

PCR

New products across the PCR workflow

Invitrogen™ SuperScript™ Reverse Transcriptases

Invitrogen™ Platinum™ DNA Polymerases

Applied Biosystems™ Thermal Cycler

15%

* ~10월 까지
* 장비 제외

STEP 1

cDNA Synthesis

Which SuperScript IV format is right for you?

SuperScript IV Reverse Transcriptase

- 샘플에 맞는 조건으로 직접 최적화 가능
- Kit type으로 RTase 단독으로 판매
- 구성품 : SuperScript® IV RT, 5X RT buffer, 0.1 M DTT



SuperScript IV First-Strand Synthesis System

- 합성에 필요한 모든 **Component**가 포함
- 추가적으로 Hela RNA, Control gene primer set 제공
- 구성품 : SuperScript® IV RT, 5X RT buffer, 0.1 M DTT, 10 mM dNTP mix, Oligo(dT)20, Random hexamers, Ribonuclease Inhibitor, E. coli RNase H, DEPC-treated water, Total HeLa RNA, Control Primer set

SuperScript IV VILO Master Mix

- 가장 편리하고 간편한 **Master Mix**
- 최적화된 버퍼 조건으로 제공
- Hands-on time Save
- ezDNase™ Enzyme 포함된 제품으로 구매 가능
- 구성품 : SuperScript IV VILO Master Mix, SuperScript IV VILO Master Mix 'No RT' Control, Nuclease-free water



SuperScript IV One-Step RT-PCR System

- 하나의 튜브에서 **RT부터 PCR까지 한번에 가능**
- Platinum™ SuperFi™ DNA Polymerase 포함
- ezDNase™ Enzyme 포함된 제품으로 구매 가능
- 구성품 : SuperScript IV RT Mix, 2X Platinum SuperFi RT-PCR Master Mix, nuclease-free water

SuperScript IV CellsDirect cDNA Synthesis Kit

- **RNA isolation 과정 불필요**
- Cell 1-10,000개에서 바로 cDNA 합성 가능
- 세포에서 cDNA 합성까지 약 52분 소요
- 구성품 : SuperScript IV CellsDirect Lysis Solution, Stop Solution, Lysis Enhancer, Dnase I, RT Master Mix, No RT Control



Why should you choose SuperScript IV Reverse Transcriptases?

SuperScript IV Reverse Transcriptase (RT) features:



Super Fast

Short, 10 min cDNA synthesis protocol



Super Efficient

Higher cDNA yields than with other RT enzymes



Super Stable

High thermostability and processivity for superior cDNA synthesis performance



Super Strong

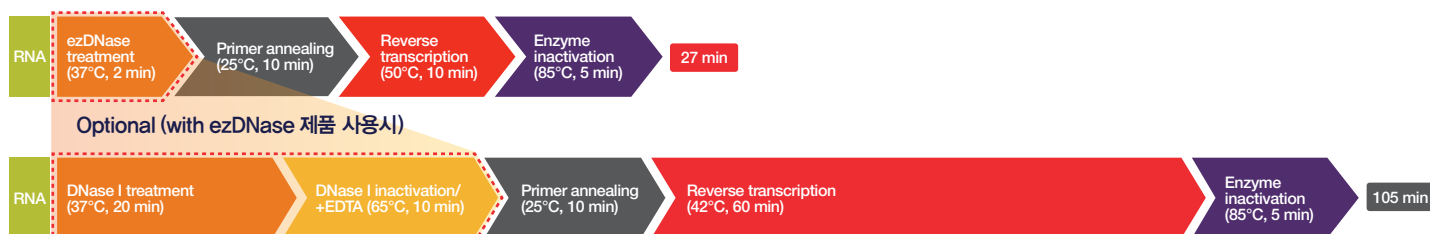
Great results, even with RNA samples of suboptimal purity

Invitrogen SuperScript는 50,000개가 넘는 논문인용에 사용되었습니다.

가장 신뢰 받고 널리 사용되는 First Strand cDNA합성 제품입니다.

IV제품은 최신 SuperScript 효소이며, 어려운 샘플 혹은 RNA 샘플에서도 우수한 성능을 제공하도록 설계된 제품입니다.

