pSpark® Done

For highly efficient, accurate and easy cloning of PCR fragments with EcoRI and NotI flanking the insertion site

Ordering info:

Cat No.	Size
C0006-S	10 rxn
C0006	20 rxn

Includes for 20 rxn:

- 20 µL pSpark® Done (20 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)

Related Products:

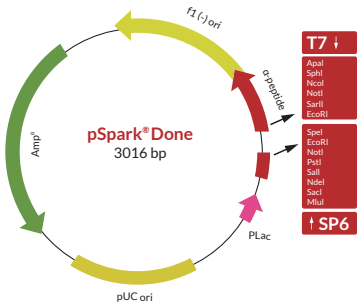
- FastPANGEA™ Long PCR DNA Polymerase (p.106)
- CVX5α™ Chemically Competent cells (p.18)
- CleanEasy™ PCR Purification kit (p.91)
- Custom Cloning services (p.140)
- FastPANGEA™ High Fidelity DNA Polymerase (p.105)
- ITPG (p.19)
- X-Gal (p.19)
- Ampicillin (p.126)

Description:

pSpark® Done is a highly efficient, accurate and easy-to-use DNA cloning system designed for cloning of blunt ended DNA with very high efficiency. The MCS of the pSpark® Done vector incorporates sequences on either side of the insert that are recognized by the restriction enzymes NotI and EcoRI. This allows the insert DNA to be removed with a single restriction digest using either of these enzymes.

Advantages & Features:

- ✓ **Optimized:** recognition sites for NotI and EcoRI either side of the insert of cloning point.
- ✓ **Flexible:** allows removing the desired insert DNA with others restriction digestion.
- ✓ **Unprecedented efficiency:** > 2,500 positive colonies expected under optimal conditions.
- ✓ **Easy-to-use:** eliminate screening of recombinants due to its <1% background.
- ✓ **Time-saving protocol:** avoids any step required after PCR, just 19 minutes from PCR to plating.
- ✓ **Powerful:** obtain 5x more positive colonies using 10x less DNA insert.
- ✓ **High stability:** eliminates cloning bias or pitfalls.
- ✓ **Great versatility:** compatible with any protocol, proofreading polymerase, competent cells, ligation time or primers.
- ✓ **Sensitive:** clone from 50 bp insert to up to 14 kb with just 5ng per kb of insert.
- ✓ **Eliminates positive selection vector.**
- ✓ **Cost avoidance:** removes expensive primer phosphorylation use.
- ✓ **Robust for every DNA size:** just 6.7 ng per kb of insert needed for optimal ligation.



Applications:

- ✓ Cloning of high fidelity PCR amplified products.
- ✓ Production of ssDNA.
- ✓ Blue/white screening for recombinants.
- ✓ *In vitro* transcription from T7/SP6 dual-opposed promoters.
- ✓ One restriction enzyme allows gene fragment excision.

Quality control:

- ✓ Functionally test using 1.0 kb PCR fragment.

Comparison with other vectors :

- ✓ Please visit page 13 to review it.

TA DNA Cloning Kits

pSpark® TA

For efficient, stable and easy cloning of non-proofreading PCR fragments or PCR from blend enzymes

Ordering info:

Cat No.	Size
C0020-S	10 rxn
C0020	20 rxn

Includes for 20 rxn:

- 20 µL pSpark® TA DNA Cloning vectors (50 ng/µL)
- 20 µL T4 DNA Ligase (5U/Weiss)
- 200 µL T4 DNA Ligase Buffer (5x)
- 5 µL Insert Control 600 bp (30 ng/µL)

Description:

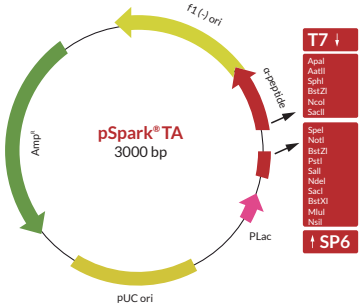
pSpark® TA is efficient, stable and easy-to-use DNA cloning vector based on an optimized TA technology for cloning single 3´-adenine overhanging DNA. The vectors are prepared by digestion of pSpark® TA at EcoRV site and the subsequent addition of a single thymidine at each 3´- end to allow cloning Taq DNA Polymerase amplified DNA fragments. Its exclusive procedure offers greater efficiency and less background of blue colonies than the others TA vectors.

