

# Marketplace

## CLONING CLASSICS

# 2.0

### In this edition of Marketplace

Special offers on  
Thermo Scientific™ products:

- Cloning Enzymes and Kits
- FastDigest™ Enzymes
- GeneJET™ Nucleic Acid Purification Kits
- TopVision™ Agarose Tablets
- PCR Plastic Consumables
- GeneRuler™ DNA Ladders
- DreamTaq™ DNA Polymerases

Find all promotions at  
[fishersci.com/TSMolecularBio](http://fishersci.com/TSMolecularBio)

# Powerful enzymes and kits to support your cloning workflow



## Thermo Scientific™ Cloning Kits

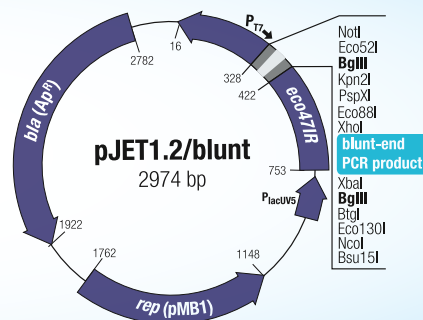
- PCR cloning of blunt- and sticky-end DNA fragments in 5–10 minutes (Cat. No. FERK1231/2)
- Ligation of blunt- or sticky-end DNA in 5 minutes (Cat. No. FERK1422/3)
- Blunting and phosphorylation of DNA ends in 5 minutes (Cat. No. FERK0771)
- Fast and efficient introduction of mutations in any type of plasmid DNA (Cat. No. F-541)

Fisher Scientific Cat. No.	Fisher Scientific Promo Cat. No.	Description	Size	List Price	25% OFF
FERK1231	FERK1231PM	CloneJET PCR Cloning Kit	20 rxns	<del>\$128.00</del>	\$96.00
FERK1232	FERK1232PM		40 rxns	<del>\$243.00</del>	\$182.25
FERK1422	FERK1422PM	Rapid DNA Ligation Kit	50 rxns	<del>\$128.00</del>	\$96.00
FERK1423	FERK1423PM		150 rxns	<del>\$248.00</del>	\$186.00
FERK0771	FERK0771PM	Fast DNA End Repair Kit	50 rxns	<del>\$157.00</del>	\$117.75
F-541	F-541PM	Phusion Site-Directed Mutagenesis Kit	20 rxns	<del>\$153.00</del>	\$114.75

\*Please use promotional Cat. No. listed above and refer to the back cover for ordering details. Offers are valid from February 1, 2015, until May 31, 2015. Not to be combined with any other promotions or offers.

## Highlights for CloneJET PCR Cloning Kit

- PCR cloning in only 5 to 10 minutes
- Positive selection: cloning vector (pJET1.2/blunt) contains a lethal gene that is disrupted by ligation of a DNA insert into the cloning site
- More than 99% positive clones
- Works for blunt and sticky ends
- No expensive blue/white screening



## Thermo Scientific™ DNA Modifying Enzymes

- For fast and efficient ligation, blunting, phosphorylation and dephosphorylation
- Extremely pure quality
- Produced under the ISO 9001:2000 quality management system