SuperScript IV RT and SuperScript IV VILO Master Mix cDNA synthesis workflow with ezDNase



Traditional cDNA synthesis workflow with DNase I

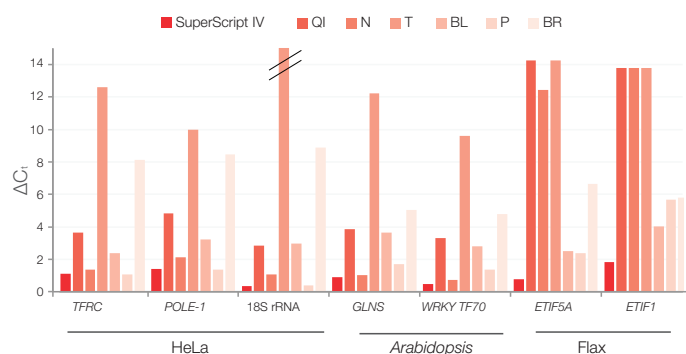


Figure 1. High efficiency with degraded RNA. RT-qPCR of degraded RNA (RNA integrity number (RIN) 1–3) from human cells and plant tissues with different RTs and Applied Biosystems™ TaqMan® Assays. Delta C_t values ($\Delta C_t = C_t - C_{t \text{ SuperScript IV}}$) show that SuperScript IV RT, with its standard 10 min protocol, delivered higher cDNA yields and lower C_t values than the recommended protocols for SuperScript III reagent and other suppliers' RTs.

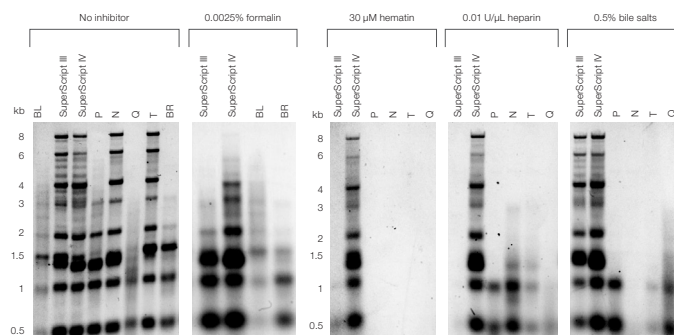


Figure 2. Tolerance to inhibitors. This data shows first-strand cDNA synthesis of an RNA ladder in the presence of reaction inhibitors. cDNA fragments were resolved by alkaline gel electrophoresis. All RTs except for SuperScript IV RT were severely affected with trace amounts of inhibitors.

STEP 2

DNA Amplification

Performance and flexibility to fit your amplification

Unique features of the latest Platinum DNA polymerases



Hot-start technology

- 항체 기반의 Hot-start 기술을 활용
- Room temperature에서 높은 안정성 제공
- 비 특이적 증폭과 Primer degradation 방지



Universal primer annealing

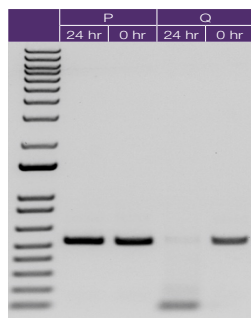
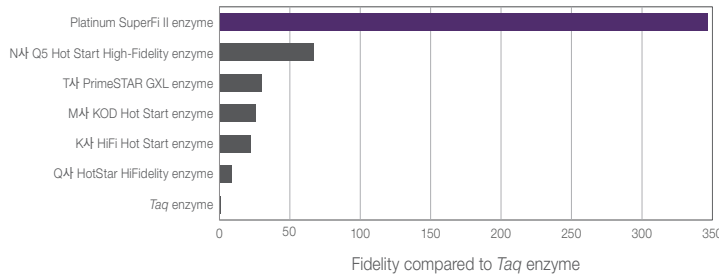
- Primer 온도 테스트 불필요
- 범용적으로 60도에서 모든 primer set 사용 가능
- 하나의 온도, 하나의 프로토콜로 여러 PCR검사 가능