Advantages & Features:

- ✓ **Efficient:** >600 white positive colonies expected under optimal conditions.
- ✓ **Easy-to-use:** eliminate screening of recombinants due to its <4% background.
- ✓ **High stability:** vector without cloning bias due to transcription of toxic genes.
- ✓ **Fast protocol:** ligation time from 60 minutes to overnight.
- ✓ **Compatible:** with direct cloning of PCR products.
- ✓ **Great versatility.**
- ✓ **Cost avoidance:** removes primer phosphorylation.

Applications:

- ✓ Cloning of non-proofreading PCR fragments.
- ✓ Production of ssDNA.
- ✓ Blue/white screening for recombinants.
- ✓ *In vitro* transcription from T7/SP6 dual-opposed promoters.



Quality control:

- ✓ Functional test using a 600 bpPCR fragment.

Related Products:

- TruePure™ dNTPs (p.115)
- Horse-Power™ Taq DNA Polymerase (p.102)
- CVX5α™ Chemically Competent cells (p.18)
- Horse-Power™ Red-Taq DNA Polymerase (p.107)
- Horse-Power™ Green-Taq DNA Polymerase (p.107)
- CleanEasy™ PCR Purification kit (p.91)
- ITPG (p.19)
- X-Gal (p.19)
- Ampicillin (p.126)

pSpark® TA Done

For efficient, stable and easy cloning of PCR fragments with EcoRI and NotI flanking the insertion site

Ordering info:

Cat No.	Size
C0021-S	10 rxn
C0021	20 rxn

Includes for 20 rxn:

- 20 µL pSpark® TA Done (50 ng/µL)
- 20 µL T4 DNA Ligase (5U/Weiss)
- 200 µL T4 DNA Ligase Buffer (5x)
- 5 µL Insert Control 600 bp(30 ng/µL)

Related Products:

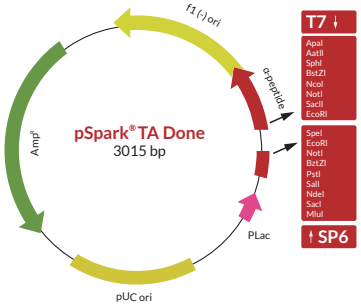
- Horse-Power™ Taq DNA Polymerase (p.102)
- CVX5α™ Chemically Competent cells (p.18)
- CleanEasy™ PCR Purification kit (p.91)
- ITPG (p.19)
- X-Gal (p.19)
- Ampicillin (p.126)
- Horse-Power™ Red-Taq DNA Polymerase (p.107)
- Horse-Power™ Green-Taq DNA Polymerase (p.107)

Description:

pSpark® TA Done is efficient, stable and easy-to-use DNA cloning vector based on an improved TA technology that offers all of the advantages of pSpark® TA with the added convenience of recognition sites for EcoRI and NotI flanking the insertion site. Thus, several options exist to remove the desired insert DNA with a single restriction digestion.

Advantages & Features:

- **Convenient:** recognition sites for EcoRI and NotI flanking the insertion site.
- **Flexible:** allows removing the desired insert DNA with other restriction digestion.
- **Efficient:** >600 white positive colonies expected under optimal conditions.
- **Stable:** without cloning bias due to transcription of toxic genes.
- **Easy-to-use:** eliminate screening of recombinants due to its <4% background.
- **Fast protocol:** ligation time from 60 minutes to overnight.
- **Compatible:** with direct cloning of PCR products.
- **Great versatility:** compatible with any competent cell or primer design.
- **Cost avoidance:** removes primer phosphorylation.



