TRANSFECTION

WORLD BEST PERFORMANCES

WELGENE

Nature, Oncogene, Gene Therapy 논문 등에
게재한 특급 연구진 보유기업
대한민국 세포배양 시장점유율 1위 기업

WelFect-EX™ Transfection Reagent
WelFect-EX™ *PLUS* Transfection Reagent
WelFect-EX™ *GOLD* Transfection Reagent

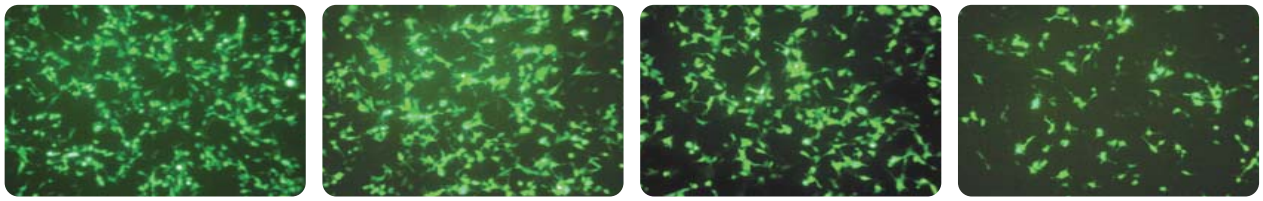
For Broad Cell Lines, Up to 100% Transfection Efficiency

Descriptions

+ 일반적인 세포주에 모두 적용이 가능한 범용성 Transfection Reagent
+ 리포좀과 Enhancing Reagent가 같이 포함된 2 in 1 package 제품 (WelFect-EX™는 리포좀만 포함된 제품)
+ 최대 100% cell 까지 transfection 가능 (수백여종의 다양한 cell line에서 고효율 transfection 검증)
+ Performance test, endotoxin test 그리고 steriliy test 등의 지독한 품질관리 수행
+ 기존 transfection이 잘 안되는 세포주 적용 가능 (WelFect-EX *GOLD*)
+ L사 대표제품 비교시 10 ~ 100배 Transfection 효율

Transfection Efficiency 1

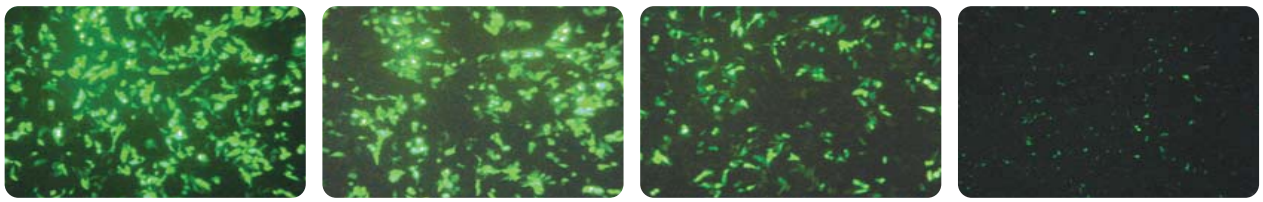
+ Cell Line : 293
+ Photo : Fluorescent microscopy (X 100)
  (DNA = 0.4 ug/well, pcDNA – GFP)



WelFect-EX™ *GOLD* | WelFect-EX™ *PLUS* | WelFect-EX™ | Company A

Transfection Efficiency 2

+ Cell Line: HeLa
+ Photo: Fluorescent microscopy (X 100)
  (DNA = 0.4 ug/well, pcDNA – GFP)



WelFect-EX™ *GOLD* | WelFect-EX™ *PLUS* | WelFect-EX™ | Company A

Ordering Information

Product Name	Cat. No.	Size
WelFect-EX™ *PLUS* Transfection Reagent	TR 003-01	0.5 ml (300 Transfections)
WelFect-EX™ *PLUS* Transfection Reagent	TR 003-02	1 ml (600 Transfections)
WelFect-EX™ *PLUS* Transfection Reagent	TR 003-03	1 ml X 5ea (3,000 Transfections)
WelFect-EX™ *GOLD* Transfection Reagent	TR 008-01	0.5 ml (300 Transfections)
WelFect-EX™ *GOLD* Transfection Reagent	TR 008-02	1 ml (600 Transfections)
WelFect-EX™ *GOLD* Transfection Reagent	TR 008-03	1 ml X 5ea (3,000 Transfections)
WelFect-EX™ Transfection Reagent	TR 006-01	0.5 ml (300 Transfections)
WelFect-EX™ Transfection Reagent	TR 006-02	1 ml (600 Transfections)
WelFect-EX™ Transfection Reagent	TR 006-03	1 ml X 5ea (3,000 Transfections)