Platinum SuperFi II DNA Polymerase

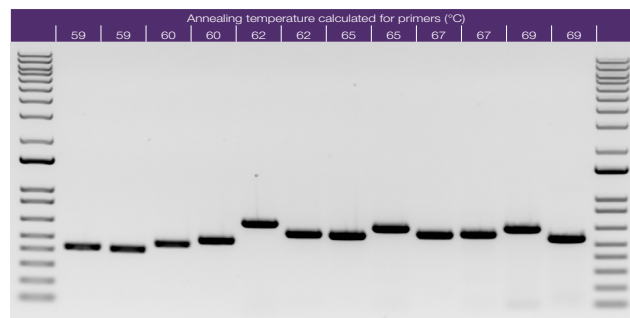
- 최대 300배 높은 정확성 (vs Taq)
- GC-rich target, long 시퀀스에도 강력한 증폭
- 제품 type : DNA polymerase, PCR Master mix, Green PCR Master mix
- Main Application : Cloning, NGS, Multiplex



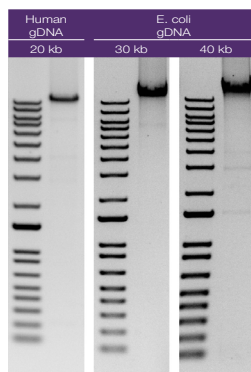
Figure 3. Fidelity comparison of commercially available enzymes and Taq enzyme. PCR amplicons (3.9 kb) obtained using different DNA polymerases were fragmented with a MuA transposase. Unique molecular identifiers (UMIs) of 12 random nucleotides were introduced during fragmentation to tag each product individually. After next-generation sequencing, reads from the same UMI family were aligned to call errors. Errors were identified only when present in all reads in the UMI family; otherwise they were discarded as sequencing errors. The fidelity values were normalized to Taq polymerase fidelity.



Benchtop stability for high-throughput applications

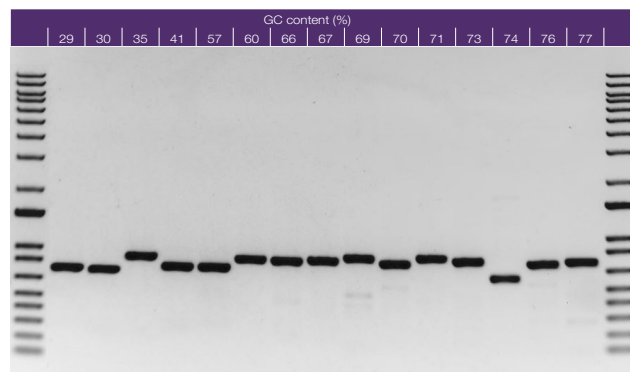


No need to calculate primer annealing temperature



High success with amplification of 20–40 kb sequences

Figure 4. Amplification of long fragments. A 20 kb target from human gDNA and 30–40 kb targets from E. coli gDNA were successfully amplified using Platinum SuperFi II DNA Polymerase.



No additives needed for GC-rich amplification

Figure 5. Robust amplification of GC-rich targets. Fifteen targets with a range of GC content were amplified from human gDNA without any supplementary buffer additives.

Platinum II Taq Hot-Start DNA Polymerase

- 일반적인 Taq 제품보다 최대 4배 빠른 합성 속도
- 높은 inhibitor 저항성, GC-rich target을 위한 Enhancer 제공
- 제품 type : DNA polymerase, PCR Master mix, Green PCR Master mix
- Main Application : Gene expression, sanger sequencing

Fast DNA synthesis at 15 sec/kb

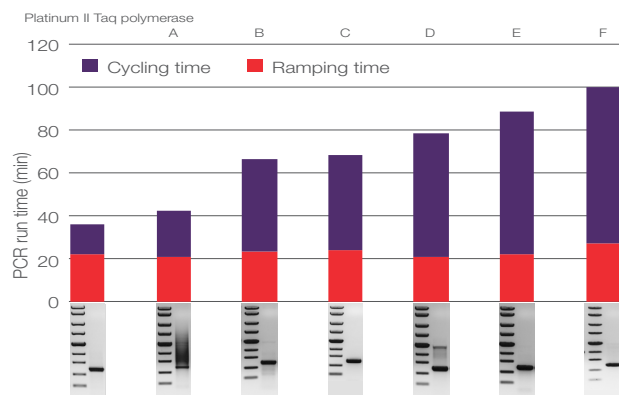


Figure 6. Fast cycling reduces PCR run time. A 0.5 kb fragment was amplified for 35 cycles, using Platinum II Taq Hot-Start DNA Polymerase and hot-start DNA polymerases from other suppliers (A–F).

