



routine PCR SNPs **genotyping** multiplex PCR **real-time PCR** DNA staining
transfection reagents **high fidelity amplification** cloning **DNA purification**

MOLECULAR **BIOLOGY**

PRODUCT **CATALOG**
2012

 **Feldan**

www.feldan.com

Feldan Molecular Biology Products

Dear Colleague,



Francois Drouin,
Senior Director, Products & Technologies

Feldan has been founded on its capacity to develop and manufacture novel and challenging proteins for the life science Industry. This capacity enables Feldan to manufacture and supply high quality enzymes that are custom-made for our Molecular Biology Product Line and used to isolate, manipulate and amplify DNA.

Feldan's Molecular Biology Products have outstanding efficiency and are distinct for many reasons from those available on the market. Feldan products are manufactured in North America, thus ensuring high purity level and lot-to-lot consistency of our products. The yields achieved when using our products match those of other top quality products on the market, and in most cases even outperform them. Feldan offers all these valuable product benefits at very competitive pricing.

Our product categories offer varying benefits to researchers such as:

DNA Prep Kits: Feldan DNA prep kits are one of the best on the market today. The yield is either equivalent to the best available on the market or better. This category of products include: Plasmid Miniprep, Plasmid DNA Maxiprep, Gel Extraction and PCR Purification.

PCR Enzymes: The only product line in the world to offer only DNA free products. Our PCR enzymes are very effective compared to our competitors and outperform most enzyme products on the market. The peer review journal article from the University

of California in Santa Barbara concluded that Feldan's enzyme is "...one of the best enzymes tested in the study." (Roux-Michollet et al. J Microbiol Methods. 2010 Dec;83(3):312-6. Epub 2010 Sep 29.).

dNTPs: Our high quality dNTPS are enzymatically synthesized. Avoiding all the organic chemicals that could inhibit PCR reactions ensures customers get their results the first time.

DNA Stains: Feldan's goGreen has been formulated to preserve environment and laboratory staff health by avoiding Ethidium Bromide. Available either as a 6X loading buffer or 10000x in-gel staining solution, our goGreen new product line is a good way to ban Ethidium Bromide usage from your lab!

In addition to continually working at keeping our products at competitive prices, our R&D and Product Management teams focus their efforts on keeping our product line aligned with market demands around the world.

Thank you for trusting us to provide the high-quality Molecular Biology products you require. We look forward to serving you in the future.

Kindest regards,

A handwritten signature in black ink, appearing to read 'Francois Drouin', written over a light blue horizontal line.

Francois Drouin,
Senior Director, Products & Technologies
fdrouin@feldan.com

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Useful **Information**

Feldan strives to deliver your product on time everytime

Ordering Online

Order online 24/7. Our Online Ordering System is quick, simple, secure and convenient.

www.feldan.com

Email

Orders: order@feldan.com

General Inquiries: inquiry@feldan.com

Ordering by Phone

Contact one of our Customer Service Representative to place an order by telephone.

CANADA

Toll Free: +1.877.956.7778

UNITED STATE

Toll Free: +1.855.956.7770

INTERNATIONAL

Tel.: +1.418.872.7277

Ordering by Fax

Fax us your Purchase Order.

CANADA

Fax: +1.877.956.7709

UNITED STATE

Fax: +1.855.956.7771

INTERNATIONAL

Fax: +1.418.872.7007

Please include the following information:

- | | |
|--------------------------------|--|
| 1. Institution or Company Name | 5. Name of Purchasing Agent and Department |
| 2. Billing Address | 6. Name and Phone Number of End User |
| 3. Shipping Address | 7. Catalog Number and Product Description |
| 4. Valid Purchase Order number | 8. Quantity and Size of Product |

Useful **Information**

Technical Support

Contact one of our Technical Service Representatives for assistance with product selection or for any other question related to Feldan's Products and Solutions.

CANADA

Toll Free: +1.877.956.7778

UNITED STATE

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Tel.: +1.418.872.7277

24 hours a day - 7 days a week

Email: support@feldan.com

Product & Information Changes

Prices and Conditions are subject to change without notice. Feldan reserves the right to discontinue sales of any product or to change product description and/or formulation at any time without notice to clients. Please visit our website for latest prices and product list.



**FELDAN RESEARCH REAGENTS ARE SUPPLIED
FOR LABORATORY RESEARCH USE ONLY.**

goGreen

A green alternative to Ethidium Bromide

goGreen Loading Buffer 6X

Features

- **Environment and Safety Friendly:**
- No DMSO or harsh chemicals!
- Compatible with UV or blue light transilluminator and common gel systems.
- **Will not affect downstream experiments:** compatible with gel purification kit (9K-006-0001), will not inhibit ligation reaction, etc.
- Cut out DNA bands for sub-cloning under safer blue light: No mutations caused by EB and UV light.
- goGreen is compatible with three common agarose electrophoresis buffers (TAE, TBE and sodium borate)
- **Easy disposal:** Gels in trash can, buffers in sink!
- Available as a 6X Loading Buffer or a 10 000X Gel Stain

Description

goGreen Loading Buffer contains goGreen Nucleic Acid Stain, a highly sensitive fluorescent dye that enables instant Nucleic Acid bands visualization during or immediately after running your agarose gel. After the run, simply place the gel on a standard UV or blue light transilluminator to view nucleic acids bands. No post staining or destaining is required.

Easy to use and versatile: Supplied in either 10 000X Gel Stain or 6X Loading Buffer.

Visualize bands using a blue light or UV transilluminator (no post staining required). You can also monitor moving nucleic acids bands if you place your transparent gel box on top of a blue light transilluminator.

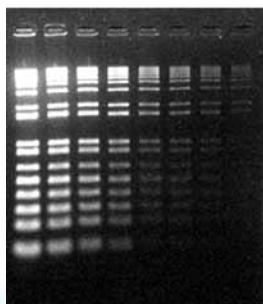
goGreen

Nucleic Acid Gel Stain 10 000X

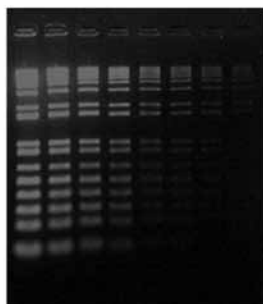
Description

goGreen is a nucleic acid stain for detecting nucleic acids in agarose gel. It can be used for replacing mutagenic ethidium bromide (EB).

Stained with
goGreen



Stained with
Ethidium Bromide (EB)



Cat. No.	Product	Size
9K-009-0002	goGreen Loading Buffer 6X	5mL
9K-009-0001	goGreen Nucleic Acid Gel Stain 10 000X	0.5mL

new

Transfection Reagent

FastFect Transfection Reagent

Because you want the DNA in your cells, not in the medium

Description

FastFect in vitro DNA Transfection Reagent contains a blend of new gene delivery compounds, which greatly facilitate transfection of DNA to various established cell lines as well as primary cells. Use room temperature to thaw FastFect.

If the entire tube can be used within 3 months, store at 4°C. Otherwise aliquot and store at -20°C.

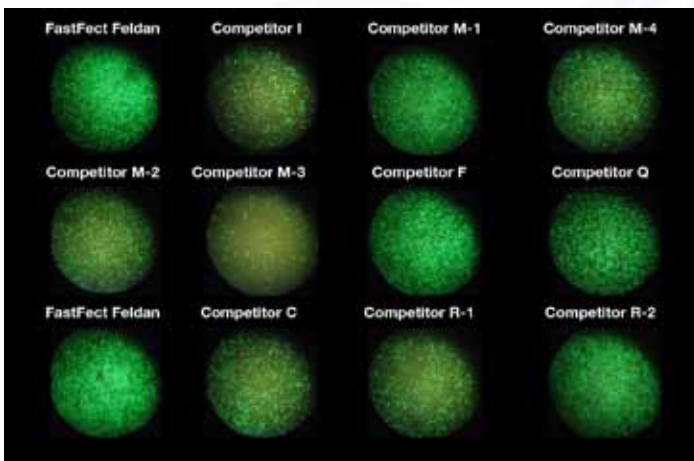
Features

- **Can transfect primary cells!**
- Non-Toxic for cells
- Transfect cells with high efficiency (up to 95% of cells)

Efficient with many cell types

Different cell lines tested with success

3LL	HLMEC	Primary human skin fibroblasts
B16-F10	H-MVEC	SAOS-2
BAEC	Huh-7D12	SHEP
BHK-21	ATT20	SH-SY5Y
Ca Ski	Sfa cells	SiHa
CaCo2	K562	SKOV3
CHO	L929	HUVEC
CLBPEC	MCF-7	IGROV1
COS-7	MDCK	Jurkat
CV-1	Neuro2A	6CSFMEo
D 407	NIH 3T3	
DHD Pro.b	PC12	
HCS-2/8	Primary human keratinocytes	
HEK293	Primary human pre-adipocytes	
HeLa		



The data is courtesy of Professor Kraupp, University of Berlin.

Cat. No.	Product	Size
9K-010-0001	FastFect Transfection Reagent	1mL



Taq DNA Polymerase for Routine PCR

Description

Feldan Taq DNA Polymerase is suitable for routine PCR. It is a thermostable enzyme that can withstand prolonged incubation at temperature up to 95°C without significant loss of activity. This enzyme is purified from the cloned *Thermus aquaticus* DNA Polymerase gene expressed in *E.coli*. It is highly purified for **maximal activity** and is **free of bacterial DNA** through a unique purification system. This PCR system yields 3'-A overhang for easy TA cloning.