서울 영업본부 T 02.2057.3288 F 02.2057.3287 / 본사 및 GMP 공장 T 053.811.7081 F 053.811.7096

WelFect-Q™ *GOLD* Transfection Reagent

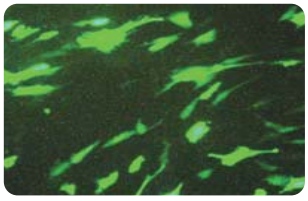
For Primary Cell and Stem Cell

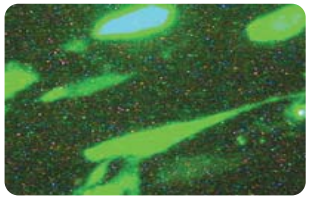
Descriptions

+ Primary cell과 stem cell 등 기존 제품으로 transfection이 잘 안되는 세포주용으로 출시된 Transfection Reagent
+ 혈청 존재하에서도 고효율 transfection이 가능한 획기적 제품
+ 리포좀과 Enhancing Reagent가 같이 포함된 2 in 1 package 제품
+ Transfection이 잘 안되는 세포주 적용시 기준 이상의 data를 확보할 수 있는 수준까지 transfection 가능
+ Performance test, endotoxin test 그리고 sterility test 등의 지독한 품질관리 수행

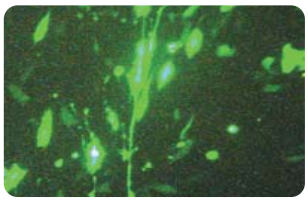
Transfection Efficiency

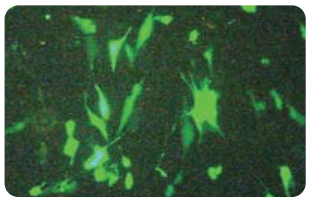
+ Cell Line: MSC
+ DNA : Enhan. : Lipo. = 1 : 3 : 3
+ Fluorescent microscopy (X 100)
  (pcDNA – GFP)





+ Cell Line: MSC
+ DNA : Enhan. : Lipo. = 1 : 4 : 3
+ Fluorescent microscopy (X 100)
  (pcDNA – GFP)



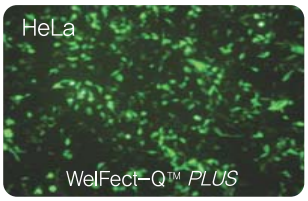


WelFect-Q™ *PLUS* Transfection Reagent

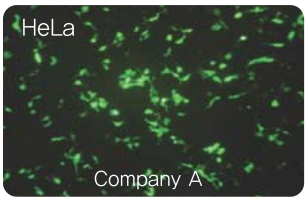
Descriptions

+ HepG2, SK-OV-3, A549, MCF-7 그리고 AGS 등의 세포주 전용 Transfection Reagent
+ SiHA, COS-1, 293 등은 혈청존재 하에서도 고효율 transfection 가능
+ Primary cell 및 stem cell에 고효율 transfection 가능
+ 리포좀과 Enhancing Reagent가 같이 포함된 2 in 1 package 제품
+ Performance test, endotoxin test 그리고 sterility test 등의 지독한 품질관리 수행

Transfection Efficiency



pcDNA – GFP
Fluorescent
microscopy



Ordering Information

Product Name	Cat. No.	Size
WelFect-Q™ *PLUS* Transfection Reagent	TR 002-01	0.5 ml (300 Transfections)
WelFect-Q™ *PLUS* Transfection Reagent	TR 002-02	1 ml (600 Transfections)
WelFect-Q™ *PLUS* Transfection Reagent	TR 002-03	1 ml X 5ea (3,000 Transfections)
WelFect-Q™ *GOLD* Transfection Reagent	TR 009-01	0.5 ml (300 Transfections)
WelFect-Q™ *GOLD* Transfection Reagent	TR 009-02	1 ml (600 Transfections)
WelFect-Q™ *GOLD* Transfection Reagent	TR 009-03	1 ml X 5ea (3,000 Transfections)