Applications:

- Cloning of non-proofreading PCR fragments.
- Production of ssDNA.
- Blue/white screening for recombinants.
- *In vitro* transcription from T7/SP6 dual-opposed promoters.

Quality control:

- Functional test using a 600 bp PCR fragment.

pMBL-T™ Vector

Efficient, convenient and fast cloning of DNA fragments with A overhangs

Ordering info:

Cat No.	Size
C0030	20 rxn

Includes for 20 rxn:

- 20 µL pMBL-T™ Vector (50 ng/µL)
- 20 µL T4 DNA Ligase (5U/Weiss)
- 100 µL T4 DNA Ligase Buffer (10x)
- 5 µL Insert Control 600 bp (30 ng/µL)

Related Products:

- Horse-Power™ Taq DNA Polymerase (p.103)
- T4 DNA Ligase (p.111)
- CVX5α™ Chemically Competent cells (p.18)
- Horse-Power™ Red-Taq DNA Polymerase (p.107)
- Horse-Power™ Green-Taq DNA Polymerase (p.107)
- CleanEasy™ PCR Purification kit (p.91)
- ITPG (p.19)
- X-Gal (p.19)
- Ampicillin (p.126)

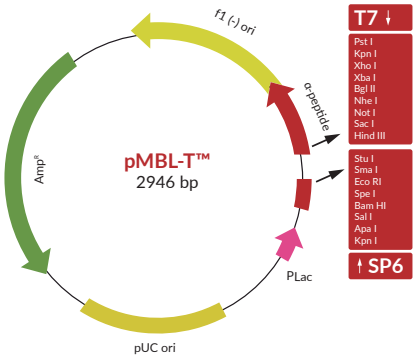
Description:

pMBL-T™ Vector DNA Cloning Kit is an efficient, convenient and fast system for the cloning of PCR products. The vector is prepared by cutting pMBL-T™ vector with EcoRV and adding a 3´ terminal thymidine to both ends. These single 3´-T overhangs at the insertion site greatly improve the efficiency of ligation of a PCR product into the plasmids by preventing recircularization of the vector and providing a compatible overhang for PCR products generated by certain thermostable polymerases such as Horse-Power™ Taq DNA Polymerase.

These polymerases often add a single deoxyadenosine, in a template-independent fashion, to the 3´-ends of the amplified fragments.

Advantages & Features:

- **Highly efficient:** > 90% white colonies in a transformation with supplied insert control.
- **Proven performance:** > 1,000 recombinant colonies in optimal conditions.
- **Fast and easy protocol:** results from 15 min protocol.
- **Optimized:** improve efficiency of ligation of a PCR product into the plasmid.
- **Compatible:** overhang for ligation of PCR products preventing recircularization of the vector.
- **Designed** by cutting the vector with EcoRV and adding a 3´ terminal thymidine to both ends.



Applications:

- Cloning of PCR fragments into DNA.
- Cloning vector.
- Blue/white screening for recombinants.

Quality control:

- Functionally test using 600 bp PCR fragment.

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)

Mutagenesis

PickMutant™

For a reliable, robust and highly efficient Site-directed Mutagenesis based in PCR

Ordering info:

Cat No.	Size
MT001	15 rxn

Includes for 15 rxn:

- 150 µl MasterMix Proofreading DNA Polymerase (2x)
- 300 U Glue enzyme (10 U/µl)
- 40 µl Glue enzyme Buffer (10x)
- 5 µl Insert Control DNA
- 15 µl pSpark® I (20 ng/µl)

Description:

PickMutant™ is a reliable, robust and highly efficient PCR-based mutagenesis kit. Extremely easy-to-use, the kit allows creating single or multiple point mutations, deletions or insertions using a rapid and easy protocol. All these mutation could be obtained by PCR using a FastPANGEA™ High Fidelity DNA Polymerase and well-designed mutagenesis primers. The assembled mutagenic PCR fragments is cloned into pSpark® cloning vector, specially designed to clone blunt PCR fragments with high efficiency or into other vector designing, in this case, an additional specific vector primer pair.