Features

Easy and simple PCR optimization with Band Sharpener can make it easy to amplify various kinds of target DNA. Band Sharpener can resolve the PCR issues of high GC contents or complex secondary structures of primers and target DNA.

The included reaction buffer is specially designed for high-yield PCR product amplification.

A high quality of dNTP mixture is included for best results of your work with all 6000U size.

High quality, High purity and low price

5'→3' Exonuclease Activity: Yes

3'→5' Exonuclease Fidelity: No

Amplification size ≤ 5kb PCR

Applications

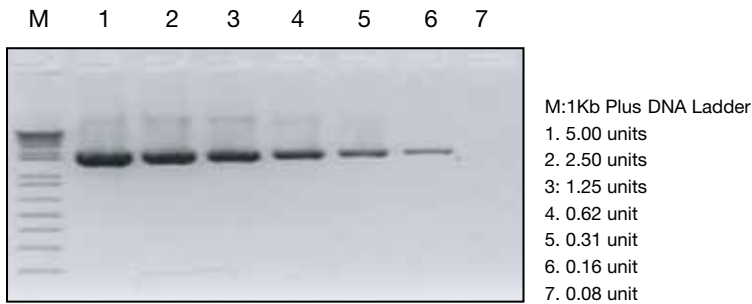
- Routine PCR
- Genotyping
- TA cloning

Cat. No.	Product	Size
9K-001-0001	Taq DNA Polymerase	500U
9K-001-0035	Taq DNA Polymerase	2x 500U
9K-001-0002	Taq DNA Polymerase	3000U
9K-001-0033	Taq DNA Polymerase	2x 3000U
9K-001-0031	Taq DNA Polymerase (with dNTP mix)	500U
9K-001-0032	Taq DNA Polymerase (with dNTP mix)	3000U
9K-001-0018	Taq DNA Polymerase (with dNTP mix)	2x 3000U
9K-001-0034	Taq DNA Polymerase (with dNTP mix)	2x 500U

Taq DNA Polymerase Quality Test - Amplification Sensitivity

High Activity

Activity test by serial enzyme dilution
 Template Human Genomic DNA (100ng)
 Target size 1.9kb
 Amplification cycle: 35 cycles
 Reaction volume: 50µL

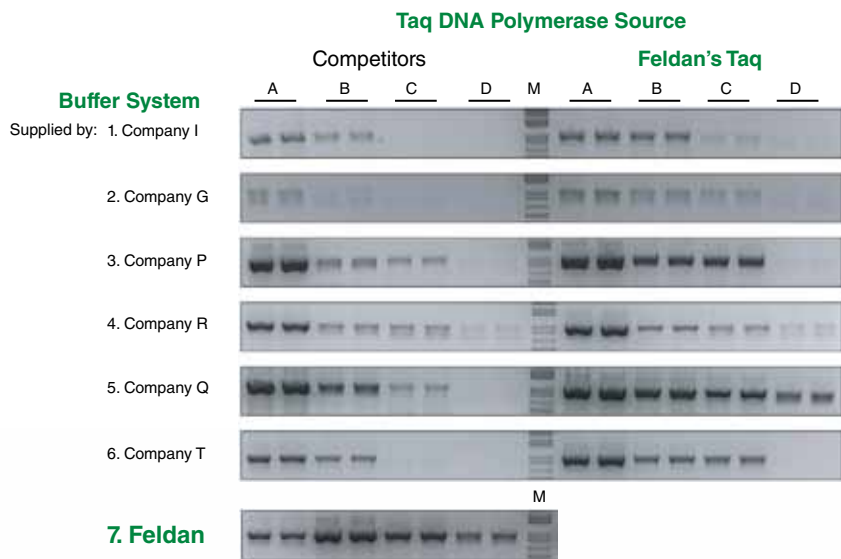


PCR amplification with Feldan Taq DNA Polymerase

Content

- Taq DNA Polymerase (5U/µL)
- 10X Taq reaction buffer (25mM MgCl₂)
- 5X Band Sharpener
- 10mM dNTP mix (optional)

Sensitivity Assay: Unit Quantity of Taq DNA Polymerase

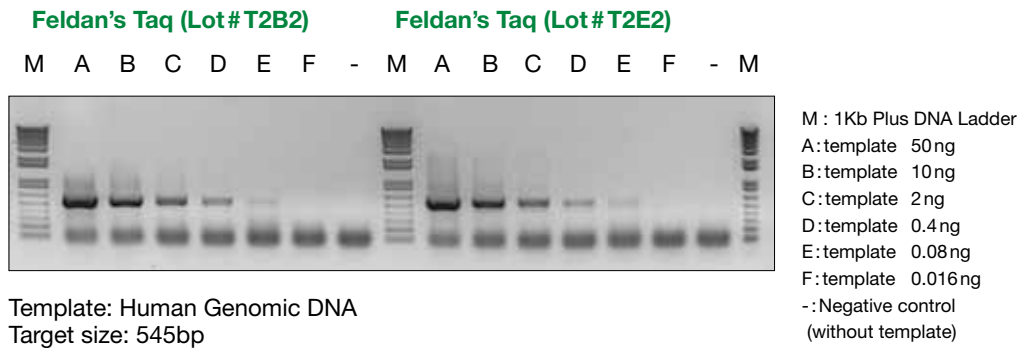


PCR Enzymes

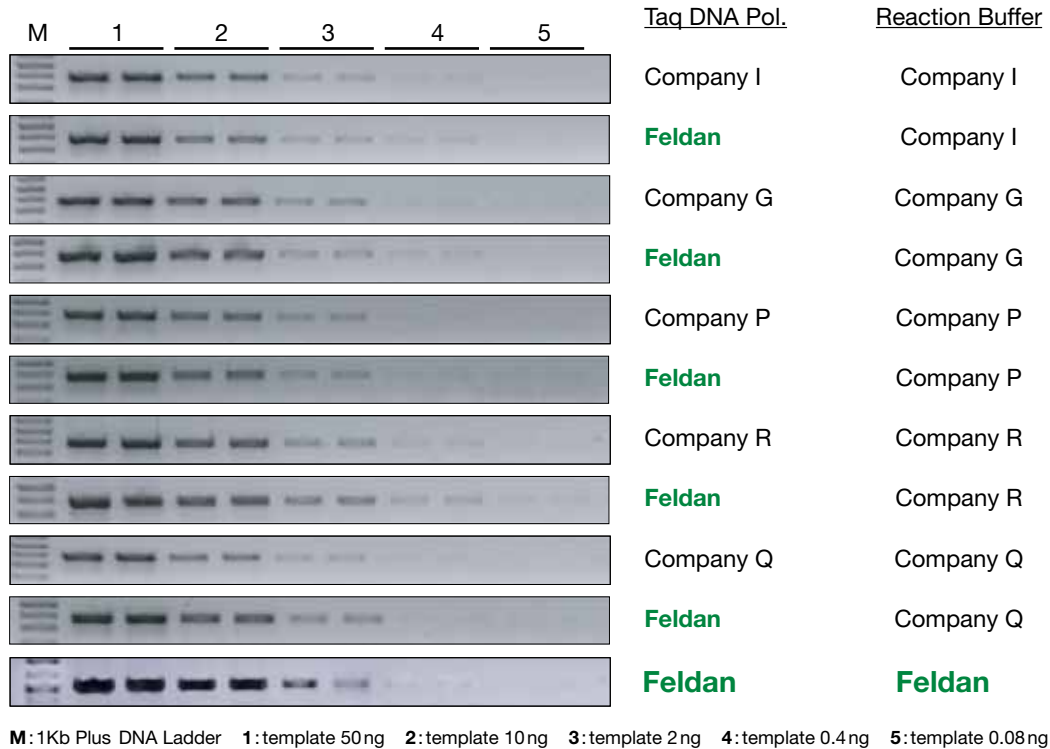
Taq DNA Polymerase

Quality Test - Amplification Sensitivity

Lot to lot consistency



Sensitivity assay: Template quantity



Taq DNA Polymerase Quality Test - Purity



DNA Contamination Assay

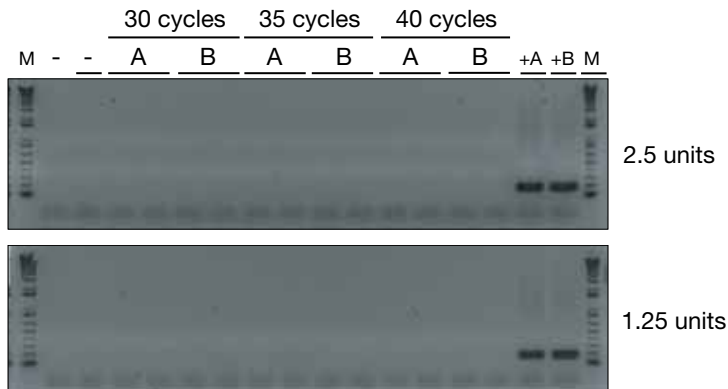
Purity assay detection of contaminating DNA

Template : total DNA of Taq-expressing cell or D.W.

