911722
Size	50µg / 500µl
Range	250-25,000 bp
Number of bands	14
Concentration	100 µg/ml
Recommended Load	5 µl / well

Prestained Protein Ladder, 10- 170 KDa

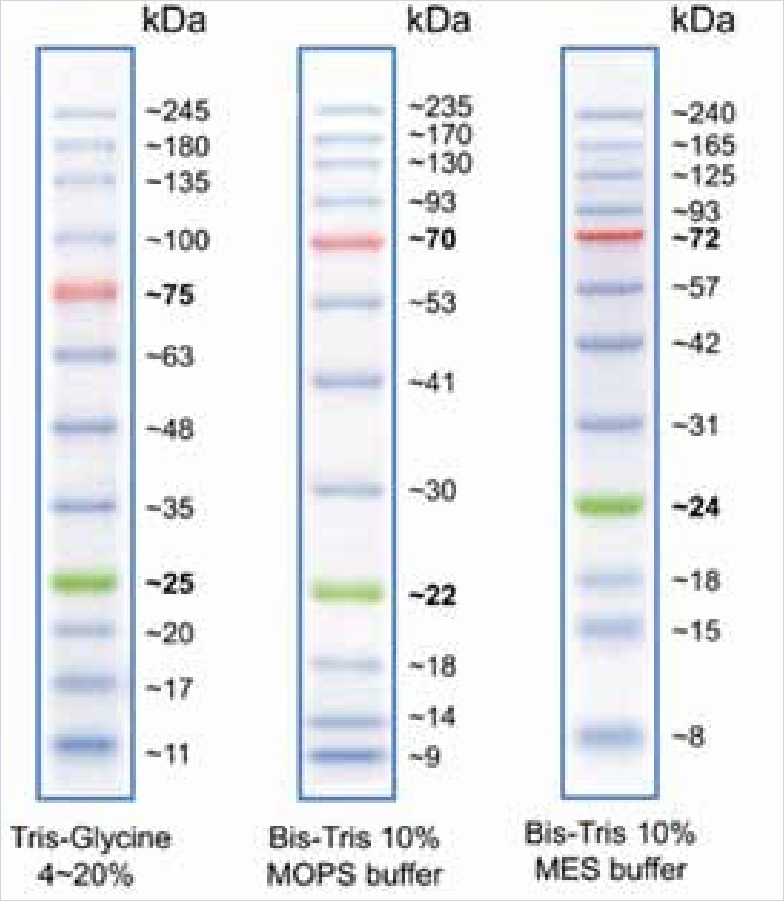
The Prestained Protein Ladder is a three-color protein standard with 10 pre-stained proteins covering a wide range molecular weights for 10 to 180 kDa.
Proteins are covalently coupled with a blue chromophore except for two reference bands (one green and one red band at 25 kDa and 75 kDa respectively) when separated on SDS-PAGE (Tris-glycine buffer).
The Prestained Protein Ladder is designed for monitoring protein separated during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (PVDF, nylon , or nitrocellulose) and for approximate sizing of proteins.The ladder is supplied in gel loading buffer and is ready to use.



Cat. No.	PR911654
Range	10-180 kDa
Number of bands	10
Concentration	0.2-0.4 mg of each protein
Recommended Load	3-5 µl / well

Prestained Protein Ladder, 10- 250 KDa

The Prestained Protein Ladder is a three-color protein standard with 12 pre-stained proteins covering a wide range molecular weights from 10 to 245 kDa. 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). The Prestained Protein Ladder is designed for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (PVDF, nylon, or nitrocellulose) and for approximating the size of proteins. The ladder is supplied in gel loading buffer and is ready to use.



Cat. No.	PR911641
Range	10-250 kDa
Number of bands	12
Concentration	0.1-0.4 mg of each protein
Recommended Load	3-5 µl / well

Blue light Stain

Blue lighting stain is ready to use G-250 coomassie stain for visualization of protein bands in SDS-PAGE
And 2-D gels. Blue lighting is a unique formulation without noxious odor of acetic acid, does not require acid/ alcohol fixation, destaining solutions and is complete non- hazardous. Using blue lighting is simple, fast and sensitive (detect as low as 7 ng protein) with complete staining as short as 20 minutes.

- Ready to use
- Non- Hazardous
- Sensitive
- Fast
- No gel fixing
- No alcohol distaining

PR0601	1L

CinnaGen DNA Electrophoresis

6X Loading Buffer

Loading dye solution used to prepare DNA samples for loading on agarose gel. It has two different dyes for visual tracking of DNA during electrophoresis. The 6X loading dye contains 2 dyes: bromophenol blue and xylene cyanol FF to track DNA migration during electrophoresis.

MR7723C	1ml

6x Loading Dye with SDS

6x Loading Dye with SDS is specially designed for loading DNA samples that contains high amount of proteins that may form complexes with DNA during gel electrophoresis. This product is suitable for use in prevention of band- shift (due to protein binding) or annealing of DNA during both agarose and polyacrylamide gel electrophoresis. The 6X loading dye with SDS contains 2 dyes; bromophenol blue and xylene cyanol FF to track DNA migration during electrophoresis. Recommended for electrophoretic DNA samples after digestion with restriction endonuclease, ligation or dephosphorylation reactions.

NM0416	5x 1ml

Ethidium Bromide

Ethidium bromide (EtBr) is commonly used marker for identifying and visualizing nucleic acid bands in electrophoresis which fluoresces readily visible with a reddish-brown color when exposed to ultraviolet (UV) light.
EtBr is a potent mutagen (may cause genetic damage), and moderately toxic after an acute exposure.

MR7721C	1ml
MR7729	250mg

DNA safe stain

To reduce potential hazardous exposures in the lab, staining of DNA by an alternative and less toxic and non hazardous chemical would be more acceptable.CinnaGen safe Stain is a variant of SYBR Green and is a nucleic acid stain which can be used as a safer alternative to the traditional ethidium bromide stain for detecting nucleic acid in agarose gels. It is as sensitive as ethidium bromide and can be used exactly the same way in agarose gel electrophoresis.

PR881603	1ml

Agarose

CinnaGen molecular biology grade agaros routinly used for seperation of wide range of DNA fragments and RNA by electrophoresis.

MR7720	10g
MR7730	50g
MR7740C	100g

Instant CinnaGen Agarose Tablet LE

CinnaGen Agarose Tablet LE is a highly purified agarose, premixed with safe, non-toxic, non-mutagenic in gel staining for simple and safe solution. It's suitable for a variety of molecular biology applications.

PR911685C	100g
PR911702C	50g

TBE buffer, 5X

This is concentrated mixture of Tris-Borate and EDTA. Diluted solution used for electrophoresis and gel preparation.

MR7725C	50ml

TBE 10X

This is concentrated mixture of Tris-Borate and EDTA. Diluted solution used for electrophoresis and gel preparation.

PR901634	50ml
PR901637	2x500ml

CinnaGen Protein Biochemical

MR8061-100g	Acrylamide
MR8264-500g	Acrylamide
MR8062-10g	Bis Acrylamide
MR7731-500g	Boric Acid
MR7727- 50g	Sodium Dodecyl Solfate, SDS
MR8247- 250g	Sodium Dodecyl Solfate, SDS
MR7734-50g	Tris
MR7738-500g	Tris
Mr7732-50g	EDTA, Disodium Salt, Titriplex III

PCR buffers and reagents:
10X PCR Buffer
AMS 10X PCR Buffer with (NH4)2SO4
MgCl2
PCR Set System
Water (DNase Free)
DEPC
DEPC-treated Water, molecular biology grade:
DNA Electrophoresis
6X Loading Buffer
6x Loading Dye with SDS
Ethidium Bromide
DNA safe stain
Agarose
Instant CinnaGen Agarose Tablet LE
TBE buffer, 5X
TBE buffer, 10X
PCR Mineral oil (Molecular grade)
Lysozyme
Ributinase
Glycogen, molecular grade (20mg/ ml)
Sodium Acetate (3M, pH 5.2)
RBC lysis buffer
Sodium Dodecyl Sulfate (SDS)
N- Lauroylsarcosine sodium (Sarcosyl)
Titriplex III (EDTA) (Ethylenedinitrilotetraacetic acid disodium salt)
Sodium Acetate (3M, pH 5.2)
Tris Base (Hydroxymethyl aminomethane)
Acrylamide, for synthesis
Bis Acrylamide
Boric Acid
RNAlater
Blue lighting Stain
CinnaGen Biochemical

PCR buffers and reagents:

10X PCR Buffer

10X PCR buffer with KCl is used in PCR with Taq DNA polymerase. It does not contain $MgCl_2$.
200mM Tris-HCl (pH 8.8 at 25°C), 500mM KCl.

CG7507C	1ml

AMS 10X PCR Buffer with $(NH4)_2SO4$

10X PCR Buffer with $(NH4)_2SO4$ is used in PCR with Taq DNA polymerase. It does not contain $MgCl_2$.
High primer specificity is observed within broad range of MgCl2 with this buffer.
750mM Tris-HCl (pH 8.8 at 25°C), 200mM $(NH_4)_2SO_4$, 0.1% Tween 20.

CG8108C	1ml

$MgCl_2$

50mM $MgCl_2$

TP7506C	0.5ml

PCR Set System

This set provides qualified reagents for amplification of different DNA templates and consisted: SmarTaq (5u/ul), 10X PCR buffer (KCl base), 10X AMS buffer (Ammonium Sulfate base), 50 mM $MgCl_2$ and 10 mM dNTPs. These reagents are sufficient for 100 reactions of 100 ul each.

PR7815C	100Reactions

Water (DNase Free)

This set provides qualified reagents for amplification of different DNA templates and consisted: SmarTaq (5u/ul), 10X PCR buffer (KCl base), 10X AMS buffer (Ammonium Sulfate base), 50 mM MgCl2 and 10 mM dNTPs. These reage

DW8505C	5ml
DW8520C	20ml

DEPC

Diethyl pyrocarbonate (DEPC) is an efficient, nonspecific inhibitor of RNases. It is typically used to treat water and solutions before working with easily degraded RNA.

MR7942	5 ml

DEPC-treated Water, molecular biology grade:

The DEPC-treated Water is deionized, Diethylpyrocarbonate (DEPC) treated water. It is recommended to be used in any application where RNA is involved.

MR8243C	5ml
MR8244C	2x50ml

DNA Electrophoresis 6X Loading Buffer

Loading dye solution used to prepare DNA samples for loading on agarose gel. It has two different dyes for visual tracking of DNA during electrophoresis.

MR7723C	1ml

6x Loading Dye with SDS

6x Loading Dye with SDS is specially designed for loading DNA samples that contains high amount of proteins that may form complexes with DNA during gel electrophoresis. This product is suitable for use in prevention of band- shift (due to protein binding) or annealing of DNA during both agarose and polyacrylamide gel electrophoresis. The 6X loading dye with SDS contains 2 dyes; bromophenol blue and xylene cyanol FF to track DNA migration during electrophoresis. Recommended for electrophoretic DNA samples after digestion with restriction endonuclease, ligation or dephosphorylation reactions.

NM0416	5x 1ml

Ethidium Bromide

Ethidium bromide (EtBr) is commonly used marker for identifying and visualizing nucleic acid bands in electrophoresis which fluoresces readily visible with a reddish-brown color when exposed to ultraviolet (UV) light.
EtBr is a potent mutagen (may cause genetic damage), and moderately toxic after an acute exposure.

MR7721C	1ml
MR7729	250mg

DNA safe stain

To reduce potential hazardous exposures in the lab, staining of DNA by an alternative and less toxic and non hazardous chemical would be more acceptable.CinnaGen safe Stain is a variant of SYBR Green and is a nucleic acid stain which can be used as a safer alternative to the traditional ethidium bromide stain for detecting nucleic acid in agarose gels. It is as sensitive as ethidium bromide and can be used exactly the same way in agarose gel electrophoresis.

PR881603	1ml

Agarose

CinnaGen molecular biology grade agaros routinly used for seperation of wide range of DNA fragments and RNA by electrophoresis.

MR7720	10g
MR7730	50g
MR7740	100g

Instant CinnaGen Agarose Tablet LE

CinnaGen Agarose Tablet LE is a highly purified agarose, premixed with safe, non-toxic, non-mutagenic in gel staining for simple and safe solution. It's suitable for a variety of molecular biology applications.

PR911685C	100g
PR911702C	50g

TBE buffer, 5X

This is concentrated mixture of Tris-Borate and EDTA. Diluted solution used for electrophoresis and gel preparation.