서울 영업본부 T 02.2057.3288 F 02.2057.3287 / 본사 및 GMP 공장 T 053.811.7081 F 053.811.7096

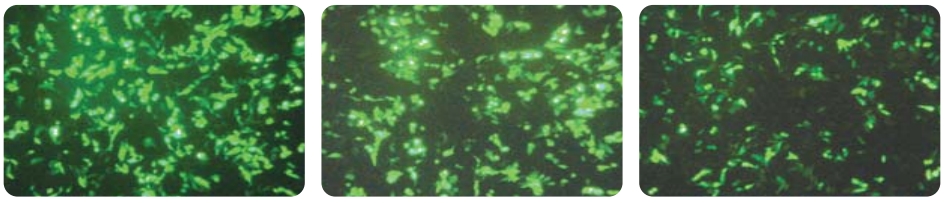
ENHANCER-Q™ Transfection Enhancing Reagent
ENHANCER-GOLD™ Transfection Enhancing Reagent

Descriptions

+ 탁월한 transfection efficiency 증대
+ 기존 사용하는 transfection reagents (liposome)와 간단하게 혼합하는 과정으로 탁월한 transfection 효율 증대 가능
+ Performance test, endotoxin test 그리고 sterility test 등의 지독한 품질관리 수행

Enhancing of Transfection Efficiency

HeLa
pcDNA 3.0 – GFP
Fluorescent
microscopy



+ ENHANCER-GOLD　　+ ENHANCER-Q　　Liposome Alone

Ordering Information

Product Name	Cat. No.	Size
ENHANCER-Q™ Transfection Enhancing Reagent	TR 001-01	0.5 ml
ENHANCER-Q™ Transfection Enhancing Reagent	TR 001-02	1 ml
ENHANCER-Q™ Transfection Enhancing Reagent	TR 001-03	1 ml X 4ea
ENHANCER-GOLD™ Transfection Enhancing Reagent	TR 015-01	0.5 ml
ENHANCER-GOLD™ Transfection Enhancing Reagent	TR 015-02	1 ml
ENHANCER-GOLD™ Transfection Enhancing Reagent	TR 015-03	1 ml X 4ea

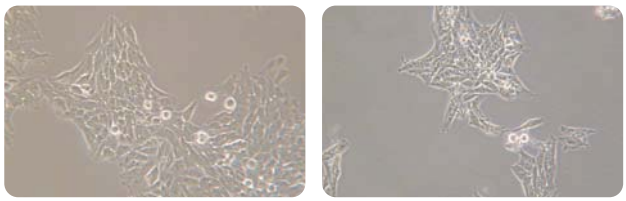
TOM™ Medium
(Transfection Optimizing Medium)

Descriptions

+ Transfection 전용 serum free medium으로 개발
+ 건강한 cell 유지 및 효과적 cell viability 증대 가능
+ 바로 사용이 가능한 액상형태의 배지
+ 탁월한 가격 및 성능
+ Performance test, 무균시험 및 endotoxin test 거친 제품

Comparison of Cell Viability

HeLa



TOM medium　　Company A

Ordering Information

Product Name	Cat. No.	Size
TOM™ Transfection Optimizing Medium (Serum-Free Medium)	TR 004-01	500 ml
TOM™ Transfection Optimizing Medium (Serum-Free Medium)	TR 004-03	500 ml X 10ea

서울 영업본부 T 02.2057.3288 F 02.2057.3287 / 본사 및 GMP 공장 T 053.811.7081 F 053.811.7096

WelFect 제품을 인용한 주요 외국 논문

– 지면상 일부만 발췌하였습니다 –

Oncogene 30, 3345–3359

Transfection

Colon cancer cells (5 × 10^4 cells per well) were plated in 24-well plates and transiently transfected with 0.4 μg of the empty vector or the constitutively activated full-length IL-32γ plasmid per well, using a mixture of plasmid and the WelFect-EX PLUS reagent in OPTI-MEN, according to the manufacturer's specification (WelGENE, Seoul, Korea).