Primer : Gcont-F: 5'-aaa gcc gat cag ggc ttg at-3'

Gcont-R: 5'-gaa agc ctt gat gaa gtc ac-3'

Polymerase Chain Reaction Reaction Mixture (Reaction Volume: 50 µL)	Thermal Cycler (ABI 2700) PCR Condition			# of Cycle(s)
Template (DNA or D.W.)	1.0µL	50°C	3 min	1
Primer mix (F&R, 10pmole/µL each)	2.0µL	95°C	2 min	
10mM dNTP(U) - Mix	1.0µL	95°C	20 sec	30~40
10X Taq reaction buffer	5.0µL	55°C	40 sec	
UDG (1U/µL)	0.5µL	72°C	1 min	
Taq DNA Polymerase	1.25-2.5µL	72°C	3 min	1
D.W. to	50.0µL	4°C	∞	



M: 1Kb Plus DNA Ladder A: Taq (Lot #: T3A9) B: Taq (Lot #: T4A1)

+: positive control (with template and enzyme)

A&B: Test sample (without template, with enzyme)

-: Negative control (without template and enzyme)

Taq DNA Polymerase Premixes

2X Taq PCR Premix

Description

2X Taq PCR Premix Solution is a mix composed of Taq DNA Polymerase and all required components for easy and simple applications of PCR.

PCR reaction can be performed just by adding Template and Primers.

Applications

- Routine PCR
- Genotyping
- TA cloning
- General sequencing

WiseTaq Premix

Description

Taq DNA polymerase is a thermostable DNA polymerase that possesses 5' to 3' polymerase activity. Taq DNA polymerase provides high quality and high value in terms of cost per unit and profit for amplification of < 5kb general PCR as high capacity.

Wise Taq premix is a freeze-dried preparation in 0.2m 8-strip PCR tube with Taq DNA polymerase and all needed reagents for rapid PCR reaction. Simply add Wise buffer, primers set and template.

Cat. No.	Product	Size
9K-002-0005	2X Taq PCR Premix	5mL
9K-002-0039	2X Taq PCR Premix	25mL
9K-002-0028	Wise Taq Premix	96Rx
9K-002-0032	Wise Taq Premix	576Rx

Innovation of Taq DNA Polymerase

Fast-Taq DNA Polymerase

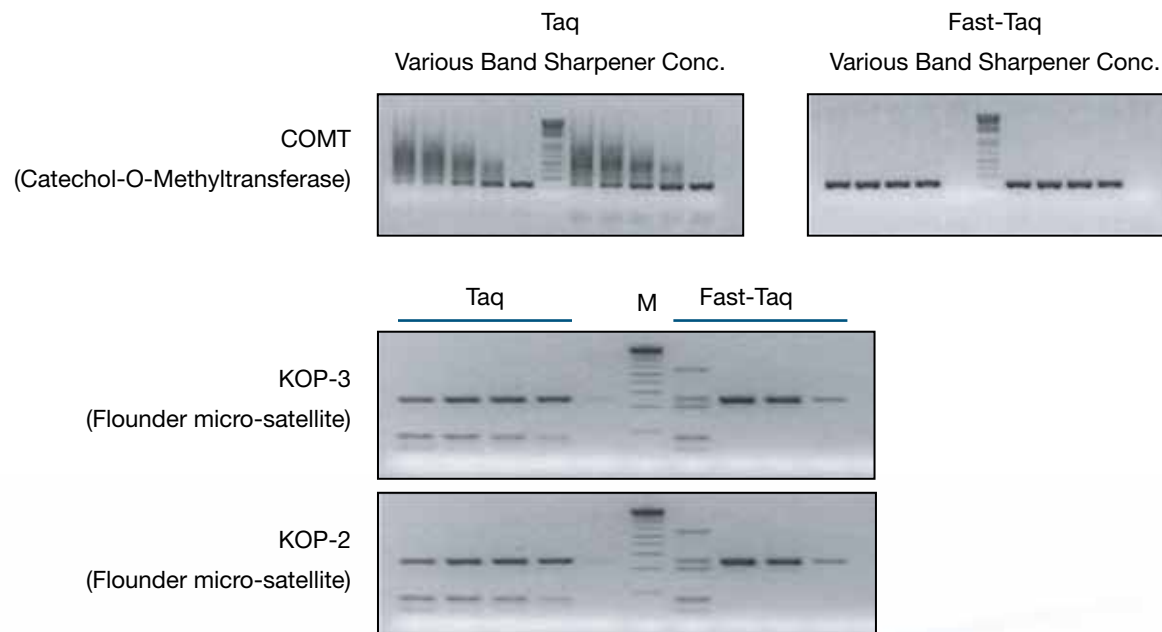
Description

Fast-Taq Polymerase is a modified enzyme of Feldan's Taq DNA Polymerase. The modification **enhances the amplification specificity and minimizes the dimer formation and non-specific PCR products**. With this innovative enzyme, the problematic PCRs due to high GC or secondary structures issues of target DNA could be easily solved. This PCR system yields 3'-A overhang for easy TA cloning.

Fast-Taq

- No need to set-up PCR Buffer
- Suitable for SNP, MS genotyping, Multiplex PCR
- Minimization of Primer dimers
- High specificity and high productivity

Comparison of regular and innovative Taq DNA Polymerase





Fast-Taq DNA Polymerase

High Specificity, High Productivity

Description

Fast-Taq Polymerase is a modified enzyme of Feldan's Taq DNA Polymerase and suitable for routine PCR, MS Genotyping SNP, Multiplex-PCR, etc. The modification enhances the amplification specificity. With this innovative enzyme, the problematic PCRs due to high GC or complex secondary structures of target DNA or primers could be easily solved. This enzyme is highly purified for **maximum activity** and **free of bacterial DNA** through a unique purification system. For easy and stable and productive PCR reactions, high-quality dNTP mixture is included. For optimization of PCR conditions, 5X Band Sharpener solution is also included.

Features

- High quality, High purity, and low price
 - Easy and simple PCR optimization with Band Sharpener can help to amplify various kinds of target DNA. Band Sharpener can resolve the PCR problems of high GC contents or complex secondary structures of primers and target DNA.
 - Clean results by minimized primer dimers and non-specific amplification.
 - The included reaction buffer is specially designed for high-yield PCR production.
 - A high quality of dNTP mixture is included for best result of your work.
- 5'→3' Exonuclease Activity: Yes
- 3'→5' Exonuclease Fidelity: No
- Amplification size ≤ 2kb PCR
- Hot-start activity: yes

Content

- Fast-Taq DNA Polymerase (5U/μL)
- 10X Fast-Taq reaction buffer (15mM MgCl₂)
- 10mM dNTP Mix (each 10mM)
- 5X Band Sharpener

Cat. No.	Product	Size
9K-001-0003	Fast-Taq DNA Polymerase (with buffer, band sharpener, dNTP)	500U
9K-001-0004	Fast-Taq DNA Polymerase (with buffer, band sharpener, dNTP)	5x 500U
Related Product		
9K-001-0013	10X Fast-Taq reaction buffer	5 mL
9K-001-0017	5X Feldan's Band Sharpener	10 mL

Fast-Taq DNA Polymerase Quality Test - Performance Assays

High Activity

Activity test by serial enzyme dilution

Template: Human Genomic DNA 100 ng/μL

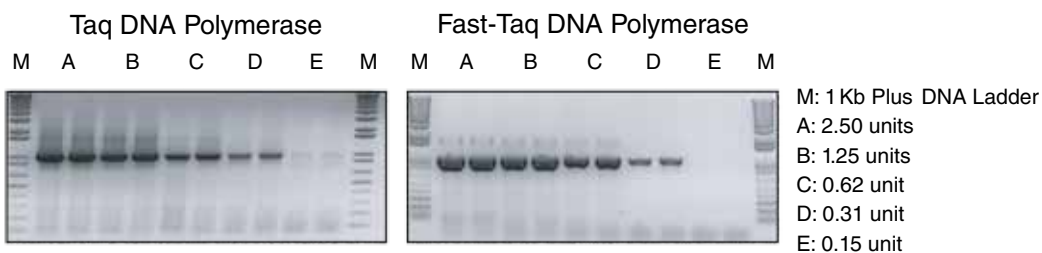
Primer sequence: ApoE-F: 5' -tcg gcc gca ggg cgc tga tgg ac-3'
 ApoE-R: 5' -ccc agg cgc tcg cgg atg gcg c-3'
 SBMA-F: 5' -tcc aga atc tgt tcc aga gcg-3'
 SBMA-R: 5' -gct gtg aag gtt gct gtt cct cat-3'

Polymerase Chain Reaction

Reaction Mixture (Reaction Volume : 50 μL)		PCR Condition (ABI 2700)		# of cycle(s)
DNA Polymerase	0.16 ~2.5U	95°C	2 min	1
10X reaction buffer	5.0μL	95°C	20 sec	
10 mM dNTP-Mix (each 10mM)	1.0μL	65°C	40 sec	40
Primers Mix (F-R 10pmole/μL each)	2.0μL	72°C	1 min	
Template	1.0μL	72°C	3 min	1
D.W. to	50.0μL	8°C	∞	



Comparison of Fast-Taq and Taq DNA Polymerase



High Purity

To examine the contamination of *E.coli* genomic and plasmid DNA in the process of Fast-Taq DNA Polymerase purification, template free PCR was performed by using Fast-Taq DNA Polymerase gene specific primers. **No amplification was detected.**

PCR Enzymes

Fast-Taq DNA Polymerase

Quality Test - Performance Assays

High Sensitivity

Sensitivity test by template dilution

Template: Human Genomic DNA 0.016 ng - 50 ng

Primer: SBMA gene SBMA-F: 5' -tcc aga atc tgt tcc aga gcg -3'
 β-globin SBMA-R: 5' -gct gtg aag gtt gct gtt cct cat -3'
 glo F: 5' -ggg atg ata gtc tga ctt tcc taa cct -3'
 glo R1: 5' -gcc ttc agt cat gcc tag gcc tgc a-3'