High sensitivity and specificity

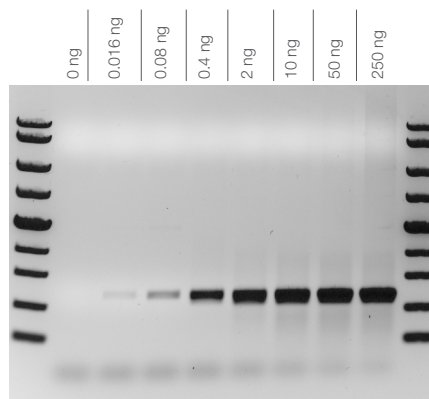


Figure 7. High sensitivity and reliable amplification from low amounts of input DNA. A 0.5 kb fragment was amplified from a range of human gDNA input, using Platinum II Taq Hot-Start DNA Polymerase.

Platinum Direct PCR Universal Master Mix

- DNA 정제(Purification) 과정없이 Direct PCR 가능
- Master Mix 제품으로 간편한 사용
- 하나의 제품으로 다양한 샘플에 사용 가능
- Sample Type : Cell, Tissue, Insect, Fish, Plant, Bacteria 등
- 구성품 : Universal Master Mix, Lysis Buffer, Proteinase K, GC Enhancer, Nuclease-free water

Two protocols to fit your needs

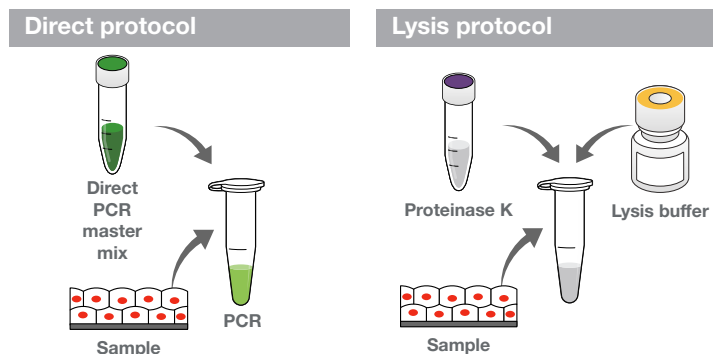


Figure 8. Direct and lysis protocols. Two protocols are available to amplify target DNA directly from crude samples. The direct protocol offers a shorter workflow, whereas the lysis protocol allows flexibility and long-term storage.

Multiple PCR targets in the same reaction

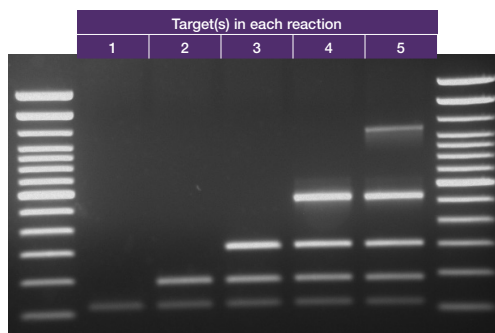


Figure 9. Efficient multiplexing in direct PCR. Five fragments of 0.1–1.1 kb were amplified from mouse tail in singleplex to 5-plex reactions, using the lysis protocol.

STEP 3

Thermal Cycler (PCR instrument)

Which instrument fits your needs?

자사 소속 엔지니어들은 1987년부터 지금까지 변함 없이 고품질의 Thermal Cycler를 설계 및 제조하고 있습니다. Applied Biosystems™ Thermal Cycler는 안정성과 정확도 뿐만 아니라 사용자에게 친숙한 인터페이스를 갖추고 있는 것으로 정평이 나 있습니다. 또한 자사의 모든 장비 솔루션은 항상 정확하고 일관성 있는 결과를 제공합니다.

MiniAmp	MiniAmp Plus	SimpliAmp	VeritiPro	ProFlex
3°C, NA	3.5°C, 3-zone	4°C, 3-zone	6°C, 6-zone	6°C, 2-zone
				
A37834	A37835	A24811	A48141	4484073

VeritiPro™ 96-well Thermal Cycler



놀라운 속도

Ramp rate : 6°C/sec
최대 2배 빠른 Run time



정확한 온도

6 개의 독립적인 온도 설정 Zone



손쉬운 사용

다양한 Protocol 제공



안심 케어

기본 2년 warranty 제공
Self verification 기능 제공

PCR 장비에 대해 자세한 설명 혹은 데모가 필요하신 경우

카카오 채널

‘데모톡톡’을 이용해주세요.