MR7725C	50ml

TBE 10X

This is concentrated mixture of Tris-Borate and EDTA. Diluted solution used for electrophoresis and gel preparation.

PR901634	50ml
PR901637	2x500ml

PCR Mineral oil (Molecular grade)

It is transparent, colorless and molecular biology grade oil and mainly used to cover PCR reaction mixture to prevent evaporation during Thermal cycling by not heated lid equipped PCR machine. In general labs it may use for anaerobic media preparation.

MI7728	5 ml
MI8029	20ml
MI8130	50ml
MI8231	500ml

Lysozyme

Lysozyme or muramidase catalyses the hydrolysis of N-acetylmuramide linkages in bacterial cell walls. It can be used for the purification of both DNA and protein. Source: Chicken Egg White Lysozyme recommended for Gram-positive bacterial lysis.

MR7735C	500mg

Ributinase

Ributinase is innovative enzymes blend for simultaneously protein and RNA degradation during genomic DNA isolation from different sources like: cell culture, tissues. It would be reactive in wide range of reaction condition.

PR891621	1 ml

Glycogen, molecular grade (20mg/ ml)

Glycogen is purified polysaccharide derived from oysters.
. Formation a visible pellet during nucleic acid purification.
. Higher efficiency than tRNA

PR892707	2x250 ul

Sodium Acetate (3M, pH 5.2)

It is nuclease free and can be use for DNA and RNA precipitation.

MR8062C	5 ml

RBC lysis buffer

Ready to use RBC Lysis solution is prepared for red blood cells lyses prior to RNA or DNA extraction from large amount of whole blood.
RBCs are selectively lysed during incubation in hypotonic condition consists detergent while intact WBCs with optimal cell viability recovered during centrifugation.

PR921729	20ml
PR921730	100ml
PR921731	1000ml

Sodium Dodecyl Sulfate (SDS)

MR8247	250g
MR7727	50g

N- Lauroylsarcosine sodium (Sarcosyl)

MR7737	50g

Titriplex III (EDTA) *(Ethylenedinitrilotetraacetic acid disodium salt)*

MR7732	50g
CR7911	10ml

Sodium Acetate (3M, pH 5.2)

It is nuclease free and can be use for DNA and RNA precipitation:

MR8063C	5ml

Tris Base (Hydroxymethyl aminomethane)

Biological buffer substance

MR7734	50g
MR7738	500g

Acrylamide, for synthesis

MR8061	100g
MR8264	500g

Bis Acrylamide

MR8062	10g

Boric Acid

MR7731	500g

RNAlater

RNA*later*® is an aqueous, non-toxic tissue and cell storage reagent that stabilizes and protects cellular RNA in intact, unfrozen tissue and cell samples. RNAlater eliminates the need to immediately process samples or to freeze samples in liquid nitrogen for later processing. RNAlater can be used with various downstream applications including mRNA and total RNA isolation, histology and immunocytochemistry

RNAlater is a registered trademark of Ambion, Inc.

R0901-20	20ml

Blue lighting Stain

Blue lighting Stain is ready to use G- 250 coomassie stain for visualization of protein bands in SDS- PAGE and 2-D gels. Blue lightning is a unique formulation without the noxious odor of acetic acid, does not require acid/ alcohol fixation, destaining solutions and is completely non – hazardous. Using Blue Lighting is simple, fast and sensitive (detect as low as 7ng protein) with complete staining as short as 20 minutes.

- **Blue lighting Stain**
- Ready to use
- Non- Hazardous
- Sensitive
- Fast
- No gel fixing
- No alcohol destaining

PR0601	1L

CinnaGen Biochemical

MR8061-100g	Acrylamide
MR8264-500g	Acrylamide
MR8062-10g	Bis Acrylamide
MR7731-500g	Boric Acid
MR7727- 50g	Sodium Dodecyl Solfate, SDS
MR8247- 250g	Sodium Dodecyl Solfate, SDS
MR7734-50g	Tris
MR7738-500g	Tris
Mr7732-50g	EDTA, Disodium Salt, Titriplex III

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CinnaGen Qualitative PCR Detection Kits:

Hepatitis B Virus PCR Detection Kit, HBV Kit.

Mycobacterium tuberculosis PCR Detection Kit, MTB Kit.

Cytomegalovirus PCR Detection Kit, CMV Kits.

Herpes simplex Virus I&II Detection Kit, HSV I&II Kit.

Helicobacter pylori PCR Detection Kit.

Leishmania sp. PCR Determination and Detection Kit.

Sex Determination PCR Kit.

STRPTM Hepatitis C Virus Detection Kit, HCV Kit. (Single tube RT-PCR)

STRPTM HIV Detection Kit (Single tube RT-PCR)

PCR Check System

Epstein - Barr virus PCR Detection kit, EBV Kit.

Toxoplasma gondii PCR Detection kit

Mycoplasma sp. PCR Detction kit

CinnaGen Qualitative PCR Detection Kits:

Hepatitis B Virus PCR Detection Kit, HBV Kit.

This kit is destined for qualitative detection of HBV DNA in serum and plasma of Human blood by the method of Polymerase Chain Reaction. This Kit contains all needed PCR reagents: ready to use 1X PCR mix and it consisted: 10X buffer, $MgCl_2$, dNTPs, loading buffer, specific forward and reverse primers and PCR reaction enhancers at final concentration, Taq DNA polymerase, and DNA template as PCR positive control High conserved region of Surface Antigen considered as target and 353 bp fragment in compare with positive control indicated as a positive test.
For DNA extraction **CinnaPure-DNA (whole blood, serum and plasma) and CinnPure viral are recommended.**

PR7813C	50Preps

Mycobacterium tuberculosis PCR Detection Kit, MTB Kit.

This kit is designed for qualitative detection of Mycobacterium tuberculosis (MTB) DNA in the Human sample by the method of Polymerase Chain Reaction. This Kit contains all needed PCR reagents: ready to use 1X PCR mix and it consisted: 10X buffer, MgCl2, dNTP, loading buffer, specific forward and reverse primers at final concentration, Taq DNA polymerase, TB lysis solution and DNA template as PCR positive control. For DNA extraction **CinnaPure-DNA (Gram Positive Bacteria) is recommended**. IS6110 considered as target and 163 bp fragment in compare with positive control indicated as a positive test.

PR7935C	50 Preps

Cytomegalovirus PCR Detection Kit, CMV Kits.

CinnaGen CMV PCR Detection Kit is able to detect the presence of human CMV DNA in clinical specimens by the method of Polymerase Chain Reactions. This Kit contains all needed PCR reagents: ready to use 1X PCR mix and it consisted: 10X buffer, MgCl2, dNTP, loading buffer, specific forward and reverse primers at final concentration, Taq DNA polymerase, and DNA template as PCR positive control. For DNA extraction from Whole blood, serum and plasma **CinnaPure-DNA (whole blood, serum and plasma) and CinnPure viral are recommended**. Early gene considered as target gene and presence of 222 bp fragment in compare with positive control indicated as a positive test.

PR7836C	50 Preps

Herpes Simplex Virus I&II Detection Kit, HSV I&II Kit.

This kit is destined for qualitative detection of Herpes simplex Virus I & II (HSV I & II) DNA in the human sample by the method of Polymerase Chain Reaction. CinnaGen HSV PCR Detection Kit may be used in clinical medicine to detect HSV I & II DNA.
This Kit contains all needed PCR reagents: ready to use 1X PCR mix and it consists: 10X buffer, MgCl2, dNTP, loading buffer, specific forward and reverse primers at final concentration. Taq DNA polymerase, and DNA template as PCR positive control. DNA Polymerase Gene considered as target and 256 bp fragment in compare with positive control indicated as a positive test.
CinnaPure-DNA (Cell culture, Tissues, Gram negative Bacteria and CSF) and CinnPure viral are recommended .

PR8240C	20 Preps

Helicobacter pylori PCR Detection Kit.

This kit is destined for qualitative detection of Helicobacter pylori DNA in culture or human, gastric biopsy by the method of Polymerase Chain Reaction .This Kit contains all needed PCR reagents: ready to use 1X PCR mix and it consisted: 10X buffer, MgCl2, dNTP, loading buffer, specific forward and reverse primers at final concentration, Taq DNA polymerase, and DNA template as PCR positive control
For DNA extraction **CinnaPure-DNA (Cell culture, Tissues, Gram negative Bacteria and CSF) is recommended**
Urease C considered as target gene and presence of 492 fragment in compare with positive control indicated as a positive test.

PR7843C	20 tests

Leishmania sp. PCR Determination and Detection Kit.

This kit is designed for qualitative detection of Leishmania sp. kinetoplast DNA (kDNA) in the Human sample by the method of Polymerase Chain Reactions. Using this kit species of Leishmania Parasite could be determined by different PCR products size. CinnaGen Leishmania sp. PCR Determination and Detection Kit may be used in clinical medicine to detect Leishmania sp.kDNA.
This Kit contains all needed PCR reagents: ready to use 1X PCR mix and it consisted: 10X buffer, MgCl2, dNTP, loading buffer, specific forward and reverse primers at final concentration, Taq DNA polymerase, and DNA template as PCR positive control
CinnaPure-DNA (Cell culture, Tissues, Gram negative Bacteria and CSF) is recommended.
In compare with PCR Positive control and 100 bp DNA ladder, the presence of 620 bp fragment indicate of L. major and 800 bp indicates of L. tropica. L.infantum also produces 800 bp fragment that should be determined according kind of sample and clinical history.

PR7937C	50Tests

Sex Determination PCR Kit.

Ready to use Sex determination PCR Kit is destined for sex detection before delivery in the first trimester or after delivery, forensic, or archeology by the method of polymerase chain reactions.
Cinnagen sex determination PCR kit may be used in medicine to determine sex of the fetus. This kit simultaneously amplifies a X-specific and Y-specific DNA fragments, which are specific to the X-Y homologous Amelogenin gene. This kit consists of internal control (X-Chromosome.)
This kit contains all needed PCR reagents: ready to use 1X PCR mix and it consisted: 10X buffer, MgCl2, dNTPs, loading buffer, specific forward and reverse primers at final concentration, Taq DNA polymerase, and DNA template as PCR positive control.
The presence of two band of 977 and 788bp from X and Y chromosome were indicative of male sex. On the other hand, the presence of only the 977bp band was considered indicative of female sex. For DNA Extraction from whole Blood **CinnaPure - DNA (whole blood, serum and plasma)** and other Samples (Blood, Tissues) **CinnaPure-DNA (Cell culture, Tissues, Gram negative Bacteria and CSF) is recommended.**

PR8048C	20Tests

STRP™ Hepatitis C Virus Detection Kit, HCV Kit. (Single tube RT-PCR)

This kit is destined for qualitative detection of HCV RNA in the serum and plasma of Human blood by the method of Single tube RT reaction, followed by nested PCR. This Kit contains all needed PCR reagents: ready to use 1x PCR mix 1 and 2 and it consisted: 10x buffer, MgCl2, dNTPs, loading buffer, specific outer and inner primers and PCR reaction enhancers at final concentration, Taq DNA polymerase, Reverse transcriptase with RNasin, DNA template as PCR positive control, DEPC- treated water for RNA dissolving . CinnaGen HCV-PCR detection Kit allows you to use RNA in PCR tube directly and ignore separated cDNA synthesis protocol. High conserved region of HCV genome, or NCR considered as target and 234 bp fragments in compare with positive control indicated as a positive test.
For RNA extraction from human serum or plasma **CinnaPure-RNA (Serum and plasma) and CinnPure viral are recommended .**

PR7832C	50Tests

STRP™ HIV Detection Kit (Single tube RT-PCR)

This kit is destined for qualitative detection of HIV RNA-1 in the serum and plasma of Human blood by the method of Single tube RT reaction, followed by nested PCR. This Kit contains all needed PCR reagents: ready to use 1x PCR mix 1 and 2 and it consisted: 10x buffer, MgCl2, dNTPs, loading buffer, specific outer and inner primers and PCR reaction enhancers at final concentration, Taq DNA polymerase, Reverse transcriptase with RNasin, DNA template as PCR positive control, DEPC- treated water for RNA dissolving . CinnaGen HIV-1-PCR detection Kit allows you to use RNA in PCR tube directly and ignore separated cDNA synthesis protocol. Hpol gene considered as target and 174 bp fragment in compare with positive control indicated as a positive test.
For RNA extraction from human serum or plasma **CinnaPure-RNA (Serum and plasma) and CinnPure viral are recommended .**

PR8249C	20Tests

PCR Check System

Provided separated reagents: 10X PCR buffer, 50 mM mgCl2, 10 mM dNTP, Taq DNA polymerase 5u/ul), DNA template and related Primers. This Kit has been successfully tested in several PCR reactions with varying annealing temperature from 40-65oC and annealing time duration from 10-60 seconds. Reaction conditions (concentration of each components, temperature or incubation time may be vary and evaluated by user. When you have any problem with your PCR system or you want to check your new reagents, you can use this Kit and evaluate your reaction. This Kit use as an educational Kit as well.