Polymerase Chain Reaction

Reaction Mixture (Reaction Volume : 50 μL)		PCR Condition (β-globin)		# of cycle(s)	PCR Condition (SBMA)		# of cycle(s)
DNA Polymerase	1.0μL	95°C	2 min	1	95°C	2 min	1
10X reaction buffer	5.0μL	95°C	20 sec	40	95°C	20 sec	40
10 mM dNTP-Mix (each 10mM)	1.0μL	68°C	40 sec		65°C	40 sec	
Primers Mix (F-R 10pmole/μL each)	2.0μL	68°C	1 min	1	72°C	1 min	
Template	0.16 ~2.5ng	4°C	∞		72°C	3 min	1
D.W. to	50.0μL				4°C	∞	

Sensitivity Assay



Template: Human Genomic DNA 100ng/μL

Primer sequence: glo F 5'-ggg atg ata gtc tga ctt tcc cct-3'
 glo R2-1 : 5'-gat cca ggt tgt cca acg ctg aaa gat-3'

LR DNA Polymerase *for DNA Free Long-Range PCR*

Description

Feldan's LR DNA Polymerase is ideal for long (up to 40 kb) and accurate PCR. It has higher fidelity, productivity and processing ability than Taq DNA Polymerase.

Several special cofactors added to the enzyme enhance the productivity of long PCR. These enzymes are highly purified for maximum activity and free of bacterial DNA through a unique purification system. This PCR system yields 3'-A overhang for easy TA cloning.

Content

- LR DNA Polymerase (2.5U/μL)
- 10X LR reaction buffer (25mM MgCl₂)
- 10mM dNTP Mix (each 10mM)
- 5X Band Sharpener

Features

- High quality, High purity, and low price.
- Easy and simple PCR optimization with Band Sharpener can help to amplify various kinds of target DNA. Band Sharpener can resolve the PCR problems of high GC contents or complicated structures of primers and target DNA.
- The included reaction buffer is specially designed for high-yield PCR production.
- A high quality of dNTP mixture is included for best result of your work. (The quality of dNTP mixture is one of the most critical factor in Long-Range PCR).

5'→3' Exonuclease Activity: Yes

3'→5' Exonuclease Fidelity: Yes (weak)

Amplification size ≤ 40kb PCR

Cat. No.	Product	Size
9K-001-0008	LR DNA Polymerase (with buffer, band sharpener, dNTP)	250U
9K-001-0007	LR DNA Polymerase (with buffer, band sharpener, dNTP)	2x 250U

Related Product

9K-001-0015	10X LR reaction buffer (for Feldan's LR users)	5 mL
9K-001-0017	5X Feldan's Band Sharpener	10 mL

PCR Enzymes

LR DNA Polymerase

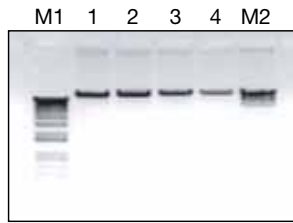
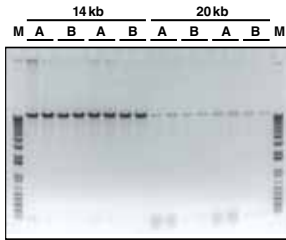
Quality Test - Long Amplification Capacity

Long-range PCR with LR DNA Polymerase

Template : Human Genomic DNA

Target size : 14, 17, 20, 22kb

Amplification : 35 cycles



M1: 1 Kb Plus DNA Ladder

M2: λ DNA / Hind III

1. 14kb

2. 17kb

3. 20kb

4. 22kb

M : 1Kb Plus DNA Ladder

A: 2.5 units B: 1.25 units

Amplification of various size (4, 6, 10, 16kb) of DNA

Polymerase Chain Reaction

Reaction Mixture (Reaction Volume: 50 μ L)

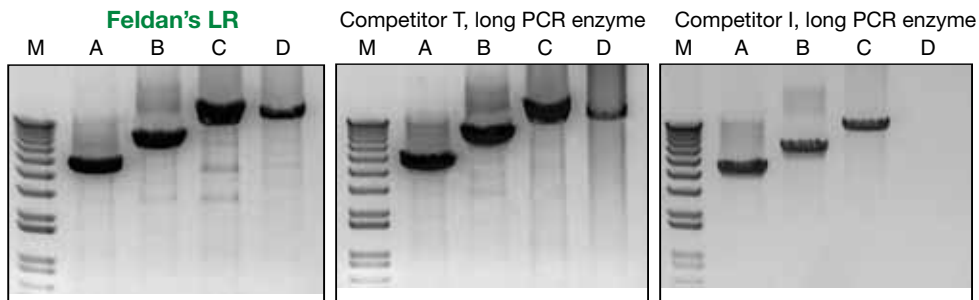
DNA Polymerase	1.25U
10X reaction buffer	5.0 μ L
10mM dNTP-Mix (each 10mM)	1.0 μ L
Primers Mix (F&R 10 pmole/ μ L each)	2.0 μ L
Template (λ DNA)	10ng
D.W. to	50.0 μ L

PCR Condition (ABI 2700)

95°C	2 min
95°C	20 sec
68°C	4 min~16 min
68°C	3 min
4°C	∞

of Cycles

1
30
1



M: 1 Kb Plus DNA Ladder

A: 4 kb

B: 6 kb

C: 10 kb

D: 16 kb

Our LR DNA Polymerase is DNA free!

To examine the contamination of *E. coli* genomic and plasmid DNA in the process of LR DNA Polymerase purification, template free PCR was performed by using LR DNA Polymerase gene specific primers. **No amplification was detected.**

LR DNA Polymerase Quality Test - Activity Assay

Activity test by serial enzyme dilution

Enzyme: Feldan's LR 0.16~2.5 units

Template: Human Genomic DNA 100ng/ μ L

Primer sequence: glo F:5'-ggg atg ata gtc ctt tcc taa cct-3'

glo R2-1:5'-gat cca ggt tgt cca acg ctg aaa gta-3'

Polymerase Chain Reaction

Reaction Mixture (Reaction Volume : 50 μ L)

DNA Polymerase 0.16 ~ 2.5 U

10X reaction buffer 5.0 μ L

10mM dNTP-Mix (each 10mM) 1.0 μ L

Primers Mix (F-R 10pmole/ μ L each) 2.0 μ L

Template 1.0 μ L

D.W. to 50.0 μ L

PCR Condition (ABI 2700) # of Cycle(s)

95°C 2 min 1

95°C 20 sec] 35

68°C 1 min]

68°C 3 min 1

4°C ∞

M A B C D E



M: 1 Kb Plus DNA Ladder

A:2.50 units

B:1.25 units

C:0.62 unit

D:0.31 unit

E:0.16 unit



Pfu DNA Polymerase

for High Fidelity DNA Free PCR

Description

Feldan's Pfu DNA Polymerase is a recombinant type purified from the cloned and engineered *Pyrococcus furiosus* DNA Polymerase expressed in *E.coli*. It is a high-fidelity Polymerase in part due to its intrinsic 3' to 5' exonuclease activity.

The PCR products produced by this enzyme have blunt-ends. This genetically engineered Feldan's Pfu DNA Polymerase has much higher activity and processing ability than other brands of high-fidelity thermostable enzymes.

Content

- Pfu DNA Polymerase (2.5U/ μ L)
- 10X Pfu reaction buffer (25mM MgCl₂)
- 10mM dNTP Mix (each 10mM)
- 5X Band Sharpener

Features

- High quality, High purity, and low price.
- Easy and simple PCR optimization with Band Sharpener can help to amplify various kinds of target DNA. Band Sharpener can resolve the PCR problems of high GC contents or complex structures of primers and target DNA.
- The included reaction buffer is specially designed for high-yield PCR production.
- A high quality of dNTP mixture is included for best result of your work.

- DNA free!

5'→3' Exonuclease Activity: Yes

3'→5' Exonuclease Fidelity: Yes

Cat. No.	Product	Size
9K-001-0010	Pfu DNA Polymerase (with buffer, band sharpener, dNTP)	250U
9K-001-0009	Pfu DNA Polymerase (with buffer, band sharpener, dNTP)	500U

Related Product

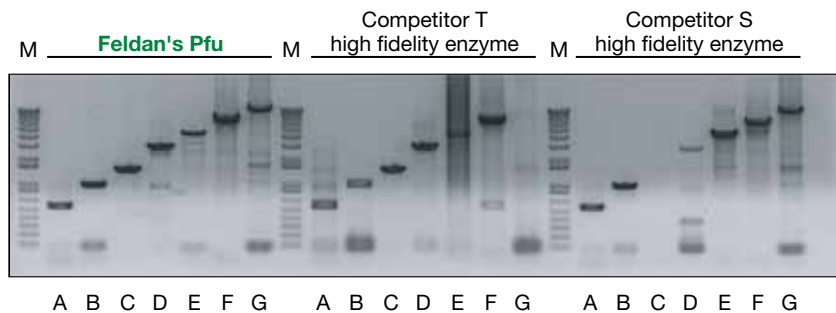
9K-001-0016	10X Pfu reaction buffer (for Feldan's Pfu Taq users)	5 mL
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Pfu DNA Polymerase Quality Test - Amplification Capacity