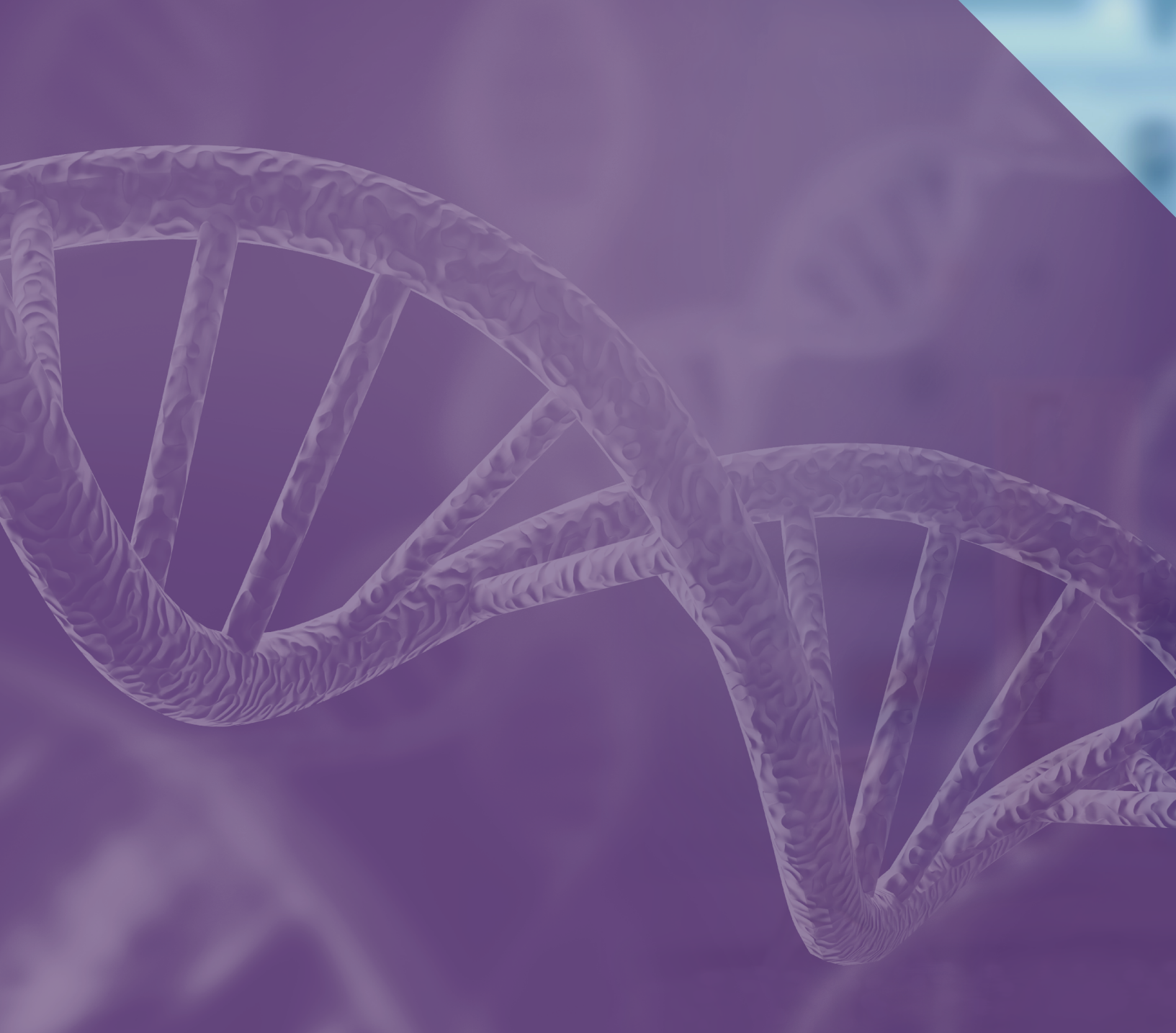
Ordering information

SuperScript Family

Product Label	Size	SKU#
SuperScript™ II Reverse Transcriptase	2,000 units	18064022
	10,000 units	18064014
	4 x 10,000 units	18064071
SuperScript™ First-Strand Synthesis System for RT-PCR	50 reactions	11904018
SuperScript™ One-Step RT-PCR System with Platinum™ Taq DNA Polymerase	100 reactions	10928042
SuperScript™ VILO™ cDNA Synthesis Kit	50 reactions	11754050
SuperScript™ VILO™ Master Mix	50 reactions	11755050
	250 reactions	11755250
SuperScript™ III Reverse Transcriptase	2,000 units	18080093
	10,000 units	18080044
	4 x 10,000 units	18080085
SuperScript™ III First-Strand Synthesis System	50 reactions	18080051
SuperScript™ III First-Strand Synthesis SuperMix	50 reactions	18080400
SuperScript™ III First-Strand Synthesis SuperMix for qRT-PCR	50 reactions	11752050
	250 reactions	11752250
SuperScript™ III One-Step RT-PCR System with Platinum™ Taq DNA Polymerase	25 reactions	12574018
	100 reactions	12574026
SuperScript™ III One-Step RT-PCR System with Platinum™ Taq High Fidelity DNA Polymerase	25 reactions	12574030
	100 reactions	12574035
SuperScript™ III CellsDirect™ cDNA Synthesis Kit	25 reactions	18080200
	100 reactions	18080300
SuperScript™ IV Reverse Transcriptase	2,000 units	18090010
	10,000 units	18090050
	4 x 10,000 units	18090200
SuperScript™ IV First-Strand Synthesis System	50 reactions	18091050
	200 reactions	18091200
SuperScript™ IV First-Strand Synthesis System with ezDNase™ Enzyme	50 reactions	18091150
	200 reactions	18091300
SuperScript™ IV One-Step RT-PCR System	25 reactions	12594025
	100 reactions	12594100
SuperScript™ IV One-Step RT-PCR System with ezDNase™	25 reactions	12595025
	100 reactions	12595100
SuperScript™ IV VILO™ Master Mix	50 reactions	11756050
	500 reactions	11756500
SuperScript™ IV VILO™ Master Mix with ezDNase™ Enzyme	50 reactions	11766050