PR7811C	20 reactions

Epstein - Barr virus PCR Detection kit, EBV Kit.

CinnaGen Epstein-Barr Virus PCR Detection kit is destined for qualitative detection of EBV DNA in infected samples by the method of Polymerase Chain Reaction. CinnaGen EBV PCR Detection kit may be used in clinical medicine to detect EBV DNA. The reagent of ready to use mix is an optimized 1X PCR mixture of Taq DNA Polymerase (recombinant), PCR buffer, MgCl2, dNTPs and primers. Primer set is specific to the highly specific repetitive region of BLLF1 gene. This primer set, allows for detection of 30 copies of Epstein – Barr virus.
The mix contains all components for PCR expect DNA. Additionally, sterile water, PCR grade mineral oil and Positive control has supplied. Positive control tube contains a plasmid with cloned PCR fragment which indicates a successful performed reaction. Blue and ready to load mix does not need to any loading dye for electrophoresis. 256 bp PCR products indicate a positive reaction.
This Kit is sufficient for 50 amplification reactions of 25 µl volume each.

PR911657C	50 reactions

Toxoplasma Gondii PCR Detection kit

Toxoplasmosis is a parasitic disease caused by the protozoan Toxoplasma gondii Toxoplasma gondii is one most succeful parasites worldwide. It is estimated that up to one third of the world's human population is infected.pregnant women and immune-compromised individuals are the main risk group.
CinnGen Toxoplasma gondii PCR Detection kit is designed for qualitative detection of T.gondii DNA based on **B1** gene in Human samples by the method of Polymerase Chain Reaction. Sinaclon T.gondii PCR Detection kit may be used in clinical medicine to detect T.gondii DNA.

PR911656C | 50 reactions

Mycoplasma sp. PCR Detction kit

This kit is destined for qualitative detection of Mycoplasma DNA by the method of polymerase Chain Reaction. The CinnaGen Mycoplasma sp. PCR detection kit offers convenient for PCR amplifications and detection of Mycoplasma contamination in cell culture and other cell culture derived biologic materials.The reagent of readt to use mix is an optimized 1X PCR mixture of Taq DNA polymerase(recombinant),PCR buffer,$MgCl_2$, dNTPs and primers.Primer set is specific to the highly conserved 16srRNA coding region in the Mycoplasma genome. This primer set, allows for detection of about 50 species of Mycoplasma. Detection requires at least 1-5 fg Mycoplasma DNA or 2-5 Mycoplasma per sample. The mix contains all components for PCR expect DNA. Additionally, sterile water, PCR grade mineral oil and positive control has supplied. Positive control tube contains a plasmide with cloned PCR fragment which indicates a successful performed reaction.blue and ready to load mix does not need to any loading dye for electrophoresis. 280bp PCR products indicate a positive reaction.

PR901649 | 20reactions

SinaClon
شرکت سیناکلون BioScience

Quantitative Real Time PCR kits

Medical genetics

Bacteriology

Virology

Parasitology

Mycology

SinaClon in collaboration with Immunospark, Italy is willing, through a network of professionals in the different fields of the IVD market, to propose a brand new way to approach and obtain what we call the "Diagnostic Information".
Immunospark sees in the Diagnostic Information the key to make available a better and more sustainable lifestyle for the human being. Prevention of disease and personalized therapy are now being a reality for patients and physicians, provided that an innovative, integrated approach to diagnostics is made available.

Our Mission

After 20 years of experience in the product design, development, manufacturing and marketing of systems in the Immunology and Molecular Diagnostics fields, the mission of Immunospark is to make integrated diagnostic formats available to our customers and partners.
While this, we keep to develop new products and diagnostic solutions based on the increasing demand for standardized, qualified and automated systems at a sustainable price.

Genespark kits

Due to its easy of use, standardization and flexibility as well, Real-Time PCR is a cornerstone in today's clinical laboratory, offering newer and newer applications.
ImmunoSpark produces molecular diagnostic kits and offers a complete list of Real Time PCR assays meeting the broadening demand of the clinical laboratory. Our Company also offers research kits and custom formats or assays on demand, for more specialized or research laboratories.
Our kits are based on a hands-on format, are provided either in qualitative or quantitative option, with additional controls and calibrators set apart on request. Internal controls (IC) allow for monitoring the efficiency of the procedure starting from the extraction to the amplification. A careful calibration of IC provides robust validation of your results, adding confidence to your routine and standardization to your research.

Code	Assay	Num. Tests	Description	Tech.
GM002	APO E	50	Kit for the identification of the polymorphisms associated with the Apolipoprotein E.	RT
GM003	DQ2/DQ8	50	Kit for the identification of the HLA haptotypes conferring susceptibility to celiac disease	RT
GM004	FII G20210A	50	Kit for the identification of genetic variation in the untreanslated region 3' of the prothrombin gene.	RT
GM005	FV G1691A (F. V Leiden)	50	Kit for the identification of factor V mutation G1691A (or R506Q) associated to increased risk for arterial thrombosis.	RT
GM006	FV Y1702C	50	Kit for the identification of the coagulation Factor V Y1702C mutation, associated with hereditary thrombo-philia.	RT
GM011	FV H1299R	50	Kit for the identification of the coagulation Factor V H1299R mutation, associated with hereditary thrombo-philia.	RT
GM007	MTHFR C677T	50	Kit for the identification of methylene-tetrahydrofolate reductase gene C677T mutation.	RT
GM008	MTHFR A1298C	50	Kit for the identification of methylene-tetrahydrofolate reductase gene A1298C mutation.	RT
GM009	MTHFR MULTIPLEX	50	Kit for the identification of methylene-tetrahydrofolate reductase gene C677T and A1298C mutation.	RT
GM010	Coagu Panel	50	Kit for the detection of coagulation factors FII G20 210A, FV G1691A and Y1702C and MTHFR C677T and A1298C mutations.	RT
GM013	HFE C282Y	50	Kit for identification of HFE gene C282Y mutation, associated with haemochromatosis.	RT
GM014	HFE H63D	50	Kit for identification of HFE gene H63D mutation, associated with haemochromatosis.	RT
GM015	HFE S65C	50	Kit for identification of HFE gene S65C mutation, associated with haemochromatosis.	RT
GM016	HFE Panel	50	Kit for simultaneous identification of HFE gene C282Y, S65C and H63D mutation, associated with haemochroma-tosis.	RT
GM018	HLA B27	50	Kit for the Amplification of human leukocyte antigen type B27 gene associated with ankylosing spondylitis.	C
GM019	ACD	50	Kit for the screening of single nucleotide polymorphism of codon124(exon4) which is coding bigh3 gene in Avellino Corneal disease.	RT/C
GM020	G6PD Asian	50	Kit for the screening of the G6PD (Glucose-6-phosphate dehydrogenase-deficiency (Asian type).	C
GM021	G6PD African	50	Kit for the screening of the G6PD (Glucose-6-phosphate dehydrogenase-deficiency (African type).	C

RT = Real time PCR ; C = Conventional PCR

BACTERIOLOGY

Code	Assay	Num. Tests	Description	Tech.
HB001	Borrelia burgdorferi	50	Kit for the detection of Borrelia burgdorferi genome by amplification of the NapA gene.	RT
HB002	Bartonella henselae	50	Kit for the identification of the Bartonella henselae genome by amplification of the ribC gene.	RT
HB003	Brucella spp.	50	Kit for the identification of Brucella spp. Genome by amplification of bcsp31 gene.	RT
HB004	Rickettsia spp.	50	Kit for the identification of Rickettsia spp. Genome by amplification of gltA gene.	RT
HB005	Pseudomonas aeruginosa	50	Kit for the identification of Pseudomonas aerouginosa genome by amplification of oprL gene.	RT
HB006	Campylobacter spp-	50	Kit for the identification of Campylobacter genus genome by amplification of inlA gene.	RT
HB010	Mycoplasma spp.	50	Kit for the identification of Mycoplasma spp genome by amplification of the P1 gene.	RT
HB011	Mycoplasma genitalium	50	Kit for the identification of Mycoplasma genitalium genome by amplification of the B subunit of DNA gyrase gene.	RT
HB012	Mycoplasma hominis	50	Kit for the identification of Mycoplasma hominis genome by amplification of the 16S rRNA gene.	RT
HB013	Ureaplasm urealyticum	50	Kit for the identification of Mycoplasma urealyticum genome by amplification of the Urease gene.	RT
HB014	Chlamydia trachomatis	50	Kit for the identification of Chlamydia trachomatis genome by amplification of the ORF6 gene of the cryptic plasmid.	RT
HB016	Mycoplasma pneumoniae	50	Kit for the identification of Mycoplasma pneumoniae genome by amplification of the P1 gene.	RT
HB019	Helycobacter pylori	50	Kit for the identification of Helycobacter pylori genome by amplification of the UreC gene.	RT
HB020	H. pylori Chlaritromycin resistant	50	Kit for the identification of H. pylori genome and chlarytro-micyn resistance by amplification of the gene coding for 23S rRNA.	RT
HB021	Listeria monocytogenes	50	Kit for the identification of Listeria monocytogenes genome by amplification of the inlA gene.	RT
HB022	Salmonella spp.	50	Kit for the identification of Salmonella spp genome by amplification of the Nuclease gene.	RT
HB023	Yersinia enterocolitica	50	Kit for the identification of Yersinia enterocolitica genome by amplification of the Yst gene.	RT
HB024	Shigella spp.	50	Kit for the identification of Shigella spp genome by amplification of the Yst gene.	RT

BACTERIOLOGY

Code	Assay	Num. Tests	Description	Tech.
HB025	MRSA	50	Kit for the identification of Streètococcus aureus genome and the detection of methicillin resistance by amplification of nuc and mecA genes.	RT
HB026	Streptococcus pyogenes	50	Kit for the identification of Streptococcus pyogenes genome by amplification of the 16S rRNA gene.	RT
HB027	Legionella pneumophila	50	Kit for the identification of Legionella pneumophila genome by amplification of the MP gene.	RT
HB028	Chlamydia pneumoniae	50	Kit for the identification of Chlamidia pneumoniae genome by amplification of the OMP gene.	RT
HB029	Mycobacterium Avium	50	Kit for the identification of Mycobacterium avium genome by amplification of the 16S rRNA gene.	RT
HB030	M. avium sub paratubercolosis	50	Kit for the identification of Mycobacterium avium subsp. Paratubercolosis genome by amplification of the IS900 gene.	RT
HB038	Clostridium difficile	50	Real Time PCR Kit for the detection of Clostridium difficile tcdA and tcdB toxin genes	RT
HB032	MTC/NTM	50	Kit for the simultaneous detection of MTB and of 5 species not-not-tubercolosis mycobacteria (co-infections) using multiplex PCR technology.	RT
HB033	MTB/M. bovis	50	Kit for the simultaneous detection of the MTB and the mycobacterium bovis using multiplex PCR technology.	RT
HB034	M. avium / M. intracellular	50	Kit for the simultaneous detection of the MTB and the mycobacterium Intracellular of NON Tubercolosis Mycobacterium using multiplex PCR technology.	RT
HB035	CRE (VIM,IMP,NDM,KPC)	50	Kit for the detection of 4 types of Carbapenem-Resistant enterobacteriaceae genes (VIM, IMP, NDM and KPC) coding in metallo- -lactamase-1 using multiplex PCR technology.	RT

