



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

各種樣品來源純化 / 濃縮 DNA 的最佳工具

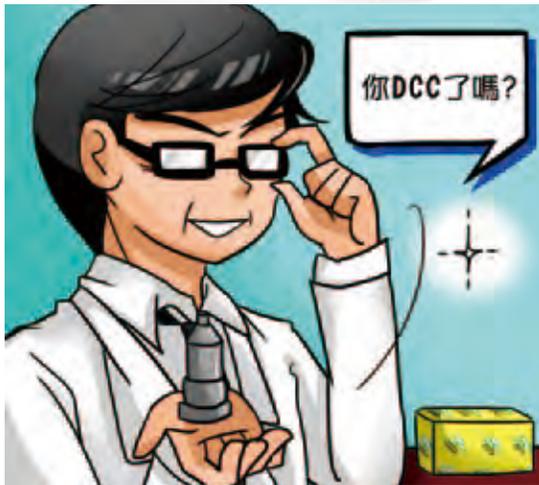
DNA Clean & Concentrator

DCC 系列產品



DCC
讓您笑嘻嘻！

U/A/UV040121

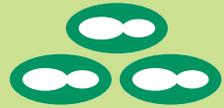


當DNA不純，會影響ligation效率。
使用DCC，能有效去除鹽類等雜質，
有品質的DNA，實驗才會成功喔～

DCC 讓您笑嘻嘻！



翌日.....



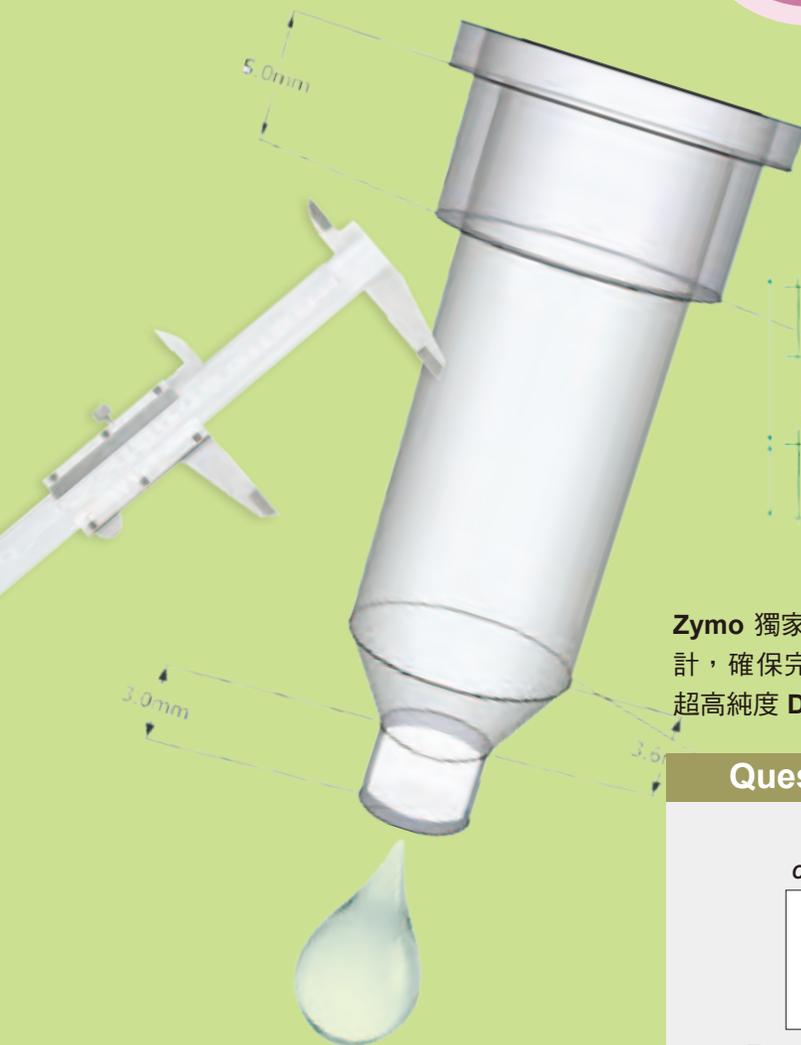
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Zymo 獨家先進技術

Clean-Spin Technology

超完美 spin column 設計
純化超高純度 DNA !