Cell viability

To determine viable cell numbers, the colon cancer cells were seeded onto 24-well plates (5 × 10^4 cells per well). The cells were trypsinized, pelleted by centrifugation for 5 min at 1500 r.p.m., resuspended in 10 ml of PBS and 0.1ml of 0.2% Trypan blue was added to the tumor cell suspension in each solution (0.9 ml each). Subsequently, a drop of suspension was placed in a Neubauer chamber, and the living cancer cells were counted. Cells that showed signs of Trypan blue uptake were considered to be dead, whereas those that excluded Trypan blue were considered to be viable. Each assay was carried out in triplicate.

J. Biol. Chem. 2010 285: 36410–36419.

Gene Regulation

Ji Hae Jun, Won-Joon Yoon, Sang-Beom Seo, Kyung-Mi Woo, Gwan-Shik Kim, Hyun-Mo Ryoo, and Jeong-Hwa Baek

BMP2-activated Erk/MAP Kinase Stabilizes Runx2 by Increasing p300 Levels and Histone Acetyltransferase Activity

J. Biol. Chem. 2010 285: 36410-36419. First Published on September 17, 2010, doi:10.1074/jbc.M110.142307

...Lipofectamine 2000 reagent was purchased from Invitrogen and WelFect-Ex™ PLUS was from WelGENE (Seoul, Korea). The luciferase assay...transiently transfected with pcDNA or MEK1 expression vectors using WelFECT. After overnight recovery, the cells were incubated in the...

J. Biol. Chem. 2011 286: 7439–7456.

Signal Transduction

Hyun-A Seong, Haiyoung Jung, and Hyunjung Ha

Murine Protein Serine/Threonine Kinase 38 Stimulates TGF-β Signaling in a Kinase-dependent Manner via Direct Phosphorylation of Smad Proteins

J. Biol. Chem. 2010 285: 30959-30970. First Published on July 21, 2010, doi:10.1074/jbc.M110.138370

...were transfected with the p3TP-Lux or p21-Luc reporter plasmids, along with each expression vector as indicated, using WelFect-Ex™ PLUS. The cells were lysed, and luciferase activity was detected using the dual luciferase assay kit (Promega, Madison...

FEBS Letters 584 (2010) 3923–3928

2. Materials and methods

2.1. Plasmids

Full-length mouse cDNA of PTPRO was ligated with pCS2-HA or pCMV5 vector to make a PTPRO-HA or PTPRO-Flag construct, respectively. To make PTPRO(ECD)-Flag or PTPRO(ΔEx)-Flag, PCR products containing the region from the 5′ to 3′ end of the extracellular domain or from the transmembrane domain to the 3′ end of the mouse PTPRO cDNA were cloned into pCMV5 vector, respectively. For PTPRO-ECD(1-3)-Fc, a PCR product containing the region from the 5′ end to the third FN III repeats of the extracellular domain was cloned into pRK-Fc vector. To make Ptpro-Luc, about 2 kb from the transcription initiation site of *ptpro* was amplified by PCR and ligated into pGL3-basic vector.

2.2. Cell culture and transient transfection

HEK293T, L929 and $CaCO_2$ cells were maintained in Dulbecco's Modified Eagle's Medium (DMEM, Gibco BRL) supplemented with 10% Fetal Bovine Serum (FBS) and antibiotics. For transient transfection experiments, each plasmid DNA was transfected by the calcium phosphate precipitation method. For L929 cells, Welfect-Ex™ was used according to the manufacturer's instruction (Welgene). The amount of DNA in each transfection was held constant by the addition of an appropriate amount of empty expression vector

Cellular Signalling 21 (2009) 43 – 51

2. Materials and methods

2.1. Cell cultures and transient transfection

C57mg, HEK 293T and MCF7 cells were grown in Dulbecco's modified Eagle medium (DMEM, Life Technologies) supplemented with 10% fetal bovine serum (FBS, Cambrex Bio Science Walkersville, Inc.) and 1X antibiotic–antimycotic (catalog number 15240; Invitrogen) in humidified 6% CO_2. Cells were transiently transfected using either the calcium phosphate precipitation method or WelFect-EX™ PLUS transfection reagent (WelGENE), in accordance with the manufacturer's instructions. Leptomycin B (LMB) was purchased from Sigma and cells were treated with 50 ng/ml for 8 h before immunofluorescence analysis.