VIROLOGY

Code	Assay	Num. Tests	Description	Tech.
HV001	EBV	50	Kit for the identification and quantification of Erpstein Barr Virus genome by amplification of the EBNA leader protein gene.	RT
HV002	CMV	50	Kit for the identification and quantification of Human Cytomegalovirus genome by amplification of the EBNA leader protein gene.	RT
HV003	HSV1	50	Kit for the identification and quantification of Herpes simplex Virus 1 genome by amplification of a HSV1 – specific sequence within US4 gene.	RT
HV004	HSV2	50	Kit for the identification and quantification of Herpes simplex Virus 2 genome by amplification of a HSV2 – specific sequence within US4 gene.	RT
HV005	HHV6	50	Kit for the identification and quantification of Herpes Herpes Virus 6 genome by amplification of specific DNA sequence within 13R gene.	RT
HV006	HHV8	50	Kit for the identification and quantification of Herpes Herpes Virus 8 genome by amplification of specific DNA sequence within ORF 26 gene.	RT
HV007	VZV	50	Kit for the identification and quantification of Varicella-Zoster Virus genome by amplification of specific DNA sequence within ORF 38 gene.	RT
HV008	Herpes panel	50	Kit for the identification of HSV1, HSV2, HHV6, HH8, EBV and VZV genomes by parallel amplification of specific DNA sequences in the same assay.	RT
HV009	Adenovirus	50	Kit for the identification and quantification of Adenovirus genome by amplification of the Hexon gene.	RT
HV010	JCV	50	Kit for the identification and quantification of JC Virus genome by amplification of the large T antige gene.	RT
HV011	BKV	50	Kit for the identification and quantification of BK Virus genome by amplification of the small T antigen gene.	RT
HV012	JC/BK virus	50	Kit for the identification and quantification of JC Virus and BK Virus genomes by amplification of sequences within the large T antigen gene and the small T antigen gene.	RT
HV013	Parvovirus B19	50	Kit for the identification and quantification of Parvovirus B19 genome by amplification of VP1 gene.	RT
HV016	Enterovirus	50	Kit for the identification and quantification of Enterovirus genome by Retrotranscription and cDNA simplification of the 5' UTR.	RT
HV018	HPV 16/18	50	Kit for the detection of the genotypes 16 and 18 (E6 region) of the Human Papilloma Virus (High Risk).	C
HV019	HPV screening	50	Kit for the detection of the Human Papilloma Virus.	C
HV021	Influenza A/B	50	Kit for the detection of the influenza virus A and B using multiplex RT-PCR technology.	RT
HV022	Influenza subtype A (6 subtypes)	50	Kit for the detection of 6 genotypes of the influenza virus A subtype using multiplex RT-PCR technology.	RT
HV015	RV13	50	Kit for the detection of 13 respiratpry viruses using multiplex RT-PCR technology.	RT

PARASITOLOGY

Code	Assay	Num. Tests	Description	Tech.
HP001	Leishmania	50	Kit for identification and quantification of the Leishmania infantum genome by DNA amplification of the minicircle DNA.	RT
HP002	Toxoplasma gondii (RUO)	50	Kit for identification and quantification of the Toxoplasma gondii genome by DNA amplification of the region B1.	RT
HP005	Malaria PF/PV/PO/PM	50	Kit for the detection of the Plasmodium falciparum, the Plasmodium vivax, the Plasmodium ovale and the Plasmodium malaria using multiplex PSR technology.	C
HP006	Tripanosoma Cruzi	50	Amplification and detection of of genome of Tripanosoma cruzi.	C

MYCOLOGY

Code	Assay	Num. Tests	Description	Tech.
HM001	Aspergillus fumigatus	50	Kit for the identification and quantification of Aspergillus fumigatus genome by amplification of the ITS1-ITS2 region.	RT
HM002	Aspergillus spp.	50	Kit for the identification and quantification of Aspergillus spp genome by amplification of the ITS1-ITS2 region.	RT

RT = Real time PCR ; C = Conventional PCR

SinaClon
شرکت سیناکلون BioScience

Veterinary Molecular Detection kits

PETS (REAL-TIME PCR KITS)

PETS (AGAROSE GEL KITS)

HORSES, AVIAN & LIVESTOCK (REAL-TIME PCR KITS)

HORSES, AVIAN & LIVESTOCK (AGAROSE GEL KITS)

SinaClon in collaboration with Immunospark is willing, through a network of professionals in the different fields of the IVD market, to propose a brand new way to approach and obtain what we call the "Diagnostic Information".
Immunospark sees in the Diagnostic Information the key to make available a better and more sustainable lifestyle for the human being. Prevention of disease and personalized therapy are now being a reality for patients and physicians, provided that an innovative, integrated approach to diagnostics is made available.

Our Mission

After 20 years of experience in the product design, development, manufacturing and marketing of systems in the Immunology and Molecular Diagnostics fields, the mission of Immunospark is to make integrated diagnostic formats available to our customers and partners.
While this, we keep to develop new products and diagnostic solutions based on the increasing demand for standardized, qualified and automated systems at a sustainable price.

Genespark kits

Molecular Diagnostics is gaining a fundamental role in every field, form biomedicine to environment control. A growing demand is on for food quality and safety. Molecular diagnostics is increasingly used in a number of field: for a rapid and specific identification of pathogens in food, for food quality and traceability, for veterinary diagnostics, and for genetics-based breeding and zootecny
Aware of the growing demand in these fields, Immunospark offers a broad range of molecular diagnostics kits for infectious and genetic diseases of pets and livestock, for food pathogens detection, and for environmental monitoring.
Our kits are available either in Real Time PCR format or in more conventional Gel or strip based assays, offering convenient options for different settings and analytical need.
In *veterinary medicine* molecular diagnostics is also providing cues to infectious and inherited diseases. Also, genetically – determined traits, either qualitative or quantitative, can be defined and identified, which are important in zootechnics for selecting desiderable traits or for molecular traceability of foodstuff.

PETS (REAL-TIME PCR KITS)

Code	PRODUCT	DET. N.	DESCRIPTION	§
MV001	CDV	50	Identification of Canine Distemper Virus (CDV) genome	
MV002	FHV1	50	Identification of Feline Herpes Virus type 1 (FHV1) genome	
MV003	Bartonella henselae	50	Identification of Bartonella henselae genome	
MV004	Borrelia burgdorferi	50	Identification of Borrelia burgdorferi genome	
MV005	Brucella spp	50	Identification of Brucella spp. Genome	
MV006	Chlamydophila felis	50	Identification of Chlamydophila felis genome	
MV007	Ehrlichia spp	50	Identification of Ehrlichia spp. genome	
MV008	Ehrlichia. canis	50	Identification of Ehrlichia canis genome	
MV009	Anaplasma phagocytophilum & platys	50	Identification and the discrimination of Anaplasma phagocytophilum and Anaplasma platys	
MV010	Ehrlichia canis & Ehrlichia chaffeensis	50	Identification and the discrimination of Ehrlichia canis and Ehrlichia chaffeensis.	
MV011	Rickettsia spp	50	Identification of Rickettsia spp. genome.	
MV012	Babesia spp	50	Identification of Babesia spp. genome.	
MV013	Babesia canis	50	Identification of Babesia canis genome.	
MV014	Leishmania spp	50	Identification and the quantification of Leishmania spp.	
MV015	Toxoplasma gondii	50	Identification of Toxoplasma gondii genome.	

PETS (AGAROSE GEL KITS)

Code	PRODUCT	DET. N.	DESCRIPTION	§
MV016	Canine Herpes Virus	50	Identification of Canine Herpes Virus.	
MV017	Canine Parvovirus	50	Identification of Canine Parvovirus genome.	
MV018	FeLV	50	Identification of Feline Leukemia Virus (FeLV) integrated genome.	
MV019	FIV	50	Identification of Feline Immunodeficiency Virus (FIV) integrated genome.	
MV020	Chlamydophila felis Mycoplasma haemofelis	50	Identification of Chlamydophila felis genome.	
MV021	/haemocanis	50	Identification of Mycoplasma haemofelis/Mycoplasma haemocanis genome.	
MV022	B.abesia canis	50	Identification of Babesia canis genome.	
MV023	Neospora caninum	50	Identification of Neospora caninum genome.	

HORSES, AVIAN & LIVESTOCK (REAL-TIME PCR KITS)

Code	PRODUCT	DET. N.	DESCRIPTION	§
MV024	CAV	50	Identification of Chicken Anemia Virus (CAV) genome.	
MV025	Qt CAV	50	Identification and quantification of Chicken Anemia Virus (CAV) genome.	
MV026	IBDV	50	Identification of Infectious Bursal Disease Virus (Gumboro Disease Virus - IBDV) genome.	
MV027	Qt IBDV	50	Identification and the quantification of Infectious Bursal Disease Virus (Gumboro Disease Virus - IBDV) genome.	
MV028	IBV	50	Identification of Infectious Bronchitis Virus (IBV) genome.	
MV029	Qt IBV	50	Identification and the quantification of Infectious Bronchitis Virus (IBV) genome.	
MV030	Swine Flu (H1)	50	Identification of Avian Swine Flu Virus (H1 type) genome.	
MV031	NDV	50	Identification of Newcastle Disease Virus (NDV) genome.	
MV032	Qt NDV	50	Identification and the quantification of Newcastle Disease Virus (NDV) genome.	
MV033	Avian Reovirus	50	Identification of Avian Reovirus genome.	
MV034	PRRSV	50	Identification and the discrimination of European and American strains of Porcine Respiratory Reproductive Syndrome Virus (PRRSV).	
MV035	West Nile Virus	50	Identification of West Nile virus genome.	
MV036	Brucella spp	50	Identification of Brucella spp. genome.	
MV037	Campylobacter spp.	50	Identification of Campylobacter spp. genome.	
MV038	Chamydophila psittaci	50	Identification of Chlamydophila psittaci.	
MV039	Ehrlichia spp.	50	Identification of Ehrlichia spp.	
MV040	Anaplasma phagocytophilum/platys	50	Identification and the discrimination of Anaplasma phagocytophilum and Anaplasma platys.	
MV041	Mycobacterium spp.	50	Identification of Mycobacterium spp. genome.	
MV042	Mycobacterium avium	50	Identification of Mycobacterium avium.	
MV043	Mycobacteriuim avium paratuberculosis	50	Identification of Mycobacterium avium sub. paratuberculosis genome.	
MV044	Mycobacterium tuberculosis	50	Identification of Mycobacterium tuberculosis genome.	
MV045	Qt Mycobacterium tuberculosis	50	Identification and the quantification of Mycobacterium tuberculosis genome.	
MV046	Mycoplasma spp.	50	Identification of Mycoplasma spp. genome.	
MV047	Mycoplasma hyopneumoniae	50	Identification of Mycoplasma hyopneumoniae genome.	
MV048	Mycoplasma gallisepticum/synoviae	50	Identification and the discrimination of Mycoplasma gallisepticum and Mycoplasma synoviae genomes.	
MV049	Salmonella spp.	50	Identification of Salmonella spp. genome.	
MV050	Babesia spp	50	Identification of Babesia spp. genome.	
MV051	Babesia equi	50	Identification of Babesia equi genome.	

HORSES, AVIAN & LIVESTOCK (AGAROSE GEL KITS)

Code	PRODUCT	DET. N.	DESCRIPTION	§
MV052	IBDV (Gumboro Disease)	50	Identification of Infectious Bursal Disease Virus (Gumboro Disease Virus - IBDV) genome.	
MV053	Mycobacteriuom avium	50	Identification of Mycobacterium avium genome.	
MV054	Mycobacterium paratuberculosis	50	Identification of Mycobacterium avium sub. paratuberculosis genome.	
MV055	Mycobacterium tbc/bovis	50	Identification of Feline Immunodeficiency Virus (FIV) integrated genome.	
MV056	Mycoplasma gallisepticum	50	Identification of Mycoplasma gallisepticum genome.	
MV057	Neospora caninum	50	Identification of Neospora caninum genome.	

Assays on demand

Immunospark R&D division can interact with customers to develop special products, according to particular needs, although not included in the product list. Thanks to a sound and long-lasting experience in molecular diagnostics, we are able to quickly develop kits, protocols and reagents for the detection of pathogens, gene mutations or expression profiles on the main platforms of molecular diagnostics: PCR, Real-Time PCR, sequencing, microarrays, beads arrays.

Reverse Transcriptase, Ribonuclease Inhibitor and cDNA synthesis Kit
AMV Reverse transcriptase (Recombinant)
M- MuLV Reverse Transcriptase (Recombinant)
Ribonuclease Inhibitor RNAse- Free
2-steps RT-PCR Kit
Oligo dt
Random hexamer primer

Reverse Transcriptase, Ribonuclease Inhibitor and cDNA synthesis Kit

AMV Reverse transcriptase (Recombinant)

Avian Myeloblastosis Virus (AMV) Reverse Transcriptase is an RNA- dependent DNA polymerase (aβ holoenzyme) with molecular weight of 157KDa. It synthesized a complementary DNA strand initiating from a primer using either RNA (cDNA synthesis) or single- stranded DNA as a template.• No bacteria genomic contamination was detected

. Ultra pure
. Optimum temperature for cDNA synthesis at 41- 42oC
. First and second strand synthesis of cDNA
. DNA labeling
. Primer extension and RNA sequencing
. RT- PCR

ME2301	500U,20u/ul
ME2302	2500U, 20u/ul

M- MuLV Reverse Transcriptase (Recombinant)

Moloney Murine Leukemia Virus (M- MuLV) is a RNA dependent DNA polymerase. It can synthesize a complementary DNA strand initiating from a primer using either RNA or single- stranded DNA as a template. The absence of RNase H activity enhances the synthesis of long cDNA and therefore the enzyme is recommended for preparing long cDNA.