PURITY
by
DESIGN

Zymo 獨家先進技術，超完美 spin column 的設計，確保完全的 elution，零 buffer 殘留，純化超高純度 DNA !

Question Your Spin Column!



Zymo-Spin™ Column

VS.



Supplier Q

實驗常見問題

DNA ligation/cloning
總是做不出來

PCR efficiency 差
一直 p 不出來

qPCR
失敗

DNA 定序
失敗

可能原因

這可能是因為 DNA 不純，含有過多的 inhibitors，像是鹽類 (例：guanidinium、KCl、NaCl)、ionic detergents (例：sodium deoxycholate、sarkosyl、SDS)、alcohols (ethanol、isopropanol、phenol)，這些 PCR inhibitors 通常會透過和 DNA 作用或抑制 DNA polymerase，影響放大反應。另外，不純的純化過程，可能殘留 polyphenols (例：melanin 或 humic acid)，會與 Mg^{2+} 整合，影響 PCR。

Inhibitor 可能的來源

存在於原本的樣本 (例：組織、血液、土壤、植物等等)
DNA 純化過程仍無法完全移除
DNA 純化過程所造成的

解決方法

使用 **Zymo DCC** 系列產品，將 inhibitor 或雜質完全移除，純化超高純度 DNA，方便進行後續實驗。



DCC

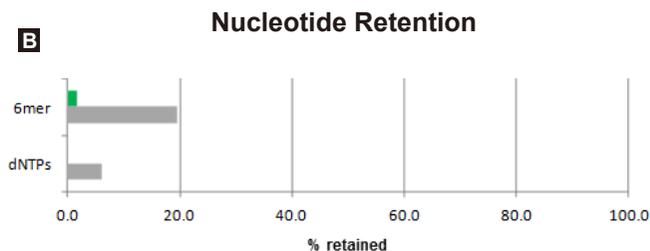
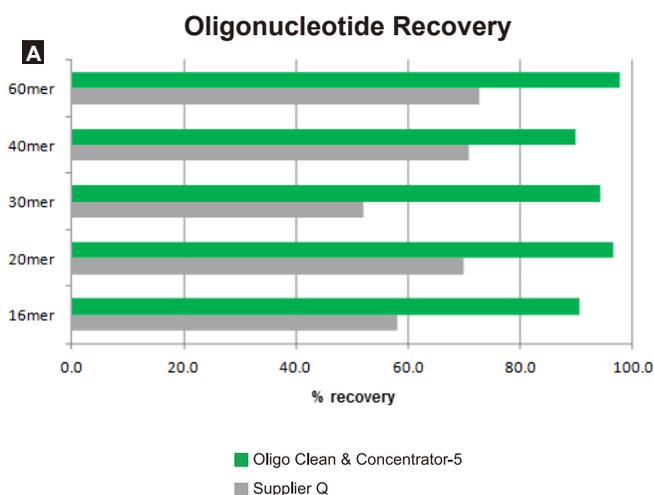
讓您笑嘻嘻！

Oligo Clean-up

Oligo Clean & Concentrator™

- 快速：僅需 2 分鐘就能從 labeling 反應 (radioactive、biotin、DIG 等) 或其他酵素反應純化高純度 DNA oligonucleotides (≥ 16 nt)，完全移除 enzymes、nucleotides、dyes、salts
- 濃縮：DNA 回收體積最少僅需 6 μ l
- 純化後的 DNA 適用於 PCR、probe hybridization、sequencing、ligation 等等實驗

Oligo Clean & Concentrator™ 的 recovery 量高，能取得 > 90% DNA oligonucleotides，並有效移除 short oligo (< 6 mer) 及 nucleotide



The Oligo Clean & Concentrator™ facilitates >90% recovery of ssDNA oligonucleotides (A) and efficient short oligo and nucleotide removal (B).