Comparative Quality Test of High-fidelity PCR enzymes

Enzyme: 1.25U/50 μ L reaction

- | | |
|---|---------------------------------|
| A. 500 bp (68°C 3min 30 cycles)
Human Genomic DNA 100 ng | Primer: GloF1/R1 |
| B. 1.2 kb (68°C 3min 30 cycles)
Human Genomic DNA 100 ng | Primer: GloF1/R2-1 |
| C. 1.5 kb (62°C 3min 35 cycles)
<i>Corynebacterium</i> chr 50 ng | Primer: 2123F/2123R |
| D. 3.0 kb (62°C 6min 35 cycles)
<i>Corynebacterium</i> chr 50 ng | Primer: 0247F/0247R |
| E. 4.0 kb (68°C 12min 30 cycles)
Phage λ DNA 1 ng | Primer: λ 20076F/24320R |
| F. 6.0 kb (68°C 12min 30 cycles)
Phage λ DNA 1 ng | Primer: λ 24210F/30211R |
| G. 10 kb (68°C 20min 30 cycles)
Phage λ DNA 1 ng | Primer: λ 20076F/30211R |



PCR Enzymes

Pfu DNA Polymerase

Quality Test - Amplification Capacity

High Activity

Activity test by serial enzyme dilution

Enzyme: Feldan's Pfu 2.5~0.3 unit

Template: Human Genomic DNA 100ng/ μ L

Primer sequence: glo F: 5'-ggg atg ata gtc tga ctt tcc taa-3'

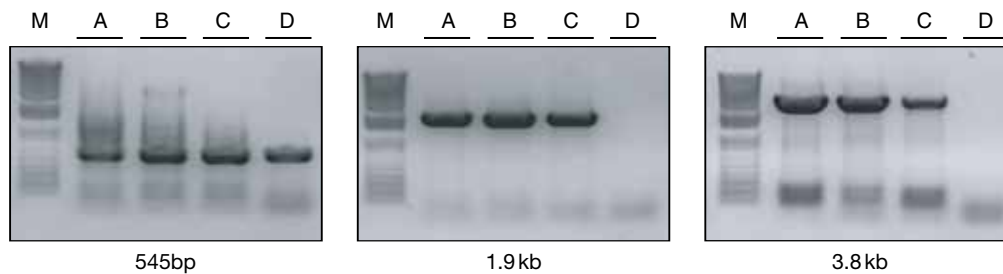
glo R1: 5'-gcc ttc agt cat gcc tag gcc tgc a-3'

glo R3: 5'-ggg gag cag tcc cat gta gta gta g-3'

glo R5: 5'-gga gag ctc aga cca tct gac ttc t-3'

Polymerase Chain Reaction

Reaction Mixture (Reaction Volume : 50 μ L)		PCR Condition	# of Cycle(s)	
DNA Polymerase	2.5 ~ 0.3 U	95°C	2 min	1
10X reaction buffer	5.0 μ L	95°C	20 sec	40
10mM dNTP-Mix (each 10mM)	1.0 μ L	65°C	40 sec	
Primers Mix (F-R 10pmole/ μ L each)	2.0 μ L	72°C	1 min	
Template	1.0 μ L	72°C	3 min	1
D.W. to	50.0 μ L	4°C	∞	



M: 1 Kb Plus DNA Ladder

A: 2.5units B: 1.25 units C: 0.62 unit D: 0.31 unit

Pfu DNA Polymerase Quality Test - Sensitivity Assay

Template sensitivity assay

Enzyme: Feldan's Pfu

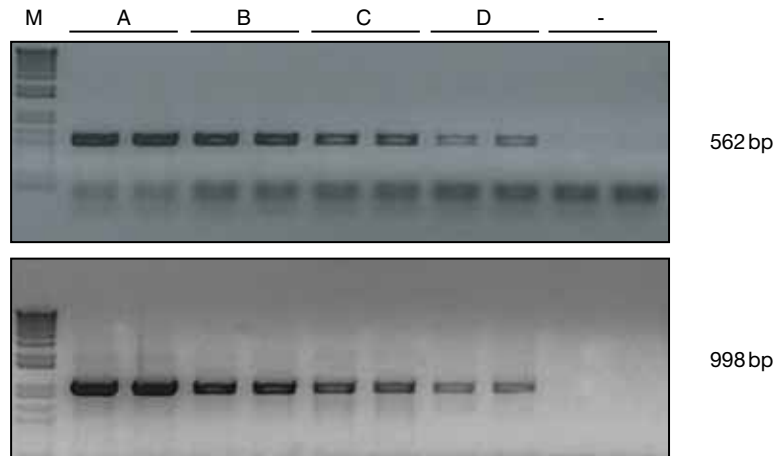
Template: Human Genomic DNA 0.4 ~ 50ng

Primer sequence: glo F-1: 5'-cgt ctg tgt cct gct ctg gga tga t-3'

glo R1: 5'-gcc ttc agt cat gcc tag gcc tgc a-3'

glo R2-1: 5'-gat cca ggt tgt cca acg ctg aaa gta-3'

Reaction Mixture (Reaction Volume : 50 μ L)		PCR Condition		# of Cycle(s)
Template	0.4 ~ 50 ng	95°C	2 min	1
Primers mix (10pmole / μ L each)	5.0 μ L	95°C	20 sec] 30
10mM dNTP-Mix (each 10mM)	1.0 μ L	68°C	2 min	
10X reaction buffer	2.0 μ L	68°C	5 min	1
Pfu DNA Polymerase (2.5 unit/ μ L)	0.5 μ L	4°C	∞	
D.W. to	50.0 μ L			



M: 1 Kb Plus DNA Ladder

A: Template 50ng

B: Template 10ng

C: Template 2ng

D: Template 0.4ng

-: Negative control



Fast Pfu

Extreme Fidelity, Extreme Speed and DNA Free

Description

Fast-Pfu is an enzyme improved from Feldan's Pfu DNA Polymerase.

It shows extreme fidelity: 3 times higher fidelity and it processes 4 to 6 times faster compared to Feldan Pfu DNA Polymerase.

Fast-Pfu is most suitable to faithful amplification of relatively long-ranged target for cloning and fast PCR with its high speed and its great accuracy.

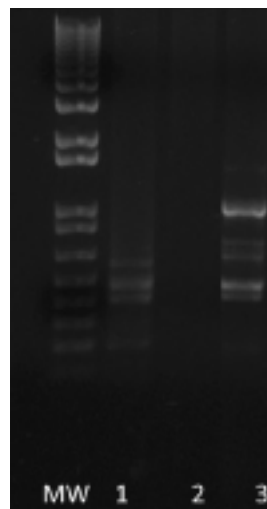
Features

- High processivity 2-4kb/min.
- Long range PCR up to 20kb
- Extreme fidelity (1 error per 3.9 millions base pare)
- **DNA free polymerase!**

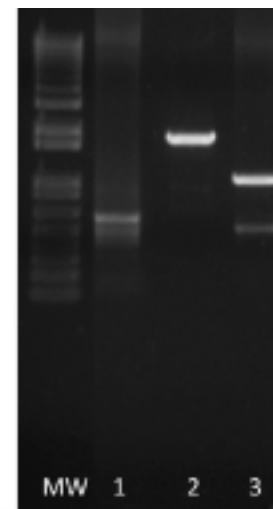
Applications

- Site-directed mutagenesis
- Long plasmid site-directed mutagenesis
- Gene cloning and protein expression

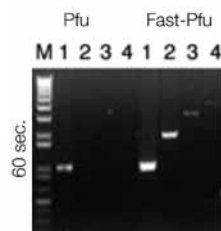
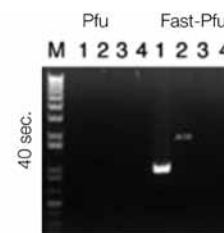
Sensitivity Assay of Fast-Pfu DNA Polymerase



Competitors B



Feldan's Fast-Pfu



Cat. No.	Product	Size
9K-001-0022	Fast-Pfu with 10mM dNTP Mix	250U
9K-001-0023	Fast-Pfu with 10mM dNTP Mix	2x 250U

DNA-Free Real Time PCR

When you can't afford False-Positive

Description

Feldan's DNA-Free Real-time PCR is designed to perform rapid & accurate real-time quantification of target DNA. The supplied DNA stain EvaGreen™ dye combined to our enzyme, Fast-Taq, enable highly specific and rapid PCR results.

Since the EvaGreen dye is also supplied in a distinct vial, the real-time PCR kit can also be used with dyes compatible on your Real-Time PCR machine.

Optimal 10x Real-time PCR reaction buffer and innovative 5x Band Sharpener can also increase the specific detection of low copy of template DNA or RNA and accurate detection of a wide range of template origin.