. Primer extension and RNA sequencing
. RT- PCR

ME2305	10000U, 200u/ ul
ME2306	50000U, 200u/ ul
PR911658	10000U, 200u/ ul

Ribonuclease Inhibitor RNAse- Free

Ribonuclease Inhibitor RNase- free inhibits the activity of RNases A, B, and C by binding them in a noncompetitive mode at a 1:1 ratio. It does not inhibit RNases 1, T1, T2, H, U1, U2, CL3 and other enzymes. Applied in procedures where RNase contamination constitutes a problem:

. In vitro transcription
. In vitro translation
. cDNA synthesis

ME4309	2500u
ME4310	4x2500u
PR921731	2500u

2-steps RT-PCR Kit

The 2-step RT-PCR kit is specially designed to provide reliable synthesis of full-length cDNA and convenient application of cDNA in PCR. M-MuLV RNase H- synthesizes complementary DNA strand initiating from a specific primer, oligo d(T) or random hexamer. The absence of RNase H enhances the synthesis of long cDNA as the RNA strand does not degrade in DNA-RNA hybrid during first strand cDNA synthesis. With the variety of kit options for standard PCR and long PCR, the 2-step RT-PCR kit provides flexibility in an easy use format.

. High yield: Absence of RNase H activity allows high amount of full length cDNA synthesis with RNA
. Templates up to 10kb.
. Flexible: Wide selection of primers, oligo d(T) or random hexamer. Taq DNA polymerase and MaxTaq
. DNA polymerase for amplification of short and long DNA fragment.
. Highly compatible with various routine PCR amplifications.
. Allows synthesis of full length cDNA from various RNA templates up to 9.8kb.
. High capacity and able to copy up to 2µg of purified mRNA

RTPL12-100app	Viva 2-steps RT-PCR Kit with M-MuLV RT/Taq DNA Polymerase

Oligo dt

The oligo (dT)18 primer is a synthetic single-stranded 18-mer oligonucleotide with 5'- and 3'-hydroxyl ends.

. First strand cDNA synthesis.

PR891629C	60 ul (30 ug)

Random hexamer primer

The Random Hexamer Primer is a mixture of single-stranded random hexanucleotides with 5'- and 3'hydroxyl ends.

. First strand cDNA synthesis.

PR891630C	120 ul (24 ug

SinaClon
شرکت سیناکلون BioScience

SinaClon Services
Primer synthesis service
Primer Set, (Random 10mer)
Oligo dt
Random hexamer primer
Genomic services
Whole Genome Amplification
Genotyping
Gene expression profiling
Sanger sequencing
Illumina sequencing
Advanced bioinformatics options
Services Available
Next Generation Sequencing with the HiSeq 2000 system
Sanger Sequencing
Transcriptome Sequencing
ChIP sequencing (ChIP seq)
Bioinformatics solutions
Targeted sequencing
Paired end sequencing
Molecular Diagnostic Services:
KRAS mutation
BRAF mutation
HER2
EGFR
NRAS
LifeSciences products
Antibodies
Clones
Apoptosis
Clinical research tools
Innate immunity
SinaClon Sequencing
Template Preparation Guidelines
Template preparation
Plasmid Preparation
Cosmids, BACs/P1's
PCR Products
Column Purification:
Template Quantitation
Sequencing from Purified Templates
Sequencing Primers held currently in stock.
Proteomics Services
Protein identification
Protein Quality Control and Post-Translational Modifications
Shotgun and Expression Proteomics

SinaClon Services

Primer synthesis service

It is coThe Oligo synthesis is based on fully automated chemical synthesis of nucleotides in a 3’ to 5’ direction. This process is done by automatic machines and each step is controlled by software.
Whereas enzymes synthesize DNA in a 5' to 3' direction, chemical oligonucleotide synthesis is carried out in the opposite, 3' to 5' direction. The process is implemented as solid phase synthesis using phosphoramidite method and A, C, G and T as building blocks.
To obtain the desired oligonucleotide, the building blocks are sequentially coupled to the growing oligonucleotide chain in the order required by the sequence of the product .The process is fully automated. Upon the completion of the chain assembly, the product is released from the solid phase to solution, deprotected, and collected.
The occurrence of side reactions sets practical limits for the length of synthetic oligonucleotides (up to about 100-120 nucleotides residues) because the number of errors accumulates with the length of the oligonucleotide being synthesized. Products are isolated by high pure technology and cartridges method to obtain the desired oligonucleotides in maximum purity.
Aim of a purification process, is deliver of near impurity-free, concentrated full-length oligo sequences. Resin of cartridges is pH stable and purifies oligo sequences of lengths ranging from 10 nt to 100 nt. Purified oligos suitable for in-vivo applications & downstream analysis and reactions.

PR7708C	A260 5 – 7, 0.05µm
PR7709C	A260 15 – 20,0.2µm

Primer Set, (Random 10mer)

This primer is a mixture of random 10 nucleotides with 5'- and 3'-hydroxyl ends and it is qualified for random amplification.

PR8011C	≤0.05µm

Oligo dt

The oligo $(dT)_{18}$ primer is a synthetic single-stranded 18-mer oligonucleotide with 5'- and 3'-hydroxyl ends.
. First strand cDNA synthesis.

PR891629	60 ul (30 ug)

Random hexamer primer

The Random Hexamer Primer is a mixture of single-stranded random hexanucleotides with 5'- and 3' hydroxyl ends.
. First strand cDNA synthesis.

PR891630	120 ul (24 ug)

We can also offer you probe synthesis service with High yield, high purity:

PAGE-100	PAGE purified, 100nmole, 2ODs
HPLC-100	HPLC purified, 100nmole, 2ODs
FAM-100	5' or 3' 6-FAM label, 100nmole, 2ODs
FAM-200	5' or 3' 6-FAM label, 200nmole, 5ODs
FAM-400	5' or 3' 6-FAM label, 400nmole, 10ODs
FAM-1000	5' or 3' 6-FAM label, 1000nmole, 20ODs

Genomic services

Source BioScience LifeSciences, UK is a leading genomic service provider in Europe.
Services are including:

- Whole Genome Amplification
- Genotyping
- Gene expression profiling
- Sanger sequencing
- Illumina sequencing
- Advanced bioinformatics options

Our comprehensive ranges of services are supported by leading technology platforms such as Illumina, Affymetrix, Applied Biosystems, and Fluidigm.
With over 15 years of experience in sequencing, Source BioScience provides the highest quality in Sanger sequencing service.
SinaClon as exclusive distributer brings Source BioScience expertise and sequencing labs in Cambridge, Oxford, Nottingham, Dublin and Berlin, closer to you.

Services Available

- **Next Generation Sequencing with the HiSeq 2000 system**

An experienced service with fast turnaround time, competitive quotes which provides researchers access to all recently launched applications.

- **Sanger Sequencing**

Single and paired-end reads allow the discovery and confirmation of mutations, chromosomal rearrangements, de novo sequencing and assembly.

- **Transcriptome Sequencing**

Generates genome-wide expression profiles through sequencing and not hybridization
RNA sequencing (RNA seq), small RNA sequencing, DEEP CAGE analysis.
A replacement to microarrays
View expression of «unknown» species
Data used to supplement your de novo transcriptome data
Use eukaryotic transcriptome sequencing as a more comprehensive method for expression profiling.

- **ChIP sequencing (ChIP seq)**

To identify and quantify in vivo protein-DNA interactions on a genome-wide scale

- **Bioinformatics solutions**

Our Bioinformatics scientists provide a complete analysis package that can be customized to your specific research needs.

- **Targeted sequencing**

Specific targeted genomic regions (either contiguous or dispersed) are enriched for subsequent deep sequencing. The ability to analyze only targeted regions rather than the entire complex genome allows for effective and systematic in-depth study of genetic variation, enabling researchers to work with larger number of samples. We are pleased to offer target-specific sequence selection through Agilent SureSelect™.

- Paired end sequencing

Allows selection of a length of insert and sequencing both ends of the insert, allowing for a highly precise alignment of reads.

- **Molecular Diagnostic Services:**

SinaClon in collaboration with Source BioScience Company, Health care and molecular diagnostic services presents gene mutation analysis on all archived samples and FFPE tissues:

KRAS mutation

o Known to occur at codons12, 13 and 61.
o Are relatively common in colorectal and lung cancers.
o Important signalling intermediate in the EGFR pathway.
o The presence of a KRAS mutation suggests a patient is unlikely to respond to EGFR targeted
treatment.

BRAF mutation
o Rarely occur, if ever, alongside KRAS mutations.
o A single activating mutation of the BRAF gene, V600E is most common.
o An Important signalling intermediate in the EGFR pathway.
o Particularly common in melanoma.

HER2
National reference laboratory for HER2 testing. We use FDA approved immunocytochemistry and FISH (fluorescence in situ hybridisation) assays according to national guidelines.
o HER2 is also known as erbB2/neu and belongs to the EGFR family.
o High expression of HER2 in breast cancer cells leads to uncontrolled growth.
o HER2 over-expression is found in several other cancers as well as breast cancer.
o HER2 testing is a pre-requisite for prescribing of Herceptin.

EGFR
o The Epidermal Growth Factor Receptor (EGFR) Pathway - Gene and Protein Alterations.
o EGFR plays a key role in the growth and survival of many solid tumour types.
o A wide range of small molecule and antibodybased therapeutics that target EGFR are currently available or in development.
o Alterations in the gene encoding EGFR and its protein product may lead to altered response to EGFR-targeted treatments.

NRAS
The RAS family of proteins are encoded by three closely related genes; HRAS, KRAS, and NRAS. These three genes are mutated in approximately 20% of human tumors, although mutations in KRAS account for 85% of these. Mutations of the NRAS gene occur more frequently in melanoma and myeloid leukemia.
Acquired mutations of the NRAS gene are found in approximately 20% of melanomas.
These mutations occur in codons 12, 13, and 61, those of codon 61 being by far the most frequent.

• **LifeSciences products**
o Antibodies
Over 90,000 primary antibodies, secondary antibodies, secondary detection kits and reagents, flow cytometry, immunohistochemistry, immunoprecipitation, control immunoglobulins. Range of antibodies against Cancer & Stem Cell Related Proteins.
More than 3,500 IHC-plus antibodies that have been extensively tested in immunohistochemistry (IHC) against formalin-fixed paraffin-embedded (FFPE) human tissues.
o Clones
Over 20 millions clones in collection. cDNA cloning and libraries, phage display libraries,
IMAGE clones, cDNA clones, genomic clones, cDNA/EST libraries, ORF libraries, RNAi libraries, miRNA, shRNA/siRNA, cDNA libraries, IMAGE and MGC clones.

o Apoptosis
Programmed cell death, or apoptosis is a mechanism by which cells die in a controlled series
of steps following for example injury, or other triggers. The Source BioScience LifeSciences
collection of apoptosis products includes apoptosis kits, antibodies, recombinant proteins,
genes and more.
Cell signaling, cell proliferation, differentiation and viability, cell biology controls, cytokine
signaling, signal transduction.

o Clinical research tools
FISH, CISH, diagnostic ELISA , purified lipoproteins, diagnostic antibodies.

o Innate immunity
TLRs, TLR screening, NLRs, inflammosomes, agonists, antagonists.

SinaClon Sequencing Includes:

. Automated Read Sequences
. Standard Primer
. Sequencing Profile (SCF)
. Text File
. Delivery of data via e-mail
. Single Read, Up to 1200b
. Per Read Pair by F&R primers

Additional Service

. PCR purification

Template Preparation Guidelines
Template preparation

DNA that is to be sequenced must be free from other template, eg, mixed clones or PCR products, genomic DNA and RNA. Also anything that may inhibit the Taq should also be avoided eg EDTA and salt.

Plasmid Preparation

Alkaline lysis with RNAse and PEG precipitation can give very good results .There are many commercial kits available. These are usually either Ion-exchange resin based or silicon based.
Ion-exchange columns usually give very good results but care must be taken not to overload the columns. The DNA is eluted in high salt so you should always perform a desalting step, for example, a precipitation with 70%EtOH wash or use a spin column.
Silica based kits are usually cheap but can also give good results but care must be taken to achieve the best results. When the DNA is eluted in water salt is often eluted as well so it is advisable to add an extra desalting step.
Care also must be taken to avoid any silica fines in the eluted DNA (the silica fines can bleed through the columns and spell death to enzymes!) This can be done by performing a long spin on the eluted DNA and removing (and keeping!) the supernatant.