2.2. Reverse transcriptase-PCR

Total RNAs isolated from cell lines, different tissues and embryos of CD-1(ICR) mice were reverse transcribed using random primers

TRANSFECTION TABLE

	Cell Lines	WF-C			WF-EX			WF-M			WF-Q		
		Plus	Gold	(-)	Plus	Gold	(-)	Plus	Gold	(-)	Plus	Gold	(-)
1	253J	++	+++(+)	++(+)	++++	++++	++	++++	+++		+++	+++	
2	293	++++	++++	++++(++++)	+++	++++	+++		++(+++)		++	+++	++
3	A427										+	+	-
4	A549		++++	++	++	+++	-						
5	AGS		++++	+++(++++)	++++	++++	+++	-	+++	-	++	+++	-
6	B16F10	++(++)	++(++)	++++(++++)	++	++	++	++(++)	+++(++)		++(++)	++(++)	
7	Bend 3				++	+++							
8	BV-2				+++	+++		++	++		+	+	
9	C2CI2	+	+	++(++)	++++	++++	++++						
10	C3H/10T1/2	+	++(++)	(++)	++++	++++	++		+++		+	++	
11	C-6		++++	+++	++	++	++	++	++++		+	+++	
12	Calu-3				++	++		+	++		++	++	
13	Chang	+(+)	+(++)	+(+)	++++	++++	++	+(++)	++(+++)		++(++)	++(+++)	
14	CHO	++++(++++)	++++(++++)	++++(++)	+++	++++	++++	+++(+++)	+++(++++)		++++(++++)	++++(+++)	+
15	Cos-1			++++(++++)	++	+++	++		+(++)		++	++(++)	
16	Cos-7	++(+)	+++(+++)	++(+++)	++++	++++	+++	+++	+		++++(+)	++++(++)	
17	DG44	++++(+)	++++(++)	+++(+)	+++	+++	++	++	++(+++)		++	++++	
18	DU145	++(+++)	++(+++)	++(+++)	+++	+++	+++	+++(+++)	+++(+++)		++(++)	++(++)	
19	EJ	++	++++(+++)	++	++	++		++	++++(++)		+++	++++(++)	
20	H-4-II-E	(+)		(++)	-	-	-	+(+++)	++(++)		+(+++)	+(++)	
21	H9C2	++(++)	++(++)	++(++)	++	++	+	++++	++++(++)		+++	+++	
22	HaCAT		++(+)	+(+)	+++	+++		+++(+)	+++(++++)		++(+)	+++(+++)	
23	HCT-8			+++(++++)	++++	++++	+++		+++				
24	HEC-1-A	++++(++)	++++(++)	++(++)	+	+	-	+++(++++)	++++(+++)		++++(++++)	++++(++)	
25	HeLa		++(+++)	+++(++)	+++	++++	++	++	+++	+	+++	++++	++
26	Hep3B	+++		+++	++	++++	++	++++	++++		+	++	
27	Hepa1c1c		+++(++)		+++	+++	+++		++++		+	+	
28	HepG2	++		+++	++	+++		++	++++				
29	HL-60				++	++							
30	HT-29				++	+++			+			+	
31	Huh-7	++(+++)	++(+++)	++(+++)	+	+	-	++(+++)	++++(++++)		++(+)	+++(+++)	
32	HuVec								++++			+++	
33	IMCD	++++(++++)	++++(++++)	++++(++++)	+++	+++	++	++++(++++)	+++(+++)		++++(+++)	+++(+++)	
34	J82	++(+++)	+++(+++)	+++(+++)	++	++		++++(++++)	++++(++++)		++++(++++)	++++(++++)	
35	Jurkat			+	++++	++++	+++	++	+++		++	++	
36	L929	+++(+++)	++++(++++)	+++(++)	++++	+++		(++)	(+)		(++)	(+)	
37	MC-3T3_E1	+	+	++	++	++	+	+	+(+++)		++++	+++	