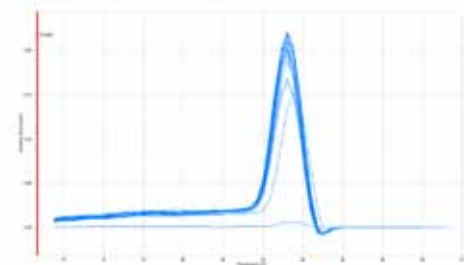
Features

- No need for new optimization round, freely replace SybrGreen for EvaGreen
- Based on INTERCALATING and SATURATING Dye EvaGreen
- Everything needed to perform the qPCR reaction included (polymerase, dNTPS, Buffer, EvaGreen)
- Also available as premix

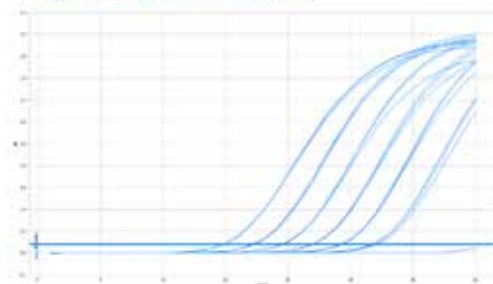
Applications

- High Resolution Melting Analysis (HRM)
- Real-time PCR (qPCR)

High Sensitivity



High Reproducibility



Cat. No.	Product	Size
9K-008-0006	Real-Time PCR Kit with 10mM dNTP Mix	500Rx
9K-008-0007	Real-Time PCR Kit with 10mM dNTP Mix	2x 500Rx
9K-008-0002	Real-Time PCR Premix	400Rx

High quality dNTP

Description

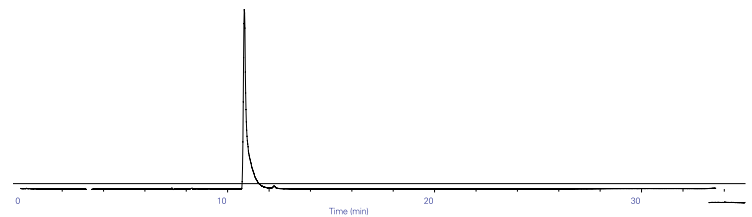
Feldan's dNTPs are enzymatically synthesized deoxy-nucleotides. The enzymatic manufacturing process provides ultra pure nucleotides without PCR inhibiting contaminants that could be generated from chemical processes.

These ultra pure dNTPs enhance the performance and sensitivity of your PCR (long PCR, high fidelity PCR, real-time PCR), RT-PCR, sequencing, DNA footprinting experiments etc. The guaranteed purity of each nucleotides is > 98% by HPLC analysis.

Cat. No.	Product	Size	Price (CAD)
9K-003-0006	dNTP Mix (10mM each)	1 mL	165.00
9K-003-0007	dNTP Set (100mM each)	4*1 mL	535.00

High Purity

HPLC plot of purified dCTP
Purity : >99%



Long-Range PCR Test Assay

Template: Human Genomic DNA

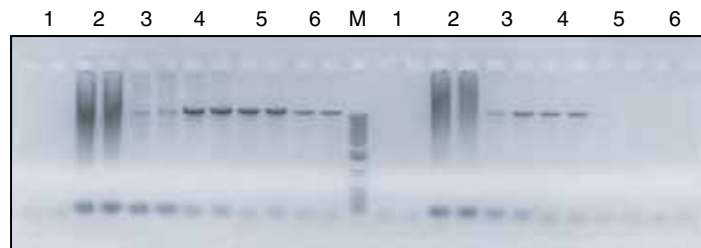
DNA Polymerase:

LR DNA Polymerase (1.25 units)

Target-Size: 14kb

Reaction Cycles: 30 cycles

dNTPs: 25µL of each 0 ~ 25mM dNTPs



Feldan

Company G

M: 1 Kb Plus DNA Ladder
1: 0mM dNTPs
2: 5mM dNTPs
3: 10mM dNTPs
4: 15mM dNTPs
5: 20mM dNTPs
6: 25mM dNTPs

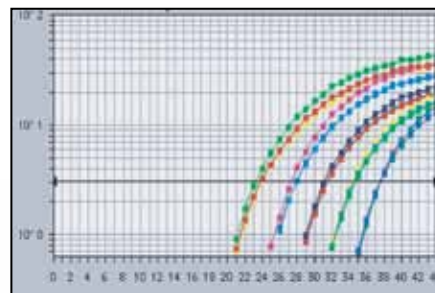
Real-Time PCR

Template: Human Genomic DNA

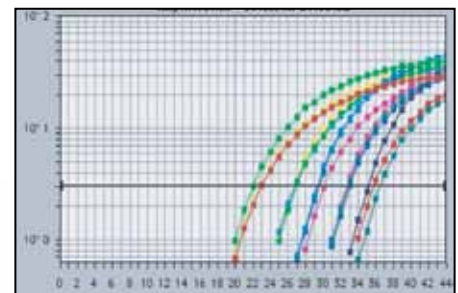
(100ng to 1pg)

Kit: FAM & TAMRA Labelled Taq-Man probe

Target: beta-Actin



Feldan



Company G

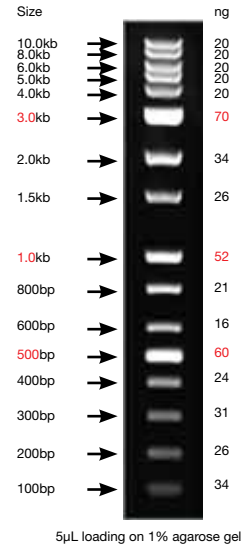
1Kb Plus DNA Ladder

Description

The 1 Kb Plus DNA Ladder is suitable for sizing double-stranded DNA fragments. Ready to use in loading buffer.

Usage information

Recommended loading: 3-5 μL /lane
Band Size Range: 100-10,000bp
Total DNA Concentration 0.1 $\mu\text{g}/\mu\text{L}$



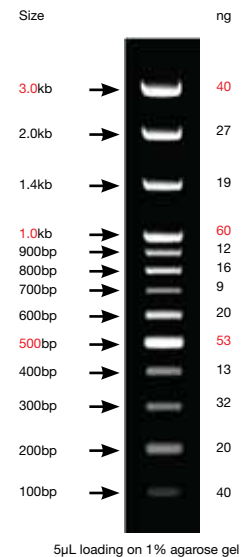
100bp Plus DNA Ladder

Description

The 100 bp Plus DNA Ladder is suitable for sizing double-stranded DNA fragments, ranged from 100bp to 1kb. Ready to use in loading buffer.

Usage information

Recommended loading: 3-5 μL /lane
Band Size Range: 100-3,000bp
Total DNA concentration 72ng/ μL



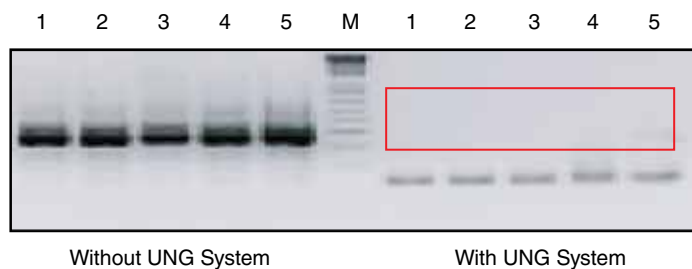
Cat. No.	Product	Size
9K-004-0001	1 Kb Plus DNA Ladder	0.5 mL (125+ lanes)
9K-004-0002	100 bp Plus DNA Ladder	0.5 mL (165+ lanes)

Molecular Biology Enzymes

Uracil DNA Glycosylase

Description

Feldan's Uracil-DNA glycosylase (UNG) is a purified *E.coli* enzyme catalyzing hydrolysis of N-glycosylic bond between the uracil and sugar, leaving an apyrimidinic site in uracil-containing single or double-stranded DNA. UNG is fully active at 50°C but can be easily heat-inactivated above 65°C. This enzyme can be used in PCR to eliminate of carryover contamination.



Template :U-template DNA
Target:Hepatitis B Virus (HBV:450bp)
PCR cycles:30 cycles
M: 1 Kb Plus DNA Ladder
1 ~ 5 :Different HBV Samples

Cat. No.	Product	Size
9K-005-0001	Uracil DNA glycosylase	1000 U
Related Product		
9K-001-0001	Taq DNA Polymerase	500 U

T4 DNA Ligase

for Efficient and Rapid Ligation

Description

A recombinant protein purified from *E.coli* strain carrying a plasmid with the cloned gene encoding this enzyme. T4 DNA ligase catalyzes the joining of two strands of DNA between the juxtaposed 5'-phosphate and the 3'-hydroxyl groups.

DNA fragments may have either blunt or cohesive ends. T4 DNA Ligase catalyses the joining of RNA to either DNA or RNA strands in duplex molecule, but will not join single-stranded nucleic acids.

Applications

- Joining double-stranded DNA with cohesive or blunt end.
- Joining linker or adaptors to blunt-ended DNA.
- Repairing nicks in duplex DNA, RNA or DNA-RNA hybrids.

Cat. No.	Product	Size
9K-005-0002	T4 DNA Ligase (400U/μL)	40,000 U

Plasmid Miniprep Kit for rapid isolation of high quality plasmid

Description

Feldan Plasmid Miniprep Kit designed for rapid isolation of high-quality & high-quantity plasmids. The principle of plasmid purification of this kit is based on the alkaline-lysis method and the binding properties of DNA on the silica-gel membrane. The high-quality plasmid isolated from this kit is adequate for routine molecular biology applications such as automated sequencing, cloning, PCR, in vitro transcription, transfection experiment, etc. Feldan's Plasmid Miniprep Kit is also specially designed for high yield isolation of low-copy plasmids and much larger size of circular DNA such as Cosmid or BAC clones.

- Spin column type
- Binding capacity : 25µg DNA/column
- Recovery yield above 80%

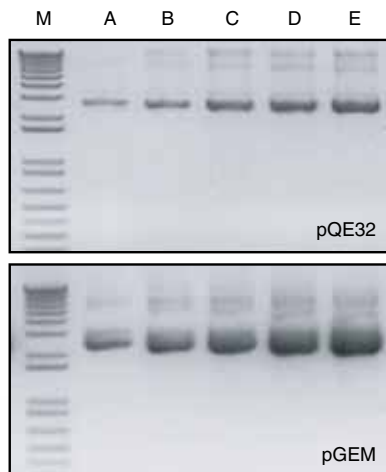
Features

- Spin-column type
- High level prep yield
- Enzyme/sequencing grade.
- Applicable to the purification of low copy or large plasmid such as BAC clone plasmids.