Fisher Scientific Cat. No.	Fisher Scientific Promo Cat. No.	Description	Size	List Price	25% OFF
FEREL0014	FEREL0014PM	T4 DNA Ligase (5 Weiss U/μL)**	200 U	<del>\$62.00</del>	\$46.50
FEREL0011	FEREL0011PM		1,000 U	<del>\$194.00</del>	\$145.50
FEREF0651	FEREF0651PM	FastAP Thermosensitive Alkaline Phosphatase (1 U/μL)	1,000 U	<del>\$66.00</del>	\$49.50
FEREF0652	FEREF0652PM		5 x 1,000 U	<del>\$259.00</del>	\$194.25
FEREN0581	FEREN0581PM	Exonuclease I (20 U/μL)	4,000 U	<del>\$79.00</del>	\$59.25
FEREN0582	FEREN0582PM		20,000 U	<del>\$308.00</del>	\$231.00
FEREP0051	FEREP0051PM	Klenow Fragment (10 U/μL)	300 U	<del>\$98.00</del>	\$73.50
FEREP0421	FEREP0421PM	Klenow Fragment, exo- (5 U/μL)	300 U	<del>\$98.00</del>	\$73.50
FEREK0031	FEREK0031PM	T4 Polynucleotide Kinase (T4 PNK) (10 U/μL)	500 U	<del>\$46.00</del>	\$34.50
FEREK0032	FEREK0032PM		2,500 U	<del>\$188.00</del>	\$141.00
FEREP0061	FEREP0061PM	T4 DNA Polymerase (5 U/μL)	100 U	<del>\$46.00</del>	\$34.50
FEREP0062	FEREP0062PM		500 U	<del>\$186.00</del>	\$139.50
FEREP0081	FEREP0081PM	T7 DNA Polymerase (10 U/μL)	300 U	<del>\$75.00</del>	\$56.25

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\*\*1 Weiss Unit = 200 Cohesive End Units (CEUs)





## For accurate DNA analysis



### Thermo Scientific™ GeneRuler™ DNA Ladders

- Broad range ladders with bright reference bands
- Easy DNA quantification
- Supplied with 6X loading dye

Fisher Scientific Cat. No.	Fisher Scientific Promo Cat. No.	Description	Size	Range (bp)	List Price	25% OFF
FERSM0241	FERSM0241PM	GeneRuler 100 bp DNA Ladder	100 appl.	100–1,000	<del>\$55.00</del>	\$41.25
FERSM0242	FERSM0242PM	GeneRuler 100 bp DNA Ladder, RTU**	500 appl.		<del>\$218.00</del>	\$163.50
FERSM0243	FERSM0243PM	GeneRuler 100 bp DNA Ladder, RTU**	100 appl.		<del>\$65.00</del>	\$48.75
FERSM0321	FERSM0321PM	GeneRuler 100 bp Plus DNA Ladder	100 appl.	100–3,000	<del>\$65.00</del>	\$48.75
FERSM0322	FERSM0322PM	GeneRuler 100 bp Plus DNA Ladder, RTU	500 appl.		<del>\$262.00</del>	\$196.50
FERSM0323	FERSM0323PM	GeneRuler 100 bp Plus DNA Ladder, RTU	100 appl.		<del>\$78.00</del>	\$58.50
FERSM0311	FERSM0311PM	GeneRuler 1 kb DNA Ladder	500 appl.	250–10,000	<del>\$130.00</del>	\$97.50
FERSM0312	FERSM0312PM	GeneRuler 1 kb DNA Ladder, RTU	2,500 appl.		<del>\$498.00</del>	\$373.50
FERSM0313	FERSM0313PM	GeneRuler 1 kb DNA Ladder, RTU	500 appl.		<del>\$163.00</del>	\$122.25
FERSM1331	FERSM1331PM	GeneRuler 1 kb Plus DNA Ladder	500 appl.	75–20,000	<del>\$132.00</del>	\$99.00
FERSM1332	FERSM1332PM	GeneRuler 1 kb Plus DNA Ladder, RTU	2,500 appl.		<del>\$519.00</del>	\$389.25
FERSM1333	FERSM1333PM	GeneRuler 1 kb Plus DNA Ladder, RTU	500 appl.		<del>\$176.00</del>	\$132.00
FERR0611	FERR0611PM	6X DNA Loading Dye	5 x 1 mL		<del>\$36.00</del>	\$27.00
FERR0631	FERR0631PM	6X Orange DNA Loading Dye	5 x 1 mL		<del>\$36.00</del>	\$27.00

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\*\*RTU = ready-to-use



### Thermo Scientific™ TopVision™ Agarose Tablets

- Convenient tablet format—no messy weighing required
- Fast dissolving protocol
- Uses an innovative, organic, solvent-free technology that helps reduce environmental impact by using less toxic materials
- Enhanced resolution and reduced background