	Cell Lines	WF-C			WF-EX			WF-M			WF-Q		
		Plus	Gold	(-)	Plus	Gold	(-)	Plus	Gold	(-)	Plus	Gold	(-)
38	MCF-10A	+++(++)	++++(++++)	+++(+++)	+	+		++	++(++++)		++	++(++)	
39	MCF-10A ras	++++(++)	++++(++)		++	++		++++(++)	+++(++++)		++(+)	++++(+++)	
40	MCF-7	++++(++++)	++++(++++)	+++(+++)	+++	++++	++	+++(++++)	++++(++++)	++	+++(++++)	++++(++++)	++
41	MG-63		++++		++	+++	+	++++	++++		+	++	
42	NCI-H1299				+++	+++					++	+++	
43	NCI-H596				+	+	+	+	++		+	++	+
44	NIH-3T3			+++	+++	++++	++	+	+		+	++	
45	P388D1	+	+		+++	++		++	++(+)		++++	++++(+)	
46	PC-12			++++	++	+++		++	++		++++(+++)	+++(++)	
47	PC-3	++(+++)	++++(++++)	+(+++)	+++(+)	+++(+)	+	+++	+++	+	++++(++)	++++(+)	+
48	PT-67 (48h ↑)	+	+++	++(++)	++	+++	++						
49	Raw264.7	+(+)	+(+)	+	+++	++		++++(++)	++++(++)		++	+++(+)	
50	RBL-2H3				++	++	+	+	+		++	++	
51	RIE1	++(+)	+++(++)	++++(++++)									
52	SH-SY5Y	+++(+)	++(+)	++(+)	+++	++++		+	+				
53	SiHa					++++	++++		++++(++++)	+	++++	++++(++++)	++
54	SK-OV-3		+++	++		+++	++		+++		+++	++++	
55	SNU16		++(+++)	++++(++++)	++++	++++		++	++		++++(++++)	++++(+++)	
56	SNU-620	+++(++)	++(++)	+++(+++)	+	+	-	+++(+++)	+++(++)		+++(++++)	++++(++++)	
57	SW480				++	++	++	++	+++		+	++	
58	T24	++	++	++	+						++	++	
59	TCCSUP	+	+	+	+	+		+	+++		+	+++	
60	U251	++	+++(++)	+++(++)	++	++	+	+++(++)	++++(+++)		++	++++(++)	
61	U373	+++	++++	++++(++)	++	++	+	+++	++++(+++)		+++	++++	
62	UMUC3	+++(+)	++++	+(+)	++++	++++	++	++++(+++)	++++(++++)	+	++++(+)	++++(++)	++(+)
63	WI38VA13				+++	++++							
64	WiDr	+++(+)	+++(+)	+++(++)	-	-	-	+++(++)	+++(++)		+++(++)	++(+)	
65	hMSC (human Mesenchymal stem cell)				+	++		+	+		++	++++	
66	Primary Adipocytes		++			+++			++			+++	
67	Primary Keratinocyte								++++				
68	Primary rat chromaffin cell	+	+	++	+	++		+++	+++		+++	+++	
69	Primary Normal N92	++(++)	+++(++)	+(+)	+	+		+++(++)	++++(++)		++++(+)	++++(++)	

+ : Low / **++** : Medium / **+++** : Good / **++++** : Excellence / ( ) : 5 ~ 10% serum
WF-C → WelFect-C / WF-EX → WelFect-EX / WF-M → WelFect-M / WF-Q → WelFect-Q

세계최고 효율 Transfection Reagents
첫 구매시 50% 할인 (일부 품목 제외)