RNA 也適用喔！

品名	Oligo Clean & Concentrator™
貨號	D4060 (50 rxns) D4061 (200 rxns)
DNA size	≥ 16 nt, up to 23 kb
Binding capacity	5 μ g
Elution volume	≥ 6 μ l
Processing time	2 min

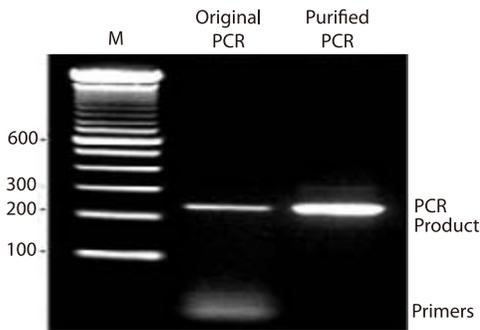
DNA purification from PCR & Enzymatic Reactions

DNA Clean & Concentrator™

DCC™

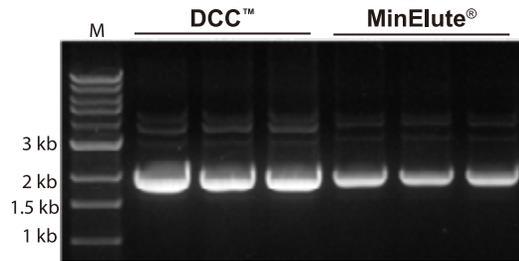
- 快速：僅需 2 分鐘就能從 PCR 產物純化高純度 DNA
- 濃縮：DNA 回收體積最少僅需 6 μl
- 純化後的 DNA 適用於 ligation、sequencing、labeling、PCR、microarray、transformation、restriction enzyme digestion 等等實驗

使用 DCC，能有效率的純化並濃縮 DNA



DNA amplicons can be efficiently purified and concentrated using the DCC™.

DCC 純化 DNA 的效率優異



High efficiency DNA recovery using the DCC™-5. Equivalent amounts of DNA were purified using the DCC™-5 or MinElute® Kit and analyzed by electrophoresis in a 0.8% (w/v) agarose/TAE/EtBr gel

讚!



ILLUMINA 推薦在 Nextera™ Sample Prep 及 Infinium® HD FFPE Restore 流程，使用 DNA Clean & Concentrator™

NUGEN 推薦在 WT-Ovation™ Pico RNA Amplification System 流程，使用 DNA Clean & Concentrator™-25 純化 amplified cDNA

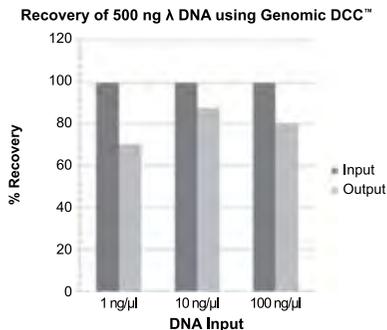
品名	DNA Clean & Concentrator™-5	DNA Clean & Concentrator™-25	DNA Clean & Concentrator™-100	DNA Clean & Concentrator™-500
貨號	D4013 (50 rxns) D4014 (200 rxns)	D4033 (50 rxns) D4034 (200 rxns)	D4029 (25 rxns) D4030 (50 rxns)	D4031 (10 rxns) D4032 (20 rxns)
DNA size	50 bp-23 kb	50 bp-23 kb	50 bp-23 kb	50 bp-23 kb
Binding capacity	5 μg	25 μg	100 μg	500 μg
Elution volume	≥ 6 μl	≥ 25 μl	≥ 150 μl	≥ 2 ml
Processing time	2 min	2 min	15 min	25 min

Genomic and large DNA Clean-up

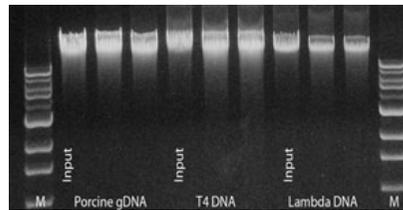
Genomic DNA Clean & Concentrator™

- 快速：僅需 5 分鐘就能從酵素反應 (例：Proteinase K digestion) 純化大片段 DNA (例：genomic, mitochondrial, BAC/PAC, viral, phage, WGA DNA)
- 濃縮：DNA 回收體積最少僅需 10 µl
- 純化後的 DNA 適用於 PCR、restriction endonuclease digestion、Sanger、Next-Gen sequencing 等等實驗

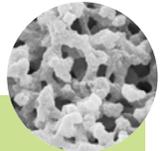
Genomic DNA Clean & Concentrator™ 能有效純化大片段 DNA



Lambda phage DNA. λ DNA (48.5 kb) is effectively recovered from various concentrations of starting material using the Genomic DCC™.