Advantages & Features:

- ✔ **Highly Effective** point mutations (single or multiple), deletions or insertions.
- ✔ **Easy and fast protocol:** it takes less than 3 hours in one step procedure.
- ✔ **Cost avoidance:** compatible with any bacterial strains or primers.
- ✔ **Versatile:** compatible with any cloning vector.
- ✔ **Efficient:** includes highly efficient pSpark® to clone blunted fragments.
- ✔ **Robust:** simultaneous assemble and clone of PCR fragments.

Applications:

- ✔ Site-directed Mutagenesis.
- ✔ Study protein function.
- ✔ Identify enzyme active sites.
- ✔ Design new proteins.

Quality control:

- ✔ The kit has been tested using the insert control DNA provided.

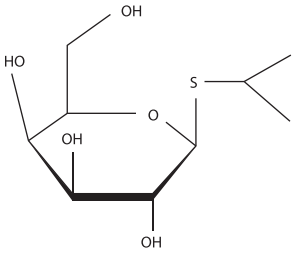
Related Products:

- Custom Mutagenesis services (p.140)
- pSpark® I DNA Cloning vector (p.12)
- FastPANGEA™ Long PCR DNA Polymerase (p.106)
- Molecular Microbiology services (p.140)
- ITPG (p19)
- X-Gal (p.19)

Related Compounds

IPTG

Isopropyl β-D-thiogalactopyranoside



Specifications:

CAS Number: 367-93-1
Chemical Formula: $C_9H_{18}O_5S$
Molecular Weight: 238.30
Purity (HPLC)(on dry basis):<99.0%
Melting point: 110 - 114°C
Identity (IR): conforms to structure
Solubility: soluble in water and methanol
Heavy metals (Pb): >5ppm
1,4-Dioxane: Not detected
pH(5% in water): 5.0 - 7.0
Water content (Karl Fischer): >1.0%

Ordering info:

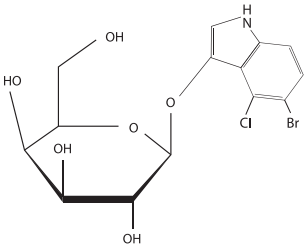
Cat No.	Size
C0040	5g
C0041	25g

Applications:

- ✔ Blue/white screening.
- ✔ Expression of genes under *lac* promoter control.

X-Gal

5-Bromo-4-chloro-3-indolyl β-D-Galactopyranoside



Specifications:

CAS Number: 7240-90-6
Chemical Formula: $C_{14}H_{15}BrClNO_6$
Molecular Weight: 408.63
Assay (HPLC):<98% w/w
Purity (HPLC):<99%
Purity (TLC): single spot
Water content (Karl Fischer): >1%
Identity (IR): conforms to structure
Solubility (5% w/v, DMF): soluble

Ordering info:

Cat No.	Size
C0043	1g
C0044	5g

Applications:

- ✔ Blue/white screening.
- ✔ Gene expression detection of β-galactosidase reporter.
- ✔ Detection of β-galactosidase activity in immunological and histochemical applications.

2. Mammalian & Bacterial Expression Vectors

Bicistronic Mammalian Expression Vectors

Non-viral Mammalian Expression Vectors
Retroviral Expression Vectors
Lentiviral Expression Vectors

Dual Reporter Plasmids

Non-viral Dual Reporter Plasmid controls
Retroviral Dual Reporter Plasmid controls
Lentiviral Dual Reporter Plasmid controls