Cosmids, BACs/P1's

Alkaline lysis with PEG precipitation give good results.

PCR Products

The amount of clean-up required depends on how optimized the PCR is. The simplest form of clean-up is simply to dilute an aliquot of the PCR reaction between 1:5 and 1:10 in water. You must insure, however that the final concentration of the PCR primers is less than 0.2uM and the dNTP's is less than 100uM. This method can give good results on highly optimized PCRs.
Another method is using Exonuclease I/ Shrimp Alkaline Phosphatase. The exonuclease degrades the left over PCR primers and the alkaline phosphatase dephosphorylates the dNTP's so the won't interfere with the sequencing reaction (they tend to out-compete the flourecently labeled dNTP's). However this method does not remove any secondary products of the PCR which can lower the quality of the data. In order to get rid of small DNA fragments column purification or gel purification is required

Column Purification:

These can be silica based, gel filtration or ultra filtration and will isolate DNA above a particular size (eg 1200b).
Gel Purification: This method is best for non-optimized reactions as it isolates the fragment you want from secondary products, primers and nucleotides. However, this method can be time consuming and the visualization of the gel with UV light can cause "nicking" of the DNA.

Template Quantitation

Sequencers are able to handle a wide range of DNA concentrations however with very low amounts of DNA the data quality will be significantly affected.
Using UV absorbance to quantitate dilute DNA solutions tends to give widely inaccurate results.
A good way to quantitate DNA is to run an aliquot on a mini gel and compare the intensity to a control of known concentration. There are also concentration ladders that are commercially available.

Sequencing from Purified Templates

We sequence your extracted plasmids using either or custom primers; we can also sequence PCR products using your PCR primers. Your template(s) should be submitted in HPLC grade water, not TE buffer or autoclaved water. While this does not ensure long term storage of the samples, it does maximize the potential of producing quality sequences.

Sequencing Primers held currently in stock.

PRIMER	SEQUENCE	LENGTH	% G+C	Tm (degrees C)
SP6 promoter	ATT TAG GTG ACA CTA TAG	18	33	41
T7 terminator	GCT AGT TAT TGC TCA GCG G	19	53	51
T7 forward	TAA TAC GAC TCA CTA TAG GG	20	40	48
EGFP N	CGT CGC CGT CCA GCT CGA CCA G	22	73	64
EGFP C F	CAT GGT CCT GCT GGA GTT CGT G	22	59	59
EGFP C R	GTT CAG GGG GAG GTG TG	17	65	62
T3	ATT AAC CCT CAC TAA AG	17	35	40
M13(-21)	TGT AAA ACG ACG GCC AGT	18	50	48
M13 reverse	CAG GAA ACA GCT ATG ACC	18	50	48
pCMV forward	GAG CTC GTT TAG TGA ACC GTC	21	52	54
pCMV reverse	CAA GGC CAG GAG AGG CAC TG	20	65	58
PGEX 5'	GGG CTG GCA AGC CAC GTT TGG TG	23	65	62
PGEX 3'	CCG GGA GCT GCA TGT GTC AGA GG	23	65	62
KS	CCT CGA GGT CGA CGG TAT CG	20	65	58
SK	CGG CCG CTC TAG AAC TAG TGG ATC	24	58	61
ACYC Duet Up1	GGA TCT CGA CGC TCT CCC T	19	63	55
Duet Down1	GAT TAT GCG GCC GTG TAC AA	20	50	52
pMAL MBP forward	GGT CGT CAG ACT GTC GAT GAA GCC	24	58	61
PQE30 forward	CCC GAA AAG TGC CAC CTG	18	61	53
PQE30 reverse	GTT CTG AGG TCA TTA CTG G	19	47	49
pTrsHis_F	GAG GTA TAT ATA TTA ATG TAT CG	21	29	45
pEXPRESS_F	TAT GGC TAG CAT GAC TGG t	19	47	49
bGHR	TAG AAG GCA CAG TCG AGG	18	56	50
pTargeT reverse	TTA CGC CAA GTT ATT TAG GTG ACA	24	38	63
30nt_M13R	AGC GCA TAA CAA TTT CAC ACA GGA	24	42	59
CMVF_pCDNA3	CAA CGG GAC TTT CCA AAA TG	20	45	55

Proteomics Services

Mass spectrometry is a powerful analytical tool and has a wide range of applications in biology and chemistry. SinaClon, in collaboration with Centre of Excellence in Mass Spectrometry and Technology Facility at the University of York, provides a means for you to access state-of the-art proteomic capabilities.

Proteomics Services

- Protein identification
- Protein quality control (bottom-up and top down)
- Post-translational modifications (phosphorylation and glycosylation)
- Shotgun proteomics
- Expression proteomcs (iTRAQ and label free)

Sequencing from Purified Templates

We sequence your extracted plasmids using either or custom primers; we can also sequence PCR products using your PCR primers. Your template(s) should be submitted in HPLC grade water, not TE buffer or autoclaved water. While this does not ensure long term storage of the samples, it does maximize the potential of producing quality sequences.

Protein Quality Control and Post-Translational Modifications

- We also offer a complete protein characterization service.
- Top-down sequencing by FTMS
- T3 sequencing by ISD
- N- and C-terminal verification
- Phosphorylation site analysis
- Glycosylation - site analysis and glycan structure
- Other PTMs on request

Shotgun and Expression Proteomics

We offer a complete shotgun (LC-based) proteomics service, including relative quantification of protein levels:

- NanoLC-ES-MS/MS
- Deep proteome coverage with multidimensional chromatography
- In vitro stable-isotope labeling with iTRAQ
- Label-free quantification with Progenesis
- LC-MS software

Our platforms are able to achieve high proteome coverage with thousands of identifications from a single sample. Changes in protein expression levels can be measured using both stable-isotopes (iTRAQ) and a label-free approach, depending on the experimental design. We can also achieve very high, and often complete, amino acid sequence coverage of single proteins with our systems.

Proteomics equipment

We are fortunate in having access to state-of-the-art instruments in the new Centre of Excellence in Mass Spectrometry at York. These facilities provide the very latest in MS capabilities for protein characterization and proteomics, and include the following Bruker mass spectrometers:

- A solariX FT-ICR-MS with 9.4-Tesla superconducting magnet
- An ultraflex III MALDI-TOF/TOF Ultraflex manual
- Two HCT ultra ion traps with ETD
- AmaXis high-performance UHR-TOF

SinaClon
شرکت سیناکلون BioScience

Human Apoptosis RT Array™ Kit
Human Angiogenesis RT Array™ Kit
Human EGFR signaling RT Array™ Kit
Human Carcinogenicity assay RT Array™ Kit
Human Toxicity assay RT Array™ Kit
Human Stem Cell marker RT Array™ Kit
DNA Check (DNA contaminated cDNA checking)
Human Housekeeping RT Array™ Kit
In vitro assay Service
Evaluation of apoptosis by Apoptosis RT Array™ kit
Evaluation of angiogenesis by Angiogenesis RT Array™ kit
Evaluation of EGFR signaling by EGFR RT Array™ kit.
Evaluation of toxicity by Toxicity RT Array™ kit
Evaluation of carcinogenicity by human
Carcinogenicity RT Array™ kit
In vitro assay by your interest genes

Human Apoptosis RT Array™ Kit

Apoptosis RT Array™ profiles the expression of 24 – 34 genes involved in apoptosis including pro-apoptotic and anti apoptotic genes. Apoptosis is a highly regulated and evolutionary conserved pathway of cell death that plays a critical role in development and maintenance of tissue homeostasis. Apoptosis is characterized by condensation and fragmentation of nuclear chromatin, compaction of cytoplasmic organelles, dilatation of the endoplasmic reticulum (frequently in a subplasmalemmal distribution), a decrease in cell volume and alterations to the plasma membrane resulting in the recognition and phagocytosis of apoptotic cells, so preventing an inflammatory response

. Apoptosis profiling
. Drug Resistance
. Induction of Apoptosis assay

K1301	Intrinsic and Extrinsic Network (34 genes for 6 reactions)
K1302	Intrinsic and Extrinsic Network (34 genes for 12 reactions)
K1303	Intrinsic Network (24 genes for 12 reactions)
K1304	Intrinsic Network (24 genes for 6 reactions)
K1305	Extrinsic Network (24 genes for 12 reactions)
K1306	Extrinsic Network (24 genes for 6 reactions)

Human Angiogenesis RT Array™ Kit

Angiogenesis RT Array™ profiles the expression of 10 – 20 genes involved in modulating the biological processes of angiogenesis. Tumor growth and metastasis are essentially dependent on angiogenesis.

Assessment of angiogenesis is perfor- med by expression analysis of angio-regulatory genes such as VEGF, HIF-1, VEGFR and angiostatin. VEGF is the most potent regulator of angiogenesis.

The signals for neoangiogenesis are initiated by local hypoxia. There is a direct correlation between the vascular density and the likelihood of metastasis in breast cancer patients, implying that the blood vessel supply can function as an independent prognostic variable in breast cancer [Weidner et al. 1991]

. Angiogenesis assay
. Tumor Invasion assay
. Anti-VEGF assay
. Angiogenesis inhibitor assay

K1307	Angiogenesis RT Array™ kit (20 genes for 6 reactions)
K1308	Angiogenesis RT Array™ kit (20 genes for 12 reactions)
K1309	Angiogenesis RT Array™ kit (10 genes for 6 reactions)
K1310	Angiogenesis RT Array™ kit (10 genes for 12 reactions)
K1307	Angiogenesis RT Array™ kit (20 genes for 6 reactions)
K1308	Angiogenesis RT Array™ kit (20 genes for 12 reactions)

Human EGFR signaling RT Array™ Kit

EGFR signaling RT Array™ profiles the expression of 10 – 20 genes involved in signal transduction of ERBB family genes (EGFR, HER2, HER3 and HER4).
The ERBB family of receptor tyrosine kinases mediates oncogenic signaling in a variety of different cancer types. For example, EGFR is thought to play an important role in the genesis of lung and colon cancer, and ERBB2 (or HER2) serves as a potent oncogene in a subset of breast cancer.
The ERBB family plays a central role in driving neoplastic growth and has been a major focal point in cancer drug discovery.

. EGFR signaling assay
. Anti-EGFR signaling assay
. Anti-RAS assay
. Anti-mTOR assay
. Anti-RAF assay
. Anti-MEK assay
. Anti- HER assay
. Anti-SRC assay

K1311	EGFR signaling RT Array™ kit (20 genes for 6 reactions)
K1312	EGFR signaling RT Array™ kit (20 genes for 12 reactions)
K1313	EGFR signaling RT Array™ kit (10 genes for 6 reactions)
K1314	EGFR signaling RT Array™ kit (10 genes for 12 reactions)

Human Carcinogenicity assay RT Array™Kit

Carcinogenicity assay RT Array™ profiles the expression of 5 – 10 responsible genes against carcinog- ens. Carcinogenicity is the ability or tendency to produce cancer. A carcinogen is any chemical, substance, radionuclide or radiation, which is an agent directly involved in the exacerbation of cancer or in the increase of its propagation. This may be due to the ability to damage the genome or to the disruption of cellular metabolic processes.

. In vitro carcinogenicity assay
. In vivo carcinogenicity assay

K1315	Carcinogenicity assay RT Array™ kit (15 genes for 6 reactions)
K1316	Carcinogenicity assay RT Array™ kit (15 genes for 12 reactions)
K1317	Carcinogenicity assay RT Array™ kit (10 genes for 6 reactions)
K1318	Carcinogenicity assay RT Array™ kit (10 genes for 12 reactions)

Human Toxicity assay RT Array™ Kit

Toxicity assay RT Array™ profiles the expression of 10-20 genes whose expression level is indicative of toxicity. The array includes genes that are directly up-regulated or deregulated by oxidative or metabolic stress, DNA damage, Apoptosis and growth arrest.

. Toxicity assay
. Drug resistance assay

K1319	Toxicity assay RT Array™ kit (20 genes for 6 reactions)
K1320	Toxicity assay RT Array™ kit (20 genes for 12 reactions)
K1321	Toxicity assay RT Array™ kit (10 genes for 6 reactions)
K1322	Toxicity assay RT Array™ kit (10 genes for 12 reactions)

Human Stem Cell marker RT Array™ Kit

Stem Cell marker RT Array™ contains the genes that up-regulated in stem cell population.
Patients generally die of cancer after the failure of current therapies to eliminate residual disease. A Sub- population of tumor cells, termed cancer stem cells (CSC), appears uniquely able to fuel the growth of phenotypically and histologically diverse tumors. It has been proposed, therefore, that failure to effectively treat cancer may in part be due to preferential resistance of these CSC to chemotherapeutic agents.

