

Fast and efficient



Features

- Fast—clone PCR products in only five minutes
- Versatile—ideal for blunt or sticky-end cloning
- Positive selection vector—>99% recombinant colonies
- Economical—no expensive blue/white screening
- Compatible with all common *E. coli* strains (TOP10 and XL1-Blue)

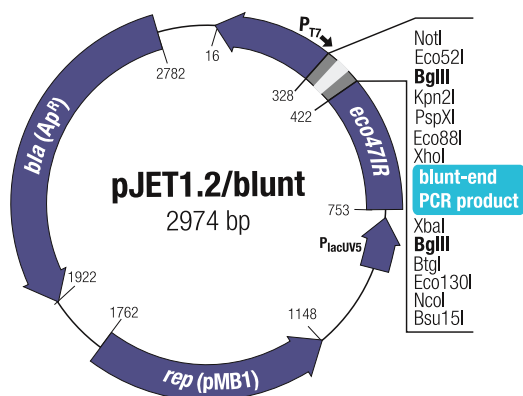
PCR cloning

One kit for all DNA fragments

The Thermo Scientific™ CloneJET™ PCR Cloning Kit is an advanced positive selection system for high-efficiency cloning of PCR products generated with any thermostable DNA polymerase. Any other blunt or sticky-end DNA fragment can be cloned as well. The kit is ideal for phosphorylated or non-phosphorylated DNA fragments.

Ligation into the included positive selection vector takes only five minutes, yielding more than 99% recombinant clones.

All common laboratory *E. coli* strains can be directly transformed with the ligation product.



Product Information

Cloning procedure

Blunt-ended PCR products generated with a proofreading enzyme are ligated directly into the cloning vector. 3'-dA tailed PCR products are blunted prior to ligation in 5 minutes using an enzyme provided with the kit.

Selection principle

The kit contains the novel, ready-to-use positive selection cloning vector pJET1.2/blunt. The vector contains a lethal restriction enzyme gene that is disrupted by ligation of a DNA insert into the cloning site. As a result, only bacterial cells with recombinant plasmids are able to form colonies. Recircularized vector molecules lacking an insert express a lethal enzyme, which kills the host *E. coli* cell after transformation.

Vector elements

For convenience in mapping and manipulation of the insert, the pJET1.2/blunt cloning vector contains multiple cloning site flanking the insertion site. In addition, the vector contains a T7 promoter for *in vitro* and *in vivo* transcription of the cloned gene.

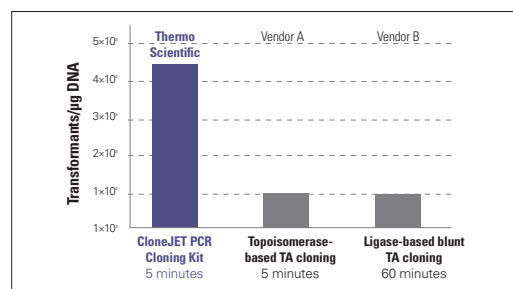
Cat #	Description	Size
K1231	CloneJET PCR Cloning Kit	20 rxns
K1232	CloneJET PCR Cloning Kit	40 rxns
Related Products		
K0502/3	Thermo Scientific™ GeneJET™ Plasmid Miniprep Kit	50/250 preps
K0691/2	Thermo Scientific™ GeneJET™ Gel Extraction Kit	50/250 preps
F-534S/L	Thermo Scientific™ Phusion™ Green High Fidelity DNA Polymerase	100/500 U
K2710/1	TransformAid Bacterial Transformation Kit	40 transf

Kit components:

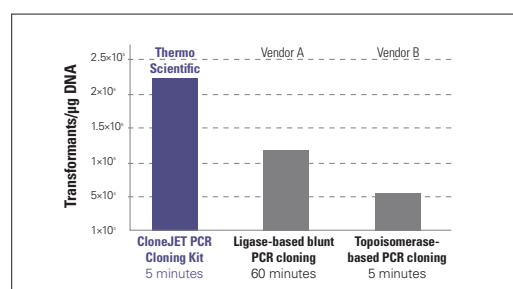
- pJET1.2/blunt Cloning Vector
- T4 DNA Ligase
- 2X Reaction Buffer
- DNA Blunting Enzyme
- pJET1.2 Forward Sequencing Primer
- pJET1.2 Reverse Sequencing Primer
- Control PCR Product
- Water, nuclease-free
- Detailed Protocol

Free sample

Want to try before you buy? Contact your sales representative.



Cloning efficiency of sticky-end PCR products. A 976 bp sticky-end PCR product, generated with *Taq* DNA Polymerase, was ligated into different cloning vectors according to suppliers, protocols. Ligation mixtures (2 µL) were used to transform *E. coli* DH10B cells. Transformation efficiency of competent cells was 1 × 10⁷ transformants per µg supercoiled DNA.



Cloning efficiency of blunt-end PCR products. A 976 bp blunt-end PCR product, generated with *Pfu* DNA Polymerase, was directly ligated into different positive selection blunt-end PCR cloning vectors according to suppliers, protocols. Ligation mixtures (2 µL) were used to transform *E. coli* DH10B cells. Transformation efficiency of competent cells was 1 × 10⁷ transformants per µg supercoiled DNA.