Packaging Vectors

Retroviral Packaging Systems
Lentiviral Packaging Systems

Bacterial Expression Vectors

Photo: Animal tissue structures under the microscope

Bicistronic Mammalian Expression vectors

pOnebyOne™ Selection Guide:

		pOnebyOne™ Non-viral																		pOnebyOne™ Retroviral				pOnebyOne™ Lentiviral			
Name		I-Neo	II-Neo	III-Neo	IV-Neo	V-Neo	VI-Neo	I-Puro	II-Puro	III-Puro	IV-Puro	V-Puro	VI-Puro	I-Hyg	II-Hyg	III-Hyg	IV-Hyg	V-Hyg	VI-Hyg	I-Retro	II-Retro	III-Retro	IV-Retro	I-Lent.	II-Lent.	III-Lent.	IV-Lent.
Catalog Number		ME001-N	ME002-N	ME003-N	ME004-N	ME005-N	ME006-N	ME001-P	ME002-P	ME003-P	ME004-P	ME005-P	ME006-P	ME001-H	ME002-H	ME003-H	ME004-H	ME005-H	ME006-H	ME0013	ME0014	ME0015	ME0016	ME0017	ME0018	ME0019	ME0020
Page		23	23	23	23	24	24	23	23	23	23	24	24	23	23	23	23	24	24	24	24	24	25	25	25	25	25
Mammalian Resistance Marker	Neomycin	✓	✓	✓	✓	✓	✓																				
	Puromycin							✓	✓	✓	✓	✓	✓														
	Hygromycin													✓	✓	✓	✓	✓	✓								
Promoter	Pcmv	✓	✓			✓		✓	✓			✓		✓	✓			✓		✓	✓			✓	✓		
	PEF1α			✓	✓		✓		✓	✓	✓		✓			✓	✓		✓			✓	✓			✓	✓
Selection Marker	ΔNGFR	✓		✓				✓		✓				✓		✓				✓		✓		✓		✓	
	eGFP		✓		✓				✓		✓				✓		✓				✓		✓		✓		✓
	Luciferase					✓	✓					✓	✓					✓	✓								
Copy number	High	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								
	Low																			✓	✓	✓	✓	✓	✓	✓	✓
Bacterial Resistence Marker	Ampicillin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Viral Vector	Retroviral																			✓	✓	✓	✓				
	Lentiviral																							✓	✓	✓	✓

pOnebyOne™

Highly efficient lineal vector ready-to-clone your PCR gene and express your Protein of Interest

All vectors includes for 20 rxn:

- 20 µL Linearized vector (50 ng/µL)
- 40 µL Glue Enzyme (10 u/µL)
- 50 µL Glue-Enzyme Buffer (10x)
- 10 µL Insert Control (30 ng/µL)
- 5 µL pOnebyOne™ Control (50 ng/µL)

Description:

pOnebyOne™ are efficient, accurate and flexible Bicistronic Mammalian expression family vectors that contains an expression cassette based in 2A sequence breakthrough technology.

As Bicistronic vector, it allows simultaneous expression of two proteins from the same mRNA. Unlike the transfection with vectors with two different expression cassettes, cells transfected with bicistronic vectors ensure that if one of the proteins is present, the other one is present too.

Bicistronic expression vectors are supported on viral elements: the IRES or 2A sequence. IRES has been widely used. It is a relative short sequence, around 600-700 bp, although this length could be a disadvantage in viral vectors where packaging capacity is limited. IRES based expression vectors are characterized by a non-stoichiometric production of both proteins, generally there is a lower expression of the downstream gene.

Many 2A sequences from several families of viruses have been described for producing multiple polypeptides. 2A mediated cleavage is a universal phenomenon in all eukaryotic cells. With just 20 bp in length, the 2A sequence has been used succesfully to generate multiple proteins in some biological models: plants, zebrafish, transgenic mice or eukaryotic cell lines. Vectors based on 2A produce stoichiometric proportion of both proteins.

Canvax offers a ready-to-clone solution of your gene of interest onto a wide collection of bicistronic vectors based on 2A sequence. You can choose among different promoters, selection antibiotics or reporter genes.