High molecular weight DNA is efficiently purified using the Genomic DCC™. Porcine gDNA (~35-50 kb), T4 phage DNA (170 kb), and lambda phage DNA (48.5 kb) were purified using the Genomic DCC™. Samples are resolved in a 0.8% TAE/agarose/EtBr gel. The size marker "M" is a 1 kb ladder (Zymo Research).



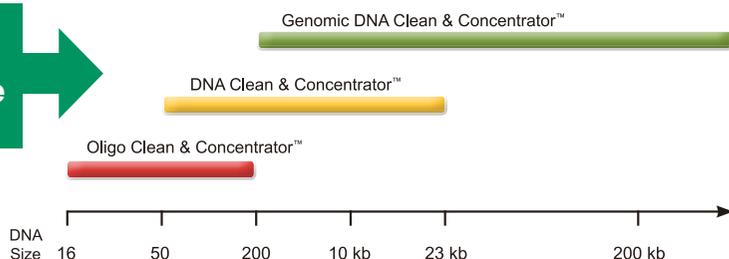
讚!



Genomic DNA Clean & Concentrator™ 中的 column 的電子顯微照片，顯示 column matrix 孔徑一致，可結合高分子量 DNA (最多 10 µg)。

Illumina 推薦在 Nextera™ DNA Sample Prep kit 之前，使用 Genomic DNA Clean & Concentrator™ 純化 DNA，確保其品質。

DCC 產品
selection guide



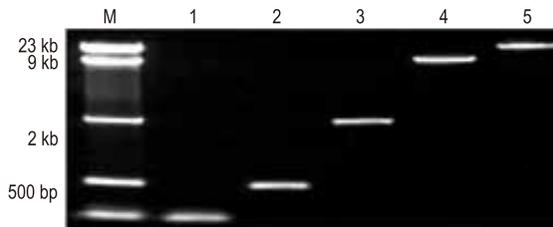
品名	Genomic DNA Clean & Concentrator™
貨號	D4010 (25 rxns) D4011 (100 rxns)
DNA size	50 bp-200 kb
Binding capacity	10 µg
Elution volume	≥ 10 µl
Processing time	5 min

Boost DNA Recoveries from Agarose Gels to > 80%

Zymoclean™ Gel DNA Recovery Kit

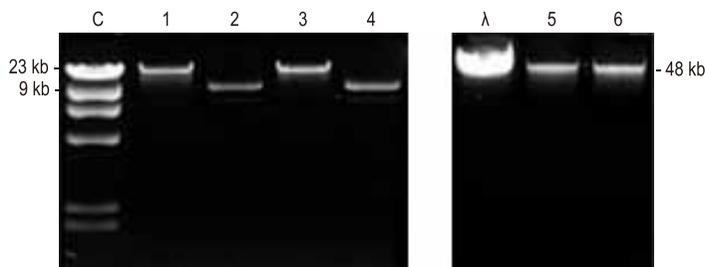
- DNA 回收率高：50 bp - 10 kb，回收率 70-90%；11 kb - 23 kb，回收率 50-70%
- 快速：僅需 15 分鐘就能從 agarose gel 純化高純度 DNA
- 濃縮：DNA 回收體積最少僅需 6 µl
- 純化後的 DNA 適用於 DNA ligation、sequencing、labeling、PCR、microarrays、transformation、restriction digestion 等等實驗
- 亦有可純化大片段 DNA (> 20 kb) 的試劑

不同長度的 DNA 皆可有效從膠體回收



DNA fragments recovered from an agarose gel using the Zymoclean™ Gel DNA Recovery Kit. Lanes: M: DNA Ladder; 1-5: individual ladder DNA fragments.