	500 reactions	11766500
SuperScript™ IV CellsDirect™ cDNA Synthesis Kit	50 reactions	11750150
	500 reactions	11750350
SuperScript™ IV CellsDirect™ Lysis Reagents	500 reactions	11750550

Platinum Family

Product Label	Size	SKU#
Platinum™ Taq DNA Polymerase	120 reactions	10966018
	300 reactions	10966026
	600 reactions	10966034
Platinum™ Taq DNA Polymerase High Fidelity	100 reactions	11304011
	500 reactions	11304029
Platinum™ Taq Green Hot Start DNA Polymerase	600 reactions	11966034
Platinum™ PCR SuperMix High Fidelity	100 reactions	12532016
Platinum™ Hot Start PCR Master Mix (2X)	50 reactions	13000012
	200 reactions	13000013
Platinum™ Green Hot Start PCR Master Mix (2X)	50 reactions	13001012
	200 reactions	13001013
	1,000 reactions	13000014
Platinum™ SuperFi™ DNA Polymerase	100 units	12351010
	500 units	12351050
Platinum™ SuperFi™ PCR Master Mix	100 reactions	12358010
	500 reactions	12358050
	5 x 500 reactions	12358250
Platinum™ Multiplex PCR Master Mix	50 reactions	4464268
	250 reactions	4464269
Platinum™ II Taq Hot-Start DNA Polymerase	100 reaction	14966001
	500 reactions	14966005
Platinum™ II Hot-Start PCR Master Mix (2X)	50 reactions	14000012
	200 reactions	14000013
	1,000 reactions	14000014
Platinum™ II Hot-Start Green PCR Master Mix (2X)	50 reactions	14001012
	200 reactions	14001013
	1,000 reactions	14001014
Platinum™ SuperFi II DNA Polymerase	100 reactions	12361010
	500 reactions	12361050
Platinum™ SuperFi II PCR Master Mix	100 reactions	12368010
	500 reactions	12368050
	5 x 500 reactions	12368250
Platinum™ SuperFi II Green PCR Master Mix	100 reactions	12369010
	500 reactions	12369050
	5 x 500 reactions	12369250
Platinum™ Direct PCR Universal Master Mix	100 reactions	A44647100
	500 reactions	A44647500
	4 x 500 reactions	A44647200



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