Related Products:

- WideUse™ Plasmid Purification Kit (p.92)
- CVX5α™ Chemically Competent cells (p.18)
- FastCONTROL™ Dual Reporter Plasmid (p.27)
- FastPANGEA™ High Fidelity DNA Pol. (p.105)
- Ampicillin (p.126)
- CANFAST™ Transfection reagent (p.76)
- Nerve Growth Factor Receptor Antibody (p.123)
- pASSEMBLE™ Packaging Systems (p.33)
- pOnebyOne™ MCS1-2A-MCS2

Advantages & Features:

- ✔ **Complete solution:** a directional cloning vector to clone and produce a protein of interest.
- ✔ **Breakthrough technology:** based in 2A sequence simultaneous expression of two proteins in mammalian cells (a protein of interest and reporter).
- ✔ **Highly efficient:** cloning system tested with up to 4 kb inserts.
- ✔ **Time-saving cloning process:** linearized vector ready-to-mix with your PCR fragment.
- ✔ **Easy-to-use:** facilitates the selection of positive cells expressing the recombinant gene of interest.
- ✔ **Cost avoidance:** avoids the use of restriction enzymes.
- ✔ **Accurate:** proven performance for most common cell lines.
- ✔ **Flexible:** allows transfection in difficult cell lines.
- ✔ **Really low experimental background:** < 1%.
- ✔ **Convenient:** available with different resistance marker cassettes.
- ✔ **Directional cloning:** of PCR with the gene of interest.
- ✔ **Reporter checking:** stoichiometric amount of your protein of interest and a reporter protein.

Applications:

pOnebyOne™ Non-viral Mammalian Expression vectors

- ✔ Protein Expression of intracellular, extracellular or transmembrane in higher cells in an equimolecular ratio with a surface marker that allows quantification.

pOnebyOne™ Retroviral Expression vectors

- ✔ Introduction of DNA in refractile transfection cell lines.
- ✔ Co-expression of your gene of interest and a reporter gene.

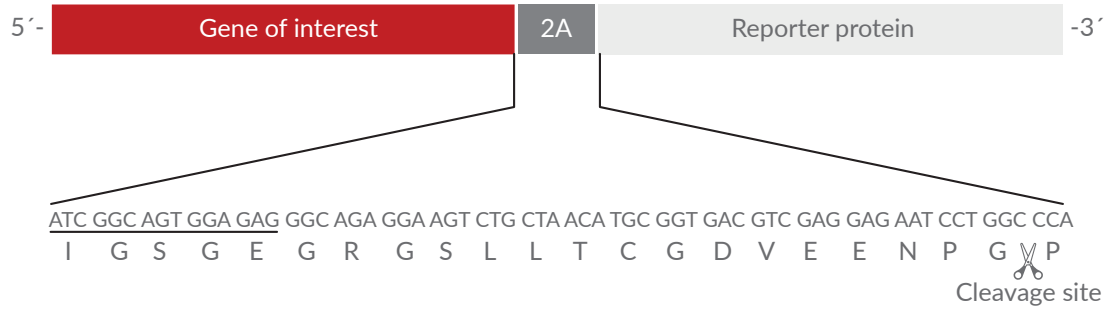
pOnebyOne™ Lentiviral Expression vectors

- ✔ Highest generation Lentiviral transfer vector to transform replicating and non-replicating cells, including stem and neuronal cells.
- ✔ Vector of choice for short-interfering RNA (siRNA) delivery and for gene therapy.

Quality control of all pOnebyOne™:

- ✔ Cloning of SEAP open reading frame and testing phosphatase alkaline activity in mammalian cells.

Figure 2.1.: 2A sequence based vector.