超大片段 DNA 也可有效回收



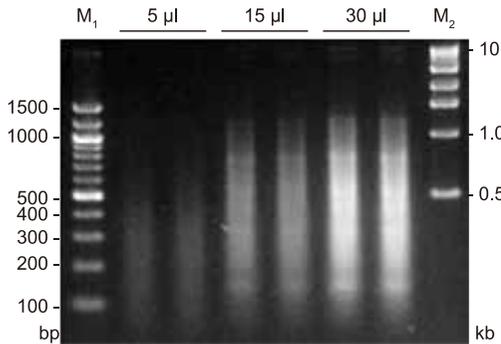
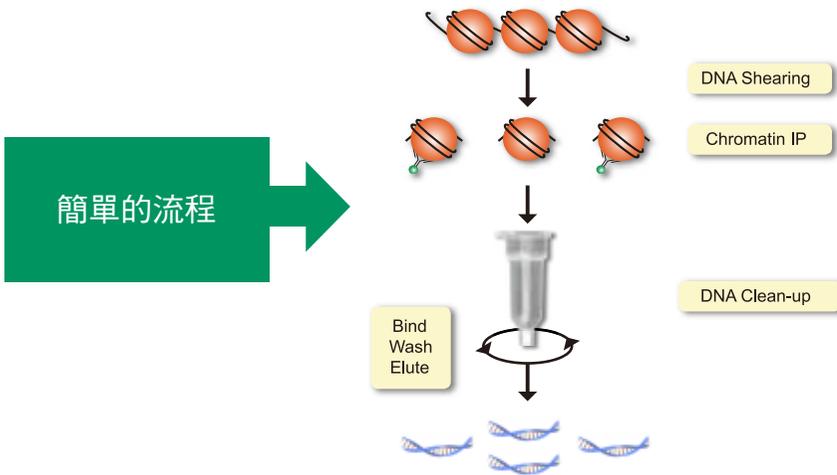
Recovery of large DNA fragments. The Zymoclean™ Large Fragment DNA Recovery Kit was used to recover λ DNA digested with HindIII and separated by agarose gel electrophoresis. Lane C: λ -HindIII digest; lanes 1 & 3: recovered 23 kb λ -HindIII fragments; lanes 2 & 4: recovered 9 kb λ -HindIII fragments. Lane λ : intact λ phage DNA; lanes 5, 6: intact λ ~48 kb bands.

品名	Zymoclean™ Gel DNA Recovery Kit	Zymoclean™ Large Fragment DNA Recovery Kit
貨號	D4007 (50 rxns) D4008 (200 rxns)	D4045 (25 rxns) D4046 (100 rxns)
DNA size	50 bp-23 kb	50 bp-200 kb
Binding capacity	5 µg	10 µg
Elution volume	≥ 6 µl	≥ 10 µl
Processing time	15 min	15 min

ChIP DNA Purification

ChIP DNA Clean & Concentrator™

- 快速：僅需 2 分鐘就能從 ChIP assay 純化高純度 DNA，也可用於 cell lysates、proteinase K digestion 樣本、PCR 及其他酵素反應
- 濃縮：DNA 回收體積最少僅需 6 μ l
- 純化後的 DNA 適用於 PCR、arrays、DNA quantification、Southern blot、sequencing 等等實驗
- 不需使用有機溶劑或酒精沉澱



從 cell lysates 純化高純度 DNA

Agarose gel electrophoresis of DNA isolated from cell lysates. High quality DNA can be efficiently recovered from *Saccharomyces cerevisiae* cell lysates using the ChIP DNA Clean and Concentrator™. Duplicate purifications were performed with 5, 15 and 30 μ l cell lysate and an equal volume of eluted DNA was loaded into each lane. The size marker M1 and M2 are 100 bp and 1 kb ladders, respectively (Zymo Research).

品名	ChIP DNA Clean & Concentrator™
貨號	D5205
DNA size	50 bp-23 kb
Binding capacity	5 μ g
Elution volume	\geq 6 μ l
Processing time	2 min

Watch the DCC™ Video!



DNA Too Dirty for PCR? Clean it with OneStep!