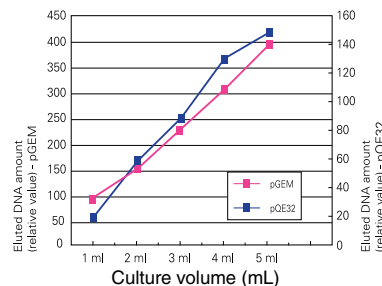
Content

FBM1 : Resuspension solution
 FBM2 : Cell lysis solution
 FBM3 : Neutralization solution
 W1 buffer : Washing buffer 1
 W2 buffer : Washing buffer 2
 EB buffer : Elution Buffer
 Columns and 2mL Collection Tubes

Purification of plasmids (pGEM, pQE32) from various volume of cultured cell



M: 1 size marker A: 1mL of *E. coli* culture
 B: 2mL of *E. coli* culture C: 3mL of *E. coli* culture
 D: 4mL of *E. coli* culture E: 5mL of *E. coli* culture



Spectro-photometer
 Quantification (pQE32)

A : 20ng/µL
 B : 60ng/µL
 C : 90ng/µL
 D : 130ng/µL
 E : 150ng/µL

Spectro-photometer
 Quantification (pGEM)

A : 90ng/µL
 B : 150ng/µL
 C : 230ng/µL
 D : 310ng/µL
 E : 395ng/µL

DNA Prep Kits

Plasmid Miniprep Kit

Quality Test - Purification Capacity & Quality

Comparison of Feldan mini prep kit with other brand

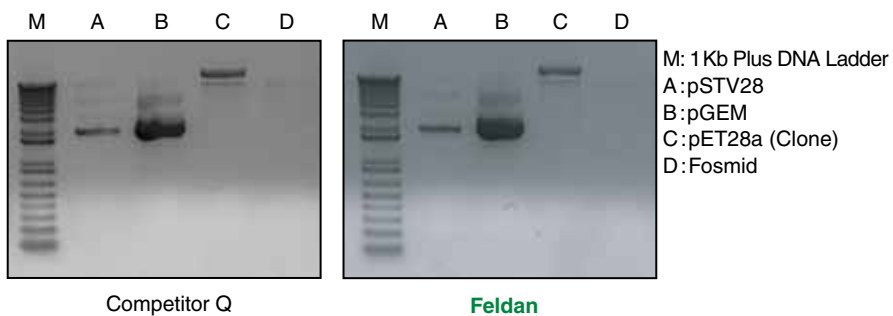
Target DNA : pSTV28, pGEM, pET-28A (Clone), Fosmid

→ Overnight culture cell 3mL harvest

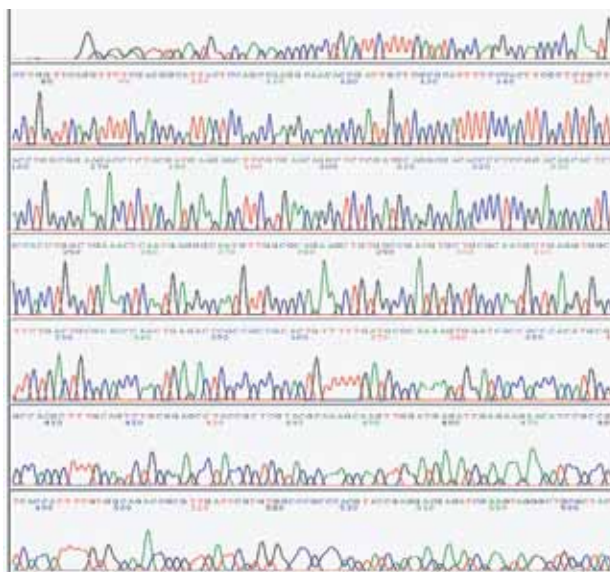
→ Protocol : plasmid prep

→ EB 50µL elution

→ 1% Agarose gel 1µL loading



Sequencing



Cat. No.	Product	Size
9K-006-0009	Plasmid Miniprep kit	100 preps
9K-006-0010	Plasmid Miniprep kit	200 preps

Plasmid DNA Maxiprep

for large scale rapid isolation of high quality plasmid

Description

Feldan Plasmid DNA Maxiprep Kit is designed for rapid and efficient extraction of high quality plasmid DNA. Following a gravity-flow procedure, the plasmid DNA is bound to the resin and the contaminants are removed.

After using this convenient kit, the purified plasmid DNA is adequate for any downstream applications such as transfection, in vitro transcription and translation and all enzymatic modifications.

Applications

The purified plasmid DNA can be used immediately in any downstream application:

- Transfection
- Microinjection
- In vitro transcription
- Restriction Enzyme digestion

Content

- FBMX1 : Resuspension buffer
- FBMX2 : Cell lysis buffer
- FBMX3 : Neutralisation buffer
- FBMXEQ : Column Equilibration buffer
- FBMXW : Washing buffer
- FBMXE : Elution buffer
- FBMX Column

Cat. No.	Product	Size
9K-006-0023	Plasmid DNA Maxiprep	10 preps
9K-006-0026	Plasmid DNA Maxiprep	30 preps

Gel Extraction Kit

for high yield DNA isolation from agarose gel

Description

Feldan Gel Extraction Kit is designed for high-yield & high-quality isolation of any type of DNA (linear or circular, size of 100bp ~ 15kb) from an agarose gel after gel electrophoresis.

This kit is adequate for preparation of high quality DNA for automated sequencing, cloning, fluorescent or radioactive labeling, in vitro transcription and other molecular biology applications.

Features

- DNA purification from agarose gel (Spin column type)
- High yield, high purity DNA purification (up to 25µg)
- High quality purification of DNA from 100bp to 15kb.
- Maximum gel slice: 200mg

Content

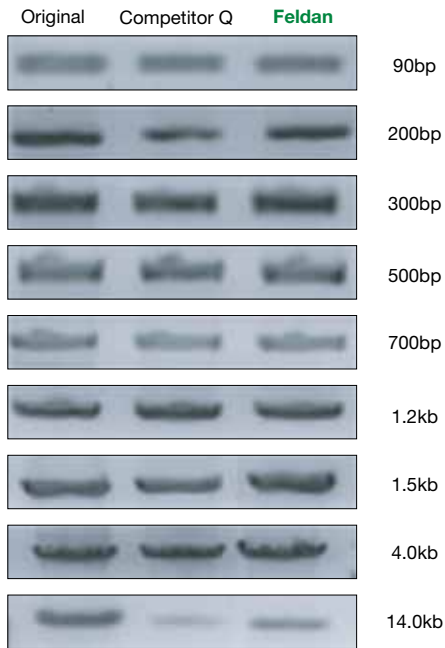
FBG1 : Gel extraction buffer

WB : Washing buffer

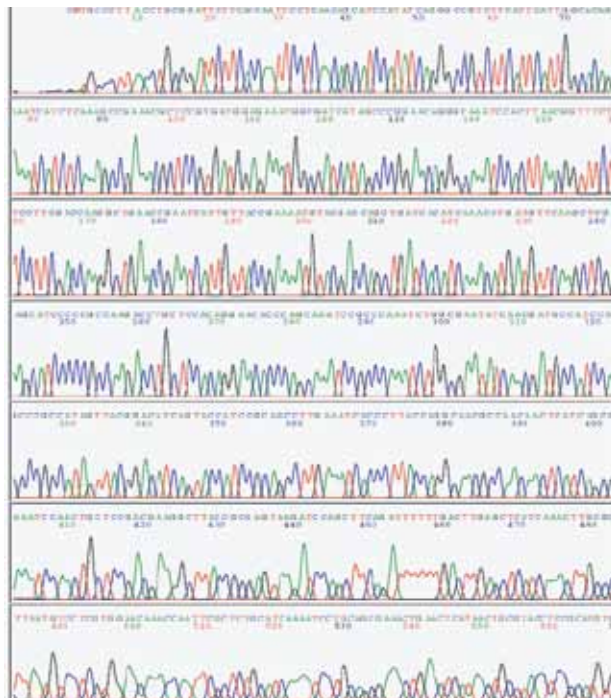
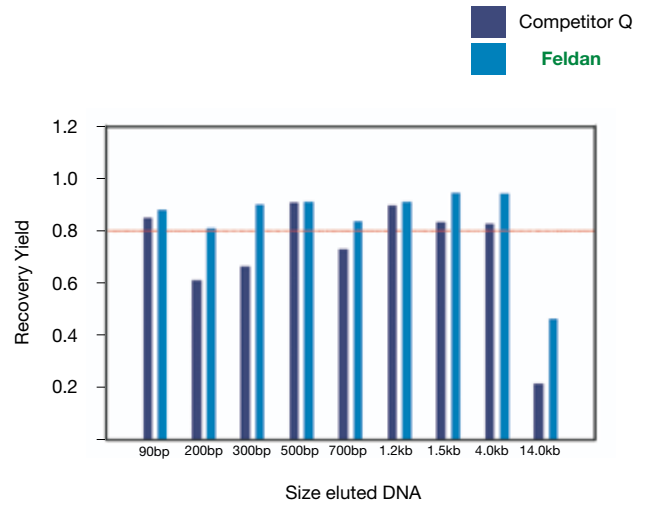
EB : Elution buffer

Columns with 2mL Collection Tubes and
1.5mL Elution Tubes

Cat. No.	Product	Size
9K-006-0001	Gel Extraction kit	100 preps
9K-006-0002	Gel Extraction kit	200 preps



Comparative Quality Test



Sequencing

PCR Purification Kit

for DNA cleanup from PCR and other enzymatic reaction

Description

Feldan PCR Purification Kit is designed for rapid and high-yield cleanup DNA from PCR and other enzymatic reaction mixtures. The high purity DNA isolated using this kit is adequate for any molecular biology applications.