. Detection of Breast cancer stem cells
. Detection of Colon cancer stem cells

K1327	Stem Cell marker RT Array™ kit (8 genes for 6 reactions)
K1328	Stem Cell marker RT Array™ kit (8 genes for 12 reactions)
K1329	Stem Cell marker RT Array™ kit (4 genes for 6 reactions)
K1330	Stem Cell marker RT Array™ kit (4 genes for 12 reactions)

DNA Check (DNA contaminated cDNA checking)

DAN contaminated cDNA checking contains a set of primer specific for GAPDH that amplifies both cDNA and genomic DNA in RT ArrayTM mix with the size of 114bp and 218bp respectively. The TM of these products is ~82°C and ~86°C for cDNA and genomic DNA.
It is recommended before array of your cDNA, check the DNA contamination by this kit also it can be used as human reference gene.

. Detection of DNA contamination of Human cDNA

K1339	DNA contaminated cDNA check kit (30 reactions)
K1340	DNA contaminated cDNA check kit (50 reactions)

Human Housekeeping RT Array™Kit

The Human Housekeeping Genes RT Array™ profiles the expression of five identical sets of house- keeping genes. This array can be easily used to identify genes with a constant level of expression among your different experimental conditions for use in normalizing your relative gene expression prof- iling experiment. Housekeeping genes encode proteins that are usually essential for the main- tenance of cellular function. Their expression often, but not always, remains constant under most expe- rimental conditions. Some of these genes may be regulated under certain circumstances and may vary with cell type.

. easily and reliably evaluate the expression of five house- keeping genes among different experiment conditions

K1342	House Keeping RT ArrayTM Kit (5 genes for 20 reactions)
K1343	House Keeping RT ArrayTM Kit (5 genes for 30 reactions)

In vitro assay Service
Evaluation of apoptosis by Apoptosis RT Array™ kit

Evaluation of apoptosis by Apoptosis RT ArrayTM kit. Select your interest genes and cell lines.
Cell line set: Cancerous epithelial cell lines, Cancerous hematopoietic cell lines, and embryo cell lines

S1361	in vitro apoptosis assay

Evaluation of angiogenesis by Angiogenesis RT Array™ kit

Evaluation of angiogenesis by Angiogenesis RT ArrayTM kit. Select your interest genes and cell lines.
Cell line set: Cancerous epithelial cell lines, Cancerous hematopoietic cell lines, and embryo cell lines

S1362 in vitro angiogenesis assay

Evaluation of EGFR signaling by EGFR RT Array™ kit.

Evaluation of EGFR signaling by EGFR RT ArrayTM kit. Select your interest genes and cell lines.
Cell line set: Cancerous epithelial cell lines, Cancerous hematopoietic cell lines, and embryo cell lines

S1363 in vitro EGFR signaling assay

Evaluation of toxicity by Toxicity RT Array™ kit

Evaluation of toxicity by Toxicity RT ArrayTM kit. Select your interest genes and cell lines.
Cell line set: Cancerous epithelial cell lines, Cancerous hematopoietic cell lines, and embryo cell lines

S1364 in vitro toxicity assay

Evaluation of carcinogenicity by human Carcinogenicity RT ArrayTM kit

Evaluation of carcinogenicity by human Carcinogenicity RT ArrayTM kit. Select your interest genes and cell lines.
Cell line set: Cancerous epithelial cell lines, Cancerous hematopoietic cell lines, and embryo cell lines .

S1365 in vitro carcinogenicity assay

in vitro assay by your interest genes

Bioassay of your compounds by Real-time PCR study using your interest genes. Select your interest genes and cell lines.
Cell line set: Cancerous epithelial cell lines, Cancerous hematopoietic cell lines, and embryo cell lines.

S1366 in vitro assay by your interest gene

SinaClon BioScience
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Blood Group Typing

CinnaClonell™Anti-A, B, D (IgG & IgM mono.Ab.)

CinnaClonell™Anti-A antibody (mono. Ab.)

CinnaClonell™Anti-AB antibody (mono. Ab.)

CinnaClonell™Anti-B antibody (mono. Ab.)

CinnaClonell™Anti-D antibody IgG & IgM (mono. Ab.)

CinnaClonell™Anti-D antibody IgM (mono. Ab.)

CinnaClonell™Anti-D antibody IgG (mono. Ab.)

ABO-Rh Blood Typing Reagents

CinnaClonell™ reagents for Rh typing

Blood Group Typing

CinnaClonell™Anti-A, B, D (IgG & IgM mono. Ab.)	
CA7800C	3×10 ml Kit
CinnaClonell™Anti-A antibody (mono. Ab.)	
CA7801C	10ml
CinnaClonell™Anti-AB antibody (mono. Ab.)	
CA7805C	10ml
CinnaClonell™Anti-B antibody (mono. Ab.)	
CA7802C	10ml
CinnaClonell™Anti-D antibody IgG & IgM (mono. Ab.)	
CA7804C	10ml
CinnaClonell™Anti-D antibody IgM (mono. Ab.)	
CA7803C	10ml
CinnaClonell™Anti-D antibody IgG (mono. Ab.)	
CA8207C	10ml

ABO-Rh Blood Typing Reagents

CinnaClonell ™ Reagents for ABO Typing

ABO-Rh Blood Typing Reagents
CinnaClonell™ Reagents for ABO Typing

The monoclonal Anti-A, Anti-B and Anti AB reagents are murine monoclonal antibodies of IgM class secreted by mouse hybridoma cell lines. The monoclonal Anti AB reagent is a blend of monoclonal Anti-A and Anti-B antibodies.
The noted monoclonal antibodies were selected for their ability to agglutinate specifically human RBCs bearing blood group antigens A and B on direct agglutination tests (slide, micro plate and tube test). The reagents do not demonstrate any cross reactivity and do not induce any non-specific agglutination.
- 11 years in market
- Exported to several Countries.

Anti-A

Appearance:	Transparent blue liquid
Specificity:	Does not agglutinate B and O erythrocytes
Titer:	Not lower than 1/64 on tube test

Anti-B

Appearance: Transparent yellow liquid
Specificity: Does not agglutinate A and O erythrocytes
Titer: Not lower than 1/64 on tube test

Anti-AB

Appearance: Transparent colorless liquid
Specificity: Does not agglutinate O erythrocytes
Titer: Not lower than 1/64 on tube test

CinnaClonell™ reagents for Rh typing

The monoclonal Anti-D reagents are human monoclonal antibodies of IgM and IgG classes secreted by chimeric human cell lines. CinnaClone Anti-D IgM consists of one human IgM monoclonal antibody and CinnaClone Anti-D blend is a mixture of human monoclonal antibodies, from both IgG and IgM classes. The noted monoclonal Anti-D reagents were selected for their ability to agglutinate specifically human RBCs bearing Rh antigen D on direct agglutination tests (slide, microplate and tube test). The monoclonal Blend Anti-D may be used in indirect antiglobulin test (Coomds test) due to incomplete IgG components. The reagents do not demonstrate any cross reactivity and do not induce any non-specific agglutination of D negative erythrocytes.

- 11 years in market.
- Exported to Asian, European and South American Countries.

Appearance: Transparent liquid
Specificity: Does not agglutinate D-negative erythrocytes
Titer of IgM: Not lower than 1/16 on tube test
Titer of IgG: Not lower than 1/32 on tube test
Hemagglutination activity shows at least 2+ agglutination at less than 30 seconds by slide test.

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Lab Ware

High quality and molecular grade plastic ware,
mechanical Pipettes and chiller racks

Filter and Standard tips

Filter tips

Standard tips

Low retention tips

Bulk tips

Micro centrifuge & PCR tubes

Serological Pipettes

Mechanical Pipettes

IsoFreeze Racks

PCR Chiller Rack

Lab Ware High quality and molecular grade plastic ware, mechanical Pipettes and chiller racks:

Filter and Standard tips

Filter tips
High quality filter tips that eliminate opportunities for cross contamination.

- No detectable nucleic acid contamination
- No detectable PCR inhibitors
- No detectable endonucleases
- No detectable endotoxin
- Sterile

5030060C	Filter	ExpellPlus 10ul long, pre-sterile, 1x96 pcs
5030090C	Filter	ExpellPlus 200ul, pre-sterile 1x96 pcs
5130150C	Filter	Expell 1000ul (vol. up to 1250ul), pre-sterile 1x96 pcs

Due to special polymers and an extremely smooth inside surface, the ExpellPlus™ tips virtually eliminate sample retention, and reduce the binding of DNA, RNA and Proteins to a minimum.

Standard tips

- The racked Expell tips are packaged in dispenser boxes designed to maximize convenience while occupying minimal bench space, allowing ease of access to the next rack to be used. Due to innovative packaging solutions, these waste saving racked tips occupy less storage space than conventional tips.

Low retention tips

- Tests show that the ExpellPlus tips deliver volumes within 0.1 % of the set volume, versus 0.5-0.7% for
standard tips. This significant difference in sample retention also is clearly visible when pipetting a dyed liquid.

5030050C	Pre-sterile	ExpellPlus 10ul long hinged racks, 1x96 pcs
5030080C	Pre-sterile	ExpellPlus 200ul,hinged racks, 1x96 pcs
5130140C	Pre-sterile	Expell 1000ul,(vol. up to 1250ul) hinged racks, 1x96 pcs

5030045C	Low retention	ExpellPlus 10ul long, hinged racks, 1x96 pcs
5030075C	Low retention	ExpellPlus 200ul, hinged racks, 1x96 pcs
5130135C	Low retention	Expell 1000ul (volumes up to 1250ul), hinged racks, 1x96 pcs

Bulk tips

• Bulk tips without the low retention properties are of the same high manufacturing standards, maintaining strict tolerances with ideal wetting properties and high transparency and purity levels.

5130010C	Bulk tips	Expell 10ul, clear, bag, 1000 pcs
5130070C	Bulk tips	Expell 200ul, clear, bag, 1000 pcs
4130135C	Bulk tips	Expell 1000ul, blue, bag, 1000 pcs

Micro centrifuge & PCR tubes

The Expell graduated micro centrifuge tubes are manufactured from virgin PP, out of the finest molds available. The main features are one hand open/close operation, polished interior to prevent from adhesion of most proteins high clarity for good sample visibility. The V-shape bottom allows total sample recovery and the thin-walled wells of polypropylene allow a very good transmission of temperature and minimize condensation.

- DNase free
- RNase free
- Pyrogen free
- withstand up to 20,000g

5100200C	PCR tubes 0.2ml, bag, 1000 pcs
5100500C	Micro centrifuge tubes 0.5 ml, bag, 1000 pcs
5101500C	Micro centrifuge tubes 1.5 ml, bag, 1000 pcs

Serological Pipettes

Designed for accurate and rapid fluid dispensing, these polystyrene pipettes are sterile, pyrogen free and cotton plugged for a variety of liquid handling applications.
The sharp, black, highly legible permanent graduations prevent ambiguity and guarantee precise reading and accurate dispensing to +1-2%.
Reverse graduations show volume removed or remaining on all pipettes larger than 1mL.
Generous negative graduations provide additional pipetting volume.
Each pipette comes with effective filter barrier to prevent overflow of liquid into pipette.
Designed to fit all available motorized pipette controllers on the market.
Pipettes are supplied individually wrapped in fiber-free colour coded paper and plastic combination that is easy to open. The uniform mouth piece fits all major pipettors and is color coded for ease of identification.

- Transparent medical grade polystyrene
- Sterilized by gamma irradiation.
- Endotoxin, Cytotoxicity free
- Non-haemolytic
- Ideal for use within tissue culture applications.

SP-5-C	Serological pipette 5ml, blue, pcs
SP-10-C	Serological pipette 10ml, orange, pcs
SP-25-C	Serological pipette 25ml, red, pcs
SP-50-C	Serological pipette 50ml, purple, pcs

Mechanical Pipettes:

AP72000	Variable Volume Pipette 0.5-10ul
AP72008	Variable Volume Pipette 2-20ul
AP72005	Variable Volume Pipette10-100ul
AP72007	Variable Volume Pipette 20-200ul
AP72006	Variable Volume Pipette 100-1000ul

IsoFreeze Racks

Available in two temperature ranges, providing consistent thermal protection for extended periods.
- The blue rack: This -20oC unit will maintain a temperature between -10oC and -20oC for up to three hours.
- The white rack: 0oC unit will maintain a temperature approximately 0oC for a minimum of 5 hours.