OneStep™ PCR Inhibitor Removal Kit

- 去除 inhibitors，包含 polyphenolics、humic/fulvic acids、tannins、melanin
- 快速、方便純化不純的 DNA 樣本，後續適合 PCR、sequencing、RT 等實驗

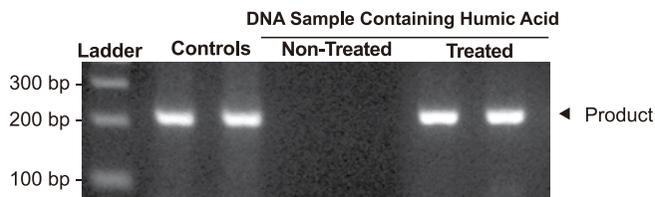


只需單一步驟

約 5 分鐘就能輕鬆取得 inhibitor-free DNA

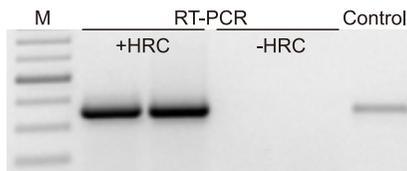
加樣本→離心→取得純淨 DNA (或 RNA)

使用此產品能去除 humic acid，成功進行 PCR



DNA is efficiently amplified by PCR following humic acid removal with the OneStep™ PCR Inhibitor Removal Kit. The figure shows amplification of a 200 bp product from DNA containing humic acid that was treated with the kit. The ladder is a 100 bp DNA marker (Zymo Research).