Fisher Scientific Cat. No.	Fisher Scientific Promo Cat. No.	Description	Size	List Price	25% OFF
FERR2801	FERR2801PM	TopVision Agarose Tablets (0.5 g each)	200 tablets	<del>\$115.00</del>	\$86.25
FERR2802	FERR2802PM		1,000 tablets	<del>\$460.00</del>	\$345.00

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## Tips & tricks: DNA gel electrophoresis

- Always let the gel solidify completely to obtain clear and sharp bands
- Chose the gel percentage according to the DNA fragments you want to analyze
- Don't overload your gel: use ~0.1–0.2 µg DNA per 1 mm gel lane
- Avoid excessive voltage: run your gels at 5–8 V/cm; lower voltage during the first minutes of the gel run increases band sharpness



Agarose conc. (%)	0.7	0.9	1.2	1.5	1.5
DNA size range (kb)	0.8–10	0.5–7	0.4–6	0.2–4	0.1–3

Recommended agarose percentage for DNA separation.



## Robust DNA polymerase for fast clone screening



### Thermo Scientific™ DreamTaq™ Green DNA Polymerase

- Enhanced *Taq* DNA polymerase optimized for routine PCR amplification
- Longer fragment amplification, higher sensitivity and better yields than conventional *Taq* DNA polymerase
- Direct loading of PCR products on gels with green buffer formats

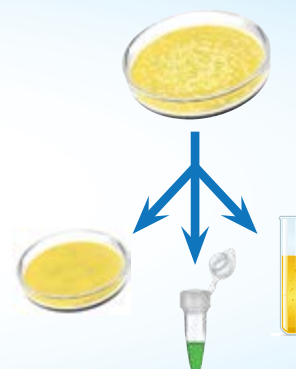
Fisher Scientific Cat. No.	Fisher Scientific Promo Cat. No.	Description	Size	List Price	25% OFF
FEREP0712	FEREP0712PM	DreamTaq Green DNA Polymerase (5 U/μL)	500 U	<del>\$67.00</del>	\$50.25
FEREP0713	FEREP0713PM		5 x 500 U	<del>\$281.00</del>	\$210.75
FERK1081	FERK1081PM		200 rxns	<del>\$95.00</del>	\$71.25
FERK1082	FERK1082PM	DreamTaq Green PCR Master Mix (2X)	1,000 rxns	<del>\$436.00</del>	\$327.00

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## Tips & tricks: colony PCR

Used for direct analysis of positive transformants.

1. Set aside a fresh LB plate and culture tubes with LB medium
2. Aliquot DreamTaq Green Master Mix
3. Transfer clone to fresh plate using a sterile pipette tip
4. Resuspend bacterial colony in DreamTaq PCR mixture and transfer tip into the culture tube
5. Run PCR (apply 5 minutes initial denaturation step to lyse cells)
6. Analyze PCR products via gel electrophoresis

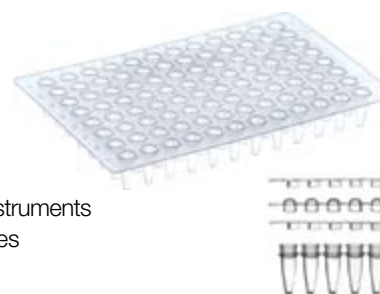


## Reliable PCR plastics



### Thermo Scientific™ Plastic Consumables

- Plates, tubes, strips and sealing options compatible with all main PCR instruments
- Clean-room production—certified free from DNA, RNases and DNases
- Uniform well walls for maximum and consistent heat transfer



