Universal DNA Cloning Kit

pSpark® Universal DNA Cloning kit

Highly efficient, robust and easy-to-use system compatible with Blunt and TA DNA cloning

Ordering info:

Cat No.	Size
C0019	20 rxn

Includes for 20 rxn:

- 20 µL pSpark® II (20 ng/µL)
- 20 µL pSpark® TA DNA Cloning vector (50 ng/µL)
- 20 µL T4 DNA Ligase (5U/Weiss)
- 200 µL T4 DNA Ligase Buffer (5x)
- 150 µL PEG 6000 (10x)
- 5 µL Insert Control 1 kb (20 ng/µL)
- 5 µL Insert Control 600 bp (30 ng/µL)

Related Products:

- pSpark® II DNA Cloning vector (p.14)
- pSpark® TA DNA Cloning vector (p.17)
- FastPANGEA™ Long PCR DNA Polymerase (p.106)
- Horse-Power™ Taq DNA Polymerase (p.103)
- CVX5α™ Chemically Competent cells (p.18)
- CleanEasy™ PCR Purification kit (p.91)
- ITPG (p.19)
- X-Gal (p.19)
- Ampicillin (p.126)

Description:

pSpark® Universal is a highly efficient, accurate and easy-to-use DNA cloning kit ideal for a broad range of PCR fragments cloning applications. There is a range of DNA polymerases available that do not generate PCR products with identical ends: proofreading DNA polymerases leave blunt ends while blends of polymerases and non-proofreading DNA polymerases leaves 3´A overhangs. Therefore, it is necessary to employ different vectors to clone both kinds of PCR fragments.

pSpark® Universal DNA cloning kit has been designed to save time, looking for a kit for several cloning scenarios. It is mainly composed of two cloning vectors which allow blunt or TA DNA cloning. For blunt DNA cloning and TA DNA cloning, pSpark® II DNA cloning vector and pSpark® TA DNA cloning vector, respectively, are included.

Advantages & Features:

- **Compatible with Blunt and TA DNA cloning:** it is composed by pSpark® II (p.14) and pSpark® TA DNA cloning vector (p.16).
- **Convenient:** ideal for a broad range of PCR fragments cloning applications.
- **Versatile:** compatible with any DNA polymerase.

Applications:

- Cloning of high fidelity PCR amplified products into pSpark® II Blunt DNA cloning vector.
- Cloning of non-proofreading PCR fragments into pSpark® TA DNA Cloning vector.
- Production of ssDNA.
- *In vitro* transcription from T7/SP6 dual-opposed promoters.

Quality control:

- Functionally test using 1.0 kb PCR fragment (pSpark® II) and 600 bp PCR fragment (pSpark® TA).

Chemically Competent Cells

CVX5α™ (1 x 10^7 CFU/µg)

Versatile, convenient and cost-effective solution for routine subcloning procedures

Ordering info:

Cat No.	Size
C0031	40 rxn (4 x 500 µl)
C0032	40 rxn (40 x 50 µl)
C0033	90 rxn (9 x 500 µl)

Includes for 40 rxn:

- 2,000 µl CVX5α™ (1 x 10^7 CFU/µg)
- 10 µl pUC18 Transformation Control Plasmid (10 ng / µl)
- 50 mL SOC Medium
- Dry ice

Description:

CVX5α™ Chemically competent cells are a versatile, convenient and cost-effective solution for routine subcloning procedures or any application where the starting DNA is not limiting.

CVX5α™ are calcium chloride-treated to facilitate attachment of the plasmid DNA to the competent cell membrane.

Advantages & Features:

- **Versatile:** proven performance for high-efficiency transformation in a wide variety of applications.
- **Convenient:** ideal for routine.
- **Compatible:** with blue/white screening of colonies on bacterial plates containing Bluo-gal or X-gal.
- **Cost avoidance:** dry ice free of charge.

CVX5α™ Genotype:

F - , gyrA96, recA1, endA1, thi1, hsdR17 (rK - mK +), deoR, supE44, Δ (*lacZ*YA-argF) U169 Φ80*lacZ*ΔM15.

Applications:

- Routine cloning and subcloning of genes into plasmid vectors.

Quality control:

- Each lot of competent cells is tested to verify transformation efficiencies using 100 pg pUC18 supercoiled DNA and the recommended protocol.
- Under these conditions, transformation efficiency will be ≥ 1 x 10^7 cfu/µg pUC18.
- Transformation efficiency is defined as the number of colony forming units (cfu) produced by transforming 1 µg of plasmid (3 kb) into a given volume of competent cells.

Note:
Optimal competence for cloning but it is not enough for the generation of cDNA libraries.

Related Products:

- pSpark® Blunt-end DNA Cloning vectors (p.12)
- pSpark® TA DNA Cloning vectors (p.16)
- pOnebyOne™ Mammalian Expression vectors (p.22)
- pColiExpress™ Glue Enzyme kits (p.34)
- Custom Cloning services (p.140)