從爛泥分離的 RNA，經此產品處理後，能成功進行 PCR

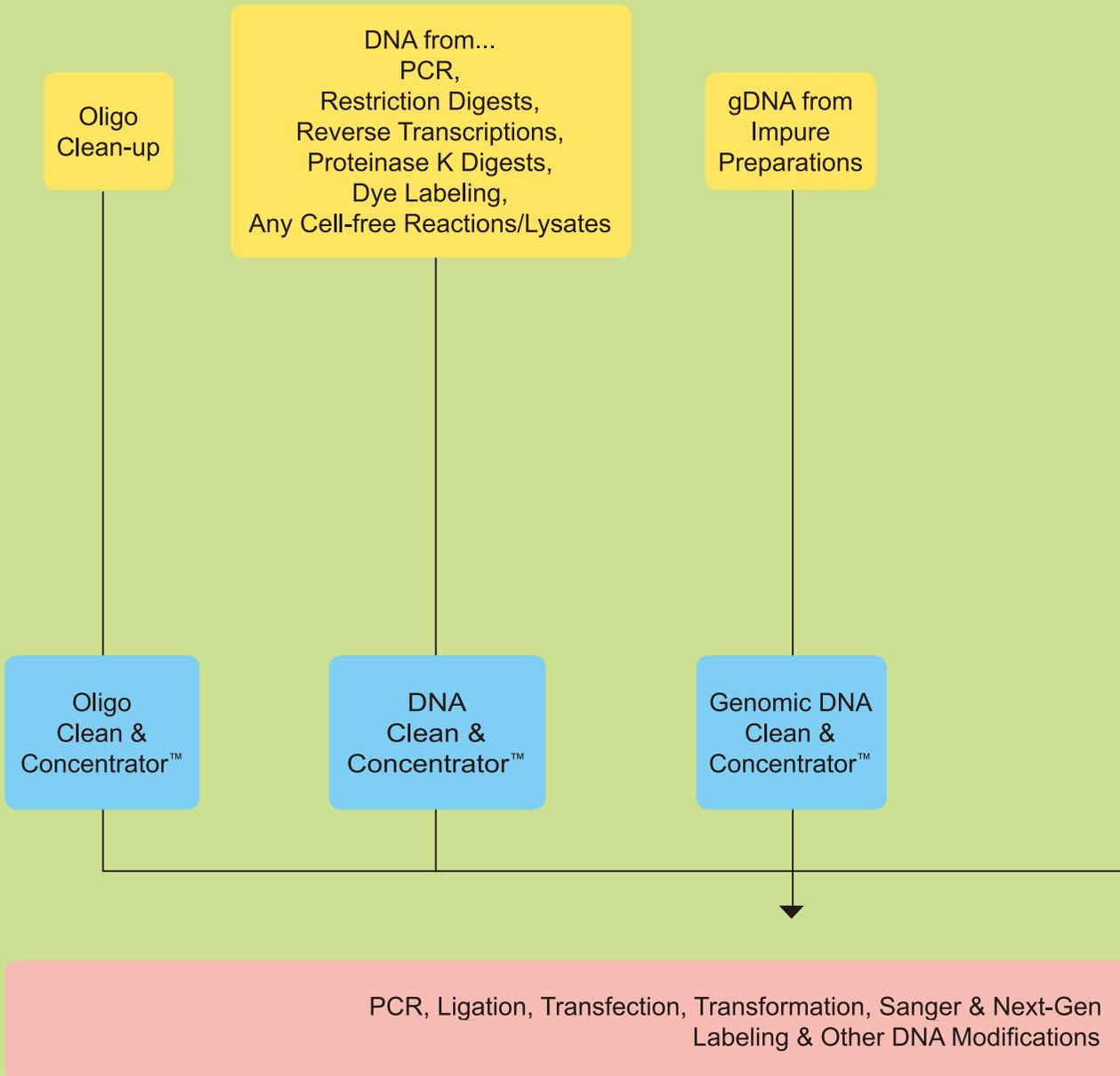


PCR amplification of an eukaryotic transcript (post-RT): Total RNA isolated from sludge with or without inclusion of the Zymo-Spin™ IV-HRC Spin Filter. M is a 1 kb DNA Marker (Zymo Research).



品名	OneStep™ PCR Inhibitor Removal Kit
貨號	D6030
Elution volume	50-200 µl
Processing time	5 min

DNA Clean-up Guide



今天 **DCC** 了嗎？
試試看！
您會發現 **DCC** 是好物！

DNA from
Agarose Gels

PCR Inhibitor
Removal Including ...
Polyphenolics
Humic Acids
Fulvic Acids
Tannins
Melanin

DNA from
ChIP

Zymoclean
Gel DNA
Recovery Kit™

Large Fragment
Zymoclean
Gel DNA
Recovery Kit™

OneStep™
PCR Inhibitor
Removal Kit

ChIP DNA
Clean &
Concentrator™

Sequencing, Restriction Digests, Arrays,

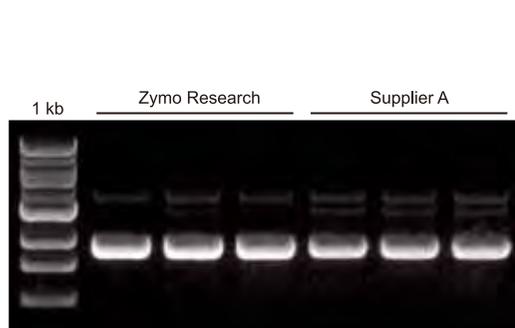
PCR, ChIP-Seq, Arrays,
Next-Gen sequencing, etc.

純化高品質 **endotoxin-free Plasmid DNA**

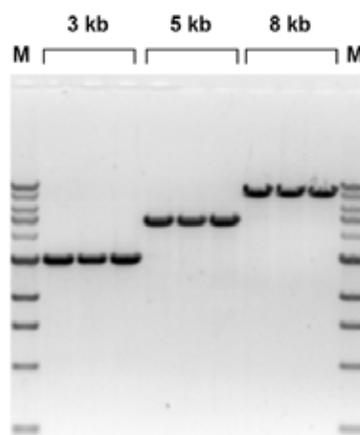
ZR Plasmid Miniprep™ - Classic

- 純化高品質 DNA：plasmid DNA 為 endotoxin-free，可進行限制酶反應、定序、transformation、cloning、transfection、in vitro transcription 等
- 專利創新設計：利用 buffer 顏色變化，即時確定實驗步驟完成

3 種 buffer
3 種顏色
確保步驟完全



	ng/μl	A ₂₆₀	A _{260/280}
Zymo Research's <i>Classic</i>	94.0	1.9	1.7
	75.3	1.5	1.9
	66.4	1.3	1.9
Supplier A	72.8	1.5	1.8
	77.5	1.6	1.8
	60.4	1.2	1.9



Restriction Endonuclease digestion of three different plasmids prepared using the ZR Plasmid Miniprep™ - Classic, performed in triplicate.

品名	ZR Plasmid Miniprep™- Classic Kit
貨號	D4015 (100 rxns) D4016 (400 rxns) D4054 (800 rxns)
Culture input	0.5-5 ml
Plasmid DNA size	Up to 25 kb
Binding capacity	25 μg
Elution volume	≥ 30 μl
Processing time	15 min



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