Fisher Scientific Cat. No.	Fisher Scientific Promo Cat. No.	Description	Size	List Price	40% OFF
AB-0620	AB0620 PM	0.2 mL Flat Cap Tubes	1,000 tubes	<del>\$101.00</del>	\$60.60
AB-1182	AB1182PM	Strips of 8 Tubes and Flat Caps	250 strips	<del>\$273.00</del>	\$163.80
AB-0784	AB0784PM	Strips of 8 Flat Caps	250 strips	<del>\$79.00</del>	\$47.40
AB-0700	AB0700PM	96-Well Low Profile PCR Plate, Non-Skirted	25 plates	<del>\$110.00</del>	\$66.00
AB-0800	AB0800PM	96-Well Low Profile PCR Plate, Full-Skirted	25 plates	<del>\$110.00</del>	\$66.00
AB-0900	AB0900PM	96-Well Segmented PCR Plate, Semi-Skirted	25 plates	<del>\$110.00</del>	\$66.00
AB-0600	AB0600PM	96-Well PCR Plate, Non-Skirted	25 plates	<del>\$110.00</del>	\$66.00
AB-1815	AB1815PM	VersiCap™ Mat, Flat Cap Strips	25 mats	<del>\$48.00</del>	\$28.80
AB-0558	AB0558PM	Adhesive PCR Film	100 sheets	<del>\$136.00</del>	\$81.60

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# Essential nucleic acid purification kits for cloning



## Thermo Scientific™ GeneJET™ Kits

- High yields of pure nucleic acids
- Convenient spin columns with trusted silica membrane technology
- Specialized protocols for a wide variety of sample types



Fisher Scientific Cat. No.	Fisher Scientific Promo Cat. No.	Description	Size	List Price	25% OFF
FERK0502	FERK0502PM	GeneJET Plasmid Miniprep Kit	50 preps	<del>\$66.00</del>	\$49.50
FERK0503	FERK0503PM		250 preps	<del>\$271.00</del>	\$203.25
FERK0481	FERK0481PM		25 preps	<del>\$184.00</del>	\$138.00
FERK0482	FERK0482PM	GeneJET Plasmid Midiprep Kit	100 preps	<del>\$654.00</del>	\$490.50
FERK0491	FERK0491PM		10 preps	<del>\$174.00</del>	\$130.50
FERK0492	FERK0492PM	GeneJET Plasmid Maxiprep Kit	25 preps	<del>\$389.00</del>	\$291.75
FERK0731	FERK0731PM		50 preps	<del>\$204.00</del>	\$153.00
FERK0732	FERK0732PM	GeneJET RNA Purification Kit	250 preps	<del>\$818.00</del>	\$613.50
FERK0721	FERK0721PM		50 preps	<del>\$104.00</del>	\$78.00
FERK0722	FERK0722PM	GeneJET Genomic DNA Purification Kit	250 preps	<del>\$471.00</del>	\$353.25
FERK0701	FERK0701PM		50 preps	<del>\$74.00</del>	\$55.50
FERK0702	FERK0702PM	GeneJET PCR Purification Kit	250 preps	<del>\$331.00</del>	\$248.25
FERK0691	FERK0691PM		50 preps	<del>\$74.00</del>	\$55.50
FERK0692	FERK0692PM	GeneJET Gel Extraction Kit	250 preps	<del>\$331.00</del>	\$248.25
FERK0831	FERK0831PM		50 preps	<del>\$77.00</del>	\$57.75
FERK0832	FERK0832PM	GeneJET Gel Extraction and DNA Cleanup Micro Kit	250 preps	<del>\$358.00</del>	\$268.50

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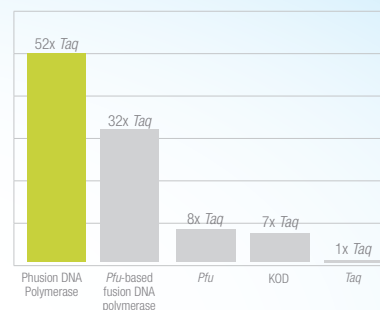
## Gold standard for high-fidelity PCR

High-fidelity DNA polymerases are essential for cloning because they help ensure high accuracy of DNA amplicons after PCR. Thermo Scientific™ Phusion™ High-Fidelity DNA Polymerase is one of the most accurate thermostable polymerases available and is considered a gold standard for cloning. It was created by fusing a proofreading DNA polymerase with a processivity-enhancing domain, which increases polymerase fidelity and speed.