제품명	제품 설명 및 사용용도	Cat. No.	용량	정상가
WelFect-EX™ Transfection Reagent	– 일반적인 세포주에 모두 적용이 가능한 범용성 제품 – 양이온성 리포좀만으로 구성 – 수백 종류의 세포주에 고효율 transfection 가능	TR 006-01 TR 006-02 TR 006-03	0.5 ml 1 ml 1 ml X 5ea	100,000 180,000 800,000
WelFect-EX™ *PLUS* Transfection Reagent	– 최대 90% cell 까지 transfection 가능 – 일반적인 세포주에 모두 적용이 가능한 범용성 제품 – 양이온성 리포좀과 Enhancing Reagent의 구성 – 수백 종류의 세포주에 고효율 transfetion 가능	TR 003-01 TR 003-02 TR 003-03	0.5 ml 1 ml 1 ml X 5ea	140,000 250,000 1,100,000
WelFect-EX™ *GOLD* Transfection Reagent	– 최대 100% cell 까지 transfection 가능 – 세계 최고 효율 Transfection Reagent – 양이온성 리포좀과 Enhancing Reagent의 구성 – 수백 종류의 세포주에 고효율 transfection 가능	TR 008-01 TR 008-02 TR 008-03	0.5 ml 1 ml 1 ml X 5ea	195,000 350,000 1,550,000
WelFect-Q™ *PLUS* Transfection Reagent	– HepG2, SK-OV-3, A549, MCF-7, AGS 전용 제품 – SiHA, COS-1, 293는 혈청존재 하 실험 가능 – Primary cell 및 stem cell	TR 002-01 TR 002-02 TR 002-03	0.5 ml 1 ml 1 ml X 5ea	85,000 160,000 590,000
WelFect-Q™ *GOLD* Transfection Reagent	– 기존 제품으로 Transfection이 어려운 세포주 (Primary cell, stem cell 등) 전용 제품 – 혈청존재 하에서도 고효율 Transfection 가능 – 기준 이상 data 확보 가능 (20% ~ 50%)	TR 009-01 TR 009-02 TR 009-03	0.5 ml 1 ml 1 ml X 5ea	195,000 350,000 1,550,000
WelFect-C™ Transfection Reagent	– 혈청존재 하에서 transfection 가능한 신개념 제품 – 양이온성 복합체로 구성	TR 012-01 TR 012-02	1 ml 1 ml X 5ea	350,000 1,555,000
WelFect-C™ *PLUS* Transfection Reagent	– 혈청존재 하에서 transfection이 가능한 신개념 transfection reagent – 양이온성 복합체와 Enhancing reagent로 구성	TR 013-01 TR 013-02	1 ml 1 ml X 5ea	400,000 1,770,000
WelFect-C™ *GOLD* Transfection Reagent	– 혈청존재 하에서 transfection이 가능한 신개념 transfection reagent – 양이온성 복합체와 Enhancing Reagent로 구성	TR 014-01 TR 014-02	1 ml 1 ml X 5ea	450,000 1,990,000
WelFect-M™ Transfection Reagent	– 혈청존재 하에서 transfection이 가능한 신개념 Transfection Reagent – 양이온성 복합체와 Enhancing Reagent로 구성	TR 017-01 TR 017-02 TR 017-03	0.5 ml 1 ml 1 ml X 5ea	100,000 180,000 800,000
WelFect-M™ *PLUS* Transfection Reagent	– 혈청존재 하에서 transfection이 가능한 신개념 Transfection Reagent – 양이온성 복합체와 Enhancing reagent로 구성	TR 016-01 TR 016-02 TR 016-03	0.5 ml 1 ml 1 ml X 5ea	140,000 250,000 1,100,000
WelFect-M™ *GOLD* Transfection Reagent	– 혈청존재 하에서 transfection이 가능한 신개념 transfection reagent – 양이온성 복합체와 Enhancing Reagent로 구성	TR 011-01 TR 011-02 TR 011-03	0.5 ml 1 ml 1 ml X 5ea	195,000 350,000 1,550,000
ENHANCER-Q™ Enhancing Reagent	– 기사용 Transfection Reagent에 첨가 사용시 효율이 수배 ~ 수백배 증대 – 다양한 타 제품과 높은 호환성	TR 001-01 TR 001-02 TR 001-03	0.5ml 1 ml 1 ml X 4ea	80,000 150,000 550,000
ENHANCER-GOLD™ Enhancing Reagent	– 기사용 Transfection Reagent에 첨가 사용시 효율이 수배 ~ 수백배 증대 – 다양한 타 제품과 높은 호환성	TR 015-01 TR 015-02 TR 015-03	0.5 ml 1 ml 1 ml X 4ea	100,000 188,000 687,000
WelFect-si™ Transfection Reagent	– si-RNA 전용 transfection reagent	TR 007-01 TR 007-02	0.5 ml 1 ml	190,000 350,000
TOM™ Medium Transfection Medium	– Transfection 전용 serum-free medium – 고효율 transfection의 파트너	TR 004-01 TR 004-03	500 ml 500 ml X 10ea	32,000 280,000

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제품에 대한 자세한 문의나 주문은 해당 영업사원, 또는 대표전화로 연락바랍니다.
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