Max tubes capacity: 20. Suitable for 0.5, 1.5 and 2.0ml.

AU0716-01-C	Chiller IsoFreeze Flipper -0°C (white)
AU0716-00-C	Chiller IsoFreeze Flipper -20°C (blue)

PCR Chiller Rack

Maintains sample temperature of less than 4oC for almost 4 hours.

AU0717-01-C	PCR Chiller IsoFreeze PCR Rack (pink)
AU0717-00-C	PCR Chiller IsoFreeze PCR Rack (yellow)

Gradient Touch Thermal Cycler

Overview

Hercuvan's high-performance thermal cyclers feature the latest technological advances, offering greater accuracy and reproducibility in nucleic acid amplification for genomic experiments.

GS-96/2x48 Gradient Touch Thermal Cycler features high performance, convenient and large colour touch screen display to make PCR run easier and faster.

The gradient thermal cycler system allows you to quickly optimize your reaction in a single run. With its robust design, GS-96/2x48 systems are reliable gradient thermal cyclers that delivers exceptional performance.

Features

- Easily creating and viewing protocols using 8 inches TFT colour touch screen display and intuitive graphical programming
- Available with or without gradient function
- High sample capacity with maximum of 96x 0.2ml tubes can be run at the same time
- High temperature uniformity with 4 independent temperature control sensors and 8 Peltier elements
- High heating and cooling rates
- Store your data up to 10,000 files
- Transfer files using USB flash drive
- Available with LAN network connection and Bluetooth printing function
- Interchangeable blocks

Specification

Model	GS-96	GS-2x48
Number of wells	96 well	2 x 48 well
Thermal gradient capability	Yes	
Program memory	10,000 programs	
Temperature range	0 - 100oC	
Temperature gradient	1 - 30 oC	
Gradient temperature range	30 - 100 oC	
Cool samples to 4 oC	Yes	
Maximum heating rate	5.0 oC / sec	
Maximum cooling rate	4.0 oC / sec	
Temperature uniformity	± 0.2 oC at 30 oC - 72 oC	
(10 sec after clock starts)	± 0.3 oC at 90 oC	
Control Accuracy	± 0.1 oC	
Ramp rate	0.1- 5.0 oC / sec	
Display	8.0"TFT color touch screen, 800x600 pixels	
Auto restart after power failure	Yes	
Adjustable heated lid	Yes	
Lid temperature range	30 oC -110 oC	
Max. number of steps	30	
Max. number of cycles	99	
Max. power consumption	600 Watt	
Input voltage	AC85-264V, 47-63Hz	
Interfaces	USB, LAN	
Dimension (W x D x H)	24cm x 38cm x 26cm	
Weight	8.5 kg	

Ordering Information

Catalogue Number	Description
GS-96	Gradient Touch Thermal Cycler, GS-96, 96 x 0.2ml
GS-2x48	Gradient Touch Thermal Cycler, GS-2x48, 2 x 48 x 0.2ml

Specification

ND-2800 NANO DOT Nucleic Acid Analyzer

Overview

NANO DOT ND-2800 Nucleic Acid Analyzer operates at three wavelengths: 230nm, 260nm, 280nm. It is specially designed to analyze concentration and purity of nucleic acid (DNA/RNA) and protein. Samples can be measured by dropping them directly onto the lower measurement pedestal without using absorption cell or cuvette. This instrument required no warm-up after start, and is operated simply and quickly with direct display of samples concentration. The concentration range of samples measured by NANO DOT ND-2800 Nucleic Acid Analyzer is 50 times larger than that measured by the general spectrophotometer.

Features

- Require only 0.3 – 2.0 µL samples!
- No absorption cells, no cuvettes!
- Rapid measurement speed!
- Display the concentration directly!
- No dilution required!
- Easy to use!
- Light weight, small foot print!

SpecificationSpecification

Specification Model	ND-2800 Nucleic Acid Analyzer
Wavelength	260nm, 230nm, 280nm
Path length	1.0 mm, 0.2mm
Sample size	0.3-2.0 µL
Light source	Xenon flash lamp
Absorbance precision	0.002 Abs
Absorbance accuracy	1%
Absorbance range	0.02-80 (10mm equivalent absorbance)
Detection range	10 – 4000 ng / µL (dsDNA)
Measurement time	0.5 mg/ml – 110 mg /ml (BSA)
Dimension	<5 seconds
Net weight	24 cm x 22 cm x 14 cm
	2.35 kg

Ordering Information

Catalogue Number	Description
ND-2800	NANO DOT Nucleic Acid Analyzer, ND-2800

ND-3800 NANO DOT Microspectrophotometer

Features

- Full spectrum absorbance analysis!
- 0.5 -2.0 µL sample size!
- No cells, no cuvettes!
- No warm-up!
- Rapid measurement speed!
- Display the concentration directly!
- No dilution for samples!
- Easy to use!

Specification

Specification Model	ND-3800 NANO DOT Microspectrophotometer
Wavelength	200 – 800 nm
Path length	0.2 mm, 1.0 mm
Sample size	0.5-2.0 µL
Light source	Xenon flash lamp
Detector type	3864-element linear silicon CCD array
Wavelength accuracy	1 nm
Spectral resolution	≤ 3 nm (FWHM at Hg 456 nm)
Absorbance precision	0.003 Abs
Absorbance accuracy	1% (0.76 absorbance at 350 nm)
Absorbance range	0.02-90 (10mm equivalent absorbance)
Detection range	10 – 3750 ng / µL (dsDNA)
Measurement time	0.5 mg/ml – 110 mg /ml (BSA)
Dimension (W x D x H)	5 seconds
Net weight	20 cm x 26.2 cm x 15.4 cm
Operating Voltage	2.5 kg
Operating power consumption	24V DC
Standby power consumption	12 – 18 W
Software compatibility	5 W

Ordering Information

Catalogue Number	Description
ND-3800	NANO DOT Microspectrophotometer, ND-3800

GENE SERIES
HERCUVAN LAB SYSTEMS

GS-96

Reliable, easy to use 96-well gradient thermal cycler with exceptional thermal performance

GS-2x48

Dual-bay gradient thermal cycler with large graphic interface

GS-96/2x48 Gradient Touch Thermal Cycler

Overview

Overview

Hercuvan's high-performance thermal cyclers feature the latest technological advances, offering greater accuracy and reproducibility in nucleic acid amplification for genomic experiments.

GS-96/2x48 Gradient Touch Thermal Cycler features high performance, convenient and large colour touch screen display to make PCR run easier and faster.

The gradient thermal cycler system allows you to quickly optimize your reaction in a single run. With its robust design, GS-96/2x48 systems are reliable gradient thermal cyclers that delivers exceptional performance.

Features

- Easily creating and viewing protocols using 8 inches TFT colour touch screen display and intuitive graphical programming
- Available with or without gradient function
- High sample capacity with maximum of 96x 0.2ml tubes can be run at the same time
- High temperature uniformity with 4 independent temperature control sensors and 8 Peltier elements
- High heating and cooling rates
- Store your data up to 10,000 files
- Transfer files using USB flash drive
- Available with LAN network connection and Bluetooth printing function
- Interchangeable blocks

Specification

Model	GS-96	GS-2x48
Number of wells	Gene Series	2 x 48 well
Thermal gradient capability	Yes	
Program memory	10,000 programs	
Temperature range	0 - 100oC	
Temperature gradient	1 - 30 oC	
Gradient temperature range	30 - 100 oC	
Cool samples to 4 oC	Yes	
Maximum heating rate	5.0 oC / sec	
Maximum cooling rate	4.0 oC / sec	
Temperature uniformity	± 0.2 oC at 30 oC - 72 oC	
(10 sec after clock starts)	± 0.3 oC at 90 oC	
Control Accuracy	± 0.1 oC	
Ramp rate	0.1- 5.0 oC / sec	
Display	8.0"TFT color touch screen, 800x600 pixels	
Auto restart after power failure	Yes	
Adjustable heated lid	Yes	
Lid temperature range	30 oC -110 oC	
Max. number of steps	30	
Max. number of cycles	99	
Max. power consumption	600 Watt	
Input voltage	AC85-264V, 47-63Hz	
Interfaces	USB, LAN	
Dimension (W x D x H)	24cm x 38cm x 26cm	
Weight	8.5 kg	

Ordering Information

Catalogue Number	Description
GS-96	Gradient Touch Thermal Cycler, GS-96, 96 x 0.2ml
GS-2x48	Gradient Touch Thermal Cycler, GS-2x48, 2 x 48 x 0.2ml

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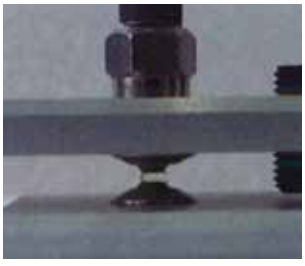
NANO SERIES

ND-2800 NANO DOT Nucleic Acid Analyzer

ND-2800

Pipette 0.3-2.0 μL sample onto pedestal

Make sure the sample is in droplet form



Lower upper arm, check whether it form a liquid column

Overview

NANO DOT ND-2800 Nucleic Acid Analyzer operates at three wavelengths: 230nm, 260nm, 280nm. It is specially designed to analyze concentration and purity of nucleic acid (DNA/RNA) and protein. Samples can be measured by dropping them directly onto the lower measurement pedestal without using absorption cell or cuvette. This instrument required no warm-up after start, and is operated simply and quickly with direct display of samples concentration. The concentration range of samples measured by NANO DOT ND-2800 Nucleic Acid Analyzer is 50 times larger than that measured by the general spectrophotometer.

Features

- Require only 0.3 – 2.0 µL samples!
- No absorption cells, no cuvettes!
- No warm-up!
- Rapid measurement speed!
- Display the concentration directly!
- No dilution required!
- Easy to use!
- Light weight, small foot print!

Specification

Specification Model	ND-2800 Nucleic Acid Analyzer
Wavelength	260nm, 230nm, 280nm
Path length	1.0 mm, 0.2mm
Sample size	0.3-2.0 µL
Light source	Xenon flash lamp
Absorbance precision	0.002 Abs
Absorbance accuracy	1%
Absorbance range	0.02-80 (10mm equivalent absorbance)
Detection range	10 – 4000 ng / µL (dsDNA)
Measurement time	0.5 mg/ml – 110 mg /ml (BSA)
Dimension	5 seconds
Net weight	24 cm x 22 cm x 14 cm
	2.35 kg

Ordering Information

Catalogue Number	Description
ND-2800	NANO DOT Nucleic Acid Analyzer, ND-2800

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Source BioScience

Source BioScience is a world leader in DNA sequencing, genomic services, bioinformatic analyses and provider of a comprehensive portfolio of clones and antibodies for life sciences.

Genomic Services

Source BioScience provides a comprehensive range of genomic services include DNA sequencing, Next Generation Sequencing, Bioinformatics, Genotyping and Gene Expression. The services are supported by leading technology platforms such as Illumina, Affymetrix and Applied Biosystems.
Source BioScience operate to a unique set of quality standards including CPA and GLP/GCP accreditations, as well as being an Illumina CSPro certified supplier.

DNA sequencing

- Sanger sequencing

Next Generation sequencing

- Illumina MiSeq
- Illumina HiSeq 2000
- Roche 454 GS FLX+

Bioinformatics

- Gene expression analysis
- Genotyping analysis
- Sequencing analysis
- Custom data analysis

Genotyping

- Fluidigm EP1™
- Applied Biosystems Taqman SNP
- Microsatellite genotyping
- Affymetrix GeneChip Mapping Arrays

Gene expression

- Affymetrix GeneChip
- Nimblegen
- Agilent SurePrint
- Taqman Real Time PCR
- Illumina BeadArray

Life Science Products

Source BioScience's portfolio comprises the world's largest publicly available clone and antibody collections for research purposes. These products are supported by the innovative, intelligent search engine GenomeCube®, which provides ready access for researchers to over 20 million clones using an array of search terms and common identifiers used in international scientific databases. This clone portfolio represents nearly every known human gene and most other organisms important in biological research and, in addition, over 150,000 antibodies for applications in both research and diagnostics are available through GenomeCube®.

ReSource

- Range of high quality high performance products
- Nucleic acid purification kits including plasmid preparation and gel extraction.

Clones

- Over 20 million clones representing nearly every known gene for most common organisms
- Sequence verification available
- Plasmid preparation service
- Custom project design

Antibodies

- Over 200,000 antibodies
- Excellent characterisation with full performance guarantee