Learn more at [thermoscientific.com/phusion](http://thermoscientific.com/phusion)

### Quick guide for using Phusion High-Fidelity DNA Polymerase in PCR

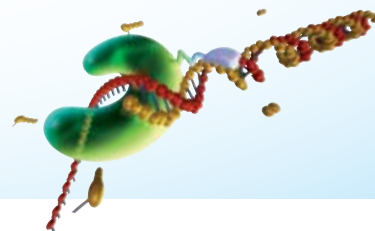
- Use 0.5–1.0 U per 50 µL reaction volume
- Use 15–30 s/kb for extension
- Use 98°C for denaturation
- Anneal at  $T_m + 3^\circ\text{C}$  (>20 nt) or use 2-step protocol
- Use 200 µM of each dNTP (final concentration)



▲ Relative fidelity values of different DNA polymerases.  
Fidelity = 1/error rate.

### Thermo Scientific Phusion High-Fidelity DNA Polymerase

- Extremely accurate and fast amplification
- Robust performance and high yields
- Direct loading on gels with green buffer formats



# Restriction digestion as easy as it gets

25%  
OFF\*

## Thermo Scientific™ FastDigest™ Restriction Enzymes

- 100% activity of all FastDigest enzymes in ONE universal reaction buffer
- Complete digestion in 5 to 15 minutes
- Green Buffer for direct loading on gels\*\*
- 100% buffer compatibility with downstream applications

### Conventional restriction enzymes Sequential digestion

- 1 Reaction setup for Apal ~2 minutes
- 2 Incubation at 37°C 60 minutes
- 3 Reaction setup for XhoI >2 minutes
- 4 Incubation at 37°C 60 minutes

**TOTAL TIME > 2 hours**

### FastDigest restriction enzymes One reaction mixture

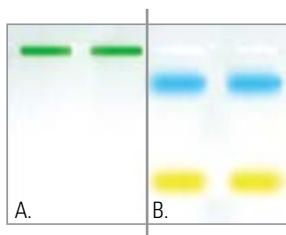
- 1 Set up ONE reaction mixture with:  
FastDigest Apal and FastDigest XhoI ~2 minutes
- 2 Incubation at 37°C 5 minutes

**TOTAL TIME 7 minutes**

Save more than 2 hours when  
performing double digestion reactions.

Discover all 176 FastDigest enzymes at  
[thermoscientific.com/fastdigest](http://thermoscientific.com/fastdigest)

\*The FastDigest product catalog numbers can be found online. Please add "PM" to the end of standard FastDigest product Cat. No. to receive promotional pricing. Offers are valid from February 1, 2015, until May 31, 2015. Not to be combined with any other promotions or offers.



### Digestion reaction mixture:

- A. Before electrophoresis  
B. Blue and yellow tracking dyes after electrophoresis

### \*\*What is the Green Buffer?

The 10X FastDigest Green Buffer includes a density reagent and two tracking dyes for direct loading of reaction mixtures on gels. It shows the same high efficiency in DNA digestion and downstream applications as the colorless FastDigest Buffer.



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For further information and ordering, visit: [fishersci.com/TSMolecularBi](http://fishersci.com/TSMolecularBi)

\*This promotion is open to customers in the US (excluding Puerto Rico) and Canada. Discount will apply to qualifying orders received by Life Technologies between February 1, 2015, and May 31, 2015, or until promotional supplies are depleted, whichever comes first. Discount applies to the list price in effect at the time the order is received by Life Technologies. Cannot be combined with other discounts or promotions. Offer void where prohibited, licensed, or restricted by federal, state, provincial, or local laws or regulation or agency/institutional policy. Other restrictions may apply.

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For customer service, call 1-800-766-7000

To fax an order, use 1-800-926-1166

To order online: [www.fishersci.com](http://www.fishersci.com)

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SCIENTIFIC

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