Features

- One-step DNA clean-up from PCR or other enzymatic reactions. (Spin column type)
- Applicable to broad range size (from 100bp to 15kb)
- Average recovery: (>90% up to 25µg)
- Efficient Removal of Primer dimers

Content

FBP: PCR purification buffer

WB: Washing buffer

EB: Elution buffer

Columns with 2mL Collection Tubes and
1.5mL Elution Tubes

Cat. No.	Product	Size
9K-006-0003	PCR Purification Kit	100 preps
9K-006-0004	PCR Purification Kit	200 preps

Genomic DNA Prep Kits

Genomic DNA Prep Kit

Description

Feldan's Genomic DNA Prep Kit is designed for convenient and fast isolation of genomic DNA from samples. Because phenol or chloroform is not used it is safe and does not produce any harmful waste. The solution based system minimizes the DNA fragmentation that would be the problem in other spin-column/filtration based method.

Features

- Fast & High yield
- No phenol, No chloroform
- High quality, less fragmentation
- Low cost & Highest services
- Available in 2 sizes (400Rx and 3300Rx)

Available Kits

- Blood and Cell Culture
- Bacteria
- Plants
- Animal Tissue and Fungi
- Yeast

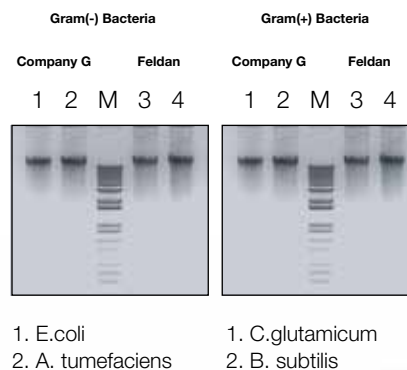
Comparative Quality Test

Blood (Yield 30~50ug/mL)



0.3mL blood sample genomic DNA
100µL Loading.
Load: 1µL (lane 1), 0.5µL (lane 2), 0.25µL (lane 3)
and 0.125 µL (lane 4).

Bacteria (Yield 40µg/mL)

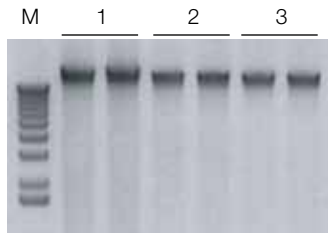


Genomic DNA Prep Kits

Genomic DNA Prep Kits

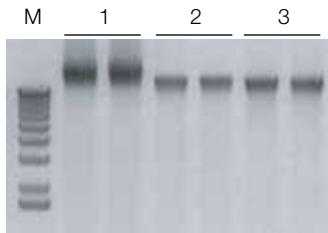
Plants (Yield 0.25µg/mL)

Black Bean



M : 1kb Plus DNA Ladder 1. Feldan 2. Supplier A 3. Supplier B

Yellow Bean



Animal tissue. Yield of purification



1: E.coli 2-5: Mouse Tail

Yeast / Fungi (Yield 10µg/mL)

Yeast



1 : Without Lytic Enzyme
2-5 : With Feldan Lytic Enzyme

Fungi



1 : *E.coli* 2 : Fungi FN 14
3 : Fungi FN 15 4 : Fungi FN 16
5 : Fungi FN 17

Cat. No.	Product	Size
9K-006-0013	Genomic DNA Prep Kit for Blood	400Rx
9K-006-0018	Genomic DNA Prep Kit for Blood	3300 Rx
9K-006-0014	Genomic DNA Prep Kit for Bacteria	400Rx
9K-006-0019	Genomic DNA Prep Kit for Bacteria	3300 Rx
9K-006-0015	Genomic DNA Prep Kit for Plants	400Rx
9K-006-0020	Genomic DNA Prep Kit for Plants	3300 Rx
9K-006-0016	Genomic DNA Prep Kit for Animal tissue and Fungi	400Rx
9K-006-0021	Genomic DNA Prep Kit for Animal tissue and Fungi	3300 Rx
9K-006-0017	Genomic DNA Prep Kit for Yeast	400Rx
9K-006-0022	Genomic DNA Prep Kit for Yeast	3300 Rx

Index of Products

DNA Stains

Cat. No.	Product	Size
9K-009-0002	goGreen Loading Buffer 6X	5mL
9K-009-0001	goGreen Nucleic Acid Gel Stain 10 000X	0.5mL

Transfection Reagent

Cat. No.	Product	Size
9K-010-0001	FastFect Transfection Reagent	1mL

PCR Enzymes

Cat. No.	Product	Size
9K-001-0001	Taq DNA Polymerase	500U
9K-001-0035	Taq DNA Polymerase	2x 500U
9K-001-0002	Taq DNA Polymerase	3000U
9K-001-0033	Taq DNA Polymerase	2x 3000U
9K-001-0031	Taq DNA Polymerase (with dNTP mix)	500U
9K-001-0032	Taq DNA Polymerase (with dNTP mix)	3000U
9K-001-0018	Taq DNA Polymerase (with dNTP mix)	2x 3000U
9K-001-0034	Taq DNA Polymerase (with dNTP mix)	2x 500U
9K-001-0003	Fast-Taq DNA Polymerase (with buffer, band sharpener, dNTP)	500U
9K-001-0004	Fast-Taq DNA Polymerase (with buffer, band sharpener, dNTP)	2500U
9K-001-0013	10X Fast-Taq reaction buffer	5mL

PCR Enzymes

Cat. No.	Product	Size
9K-001-0008	LR DNA Polymerase (with buffer, band sharpener, dNTP)	250U
9K-001-0007	LR DNA Polymerase (with buffer, band sharpener, dNTP)	2x 250U
9K-001-0015	10X LR reaction buffer (for Feldan's LR users)	5mL
9K-001-0010	Pfu DNA Polymerase (with buffer, band sharpener, dNTP)	250U
9K-001-0009	Pfu DNA Polymerase (with buffer, band sharpener, dNTP)	500U
9K-001-0016	10X Pfu reaction buffer (for Feldan's Pfu Taq users)	5 mL
9K-001-0022	Fast-Pfu with 10mM dNTP Mix	250U
9K-001-0023	Fast-Pfu with 10mM dNTP Mix	2x 250U
9K-008-0006	Real-Time PCR Kit with 10mM dNTP Mix	500Rx
9K-008-0007	Real-Time PCR Kit with 10mM dNTP Mix	2x 500Rx
9K-008-0002	Real-Time PCR Premix	400Rx

DNA Prep Kits

Cat. No.	Product	Size
9K-006-0009	Plasmid DNA Miniprep	100 preps
9K-006-0010	Plasmid DNA Miniprep	200 preps
9K-006-0023	Plasmid DNA Maxiprep	10 preps
9K-006-0026	Plasmid DNA Maxiprep	30 preps
9K-006-0001	Gel Extraction kit	100 preps
9K-006-0002	Gel Extraction kit	200 preps
9K-006-0003	PCR Purification Kit	100 preps
9K-006-0004	PCR Purification Kit	200 preps

Index of Products

Taq DNA Polymerase Primixes

Cat. No.	Product	Size
9K-002-0005	2X Taq PCR Premix	5mL
9K-002-0039	2X Taq PCR Premix	25mL
9K-002-0028	Wise Taq Premix	96Rx
9K-002-0032	Wise Taq Premix	576Rx

DNA Size Makers

Cat. No.	Product	Size
9K-004-0001	1 Kb Plus DNA Ladder	0.5 mL (125+lanes)
9K-004-0002	100bp Plus DNA Ladder	0.5 mL (165+lanes)

Molecular Biology Enzymes

Cat. No.	Product	Size
9K-005-0001	Uracil DNA glycosylase	1000 U
9K-005-0002	T4 DNA Ligase (400U/ μ L)	40,000 U

Genomic DNA Prep Kits

Cat. No.	Product	Size
9K-006-0013	Genomic DNA Prep Kit for Blood	400Rx
9K-006-0018	Genomic DNA Prep Kit for Blood	3300 Rx
9K-006-0014	Genomic DNA Prep Kit for Bacteria	400Rx
9K-006-0019	Genomic DNA Prep Kit for Bacteria	3300 Rx
9K-006-0015	Genomic DNA Prep Kit for Plants	400Rx
9K-006-0020	Genomic DNA Prep Kit for Plants	3300 Rx
9K-006-0016	Genomic DNA Prep Kit for Animal tissue and Fungi	400Rx
9K-006-0021	Genomic DNA Prep Kit for Animal tissue and Fungi	3300 Rx
9K-006-0017	Genomic DNA Prep Kit for Yeast	400Rx
9K-006-0022	Genomic DNA Prep Kit for Yeast	3300 Rx

Please visit our website to locate Feldan's Worldwide offices
or to view our complete list of products.

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