Both genes must be in frame and the nascent peptide is cleaving between the glycine and proline. After the cleavage, the short peptide IGSGEGRGSLLTCGDAEENPG (21 aminoacids) remains fused to the C-terminus of the protein of interest while the proline is added to the N-terminus of the reporter protein. 2A sequence used has high cleavage efficiency in some biological systems. Essential reverse primer sequence for directional cloning is underlined.

pOnebyOne™ Non-viral Mammalian Expression vectors

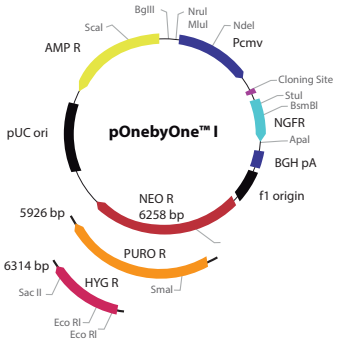
pOnebyOne™ I

Ordering info:

I-NEO (Neomycin):	
Cat No.	Size
ME001-N-S	10 rxn
ME001-N	20 rxn
I-PURO (Puromycin):	
Cat No.	Size
ME001-P-S	10 rxn
ME001-P	20 rxn
I-HYG (Hygromycin):	
Cat No.	Size
ME001-H-S	10 rxn
ME001-H	20 rxn

Description:

The expression cassette of pOnebyOne™ I incorporates the cytomegalovirus early promoter that precedes 2A sequence in frame with truncated nerve growth factor receptor (ΔNGFR). ΔNGFR is a complete solution to select positive clones. It could be visualized by cytometry using specific antibody labelled with FITC or similar and also, it could be enriched from negative clones with magnetic beads bearing anti-ΔNGFR antibody. Stable mammalian cells could be selected by Neomycin, Puromycin or Hygromycin resistance.



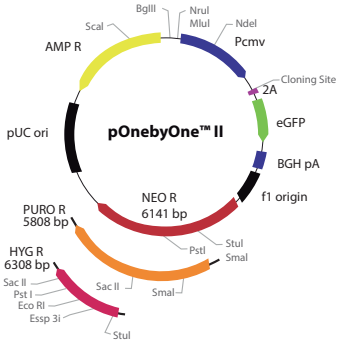
pOnebyOne™ II

Ordering info:

II-NEO (Neomycin):	
Cat No.	Size
ME002-N-S	10 rxn
ME002-N	20 rxn
II-PURO (Puromycin):	
Cat No.	Size
ME002-P-S	10 rxn
ME002-P	20 rxn
II-HYG (Hygromycin):	
Cat No.	Size
ME002-H-S	10 rxn
ME002-H	20 rxn

Description:

The expression cassette of pOnebyOne™ II contains the cytomegalovirus early promoter that precedes 2A sequence in frame with the green fluorescent protein (eGFP) from *Aequoria victoria*. eGFP is optimized for brighter and higher expression in mammalian cells, it can be visualized by cytometry or microscopy (Excitation wavelength maximum=488 nm/ Emission wavelength maximum=507 nm). Positive cells can be sorted by means of a sorter cytometer. Stable mammalian cells can be selected by Neomycin, Puromycin or Hygromycin resistance.



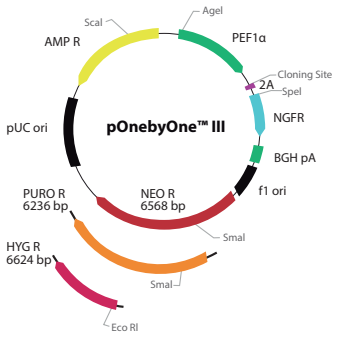
pOnebyOne™ III

Ordering info:

III-NEO (Neomycin):	
Cat No.	Size
ME003-N-S	10 rxn
ME003-N	20 rxn
III-PURO (Puromycin):	
Cat No.	Size
ME003-P-S	10 rxn
ME003-P	20 rxn
III-HYG (Hygromycin):	
Cat No.	Size
ME003-H-S	10 rxn
ME003-H	20 rxn

Description:

The expression cassette of pOnebyOne™ III incorporates the Human elongation factor 1 alpha promoter that precedes 2A sequence, in frame with the truncated nerve growth factor receptor (ΔNGFR). ΔNGFR is a complete solution to select positive clones. It can be visualized by cytometry using a specific antibody labelled with FITC or a similar method, and also, it can be enriched from negative clones with magnetic beads bearing an anti-ΔNGFR antibody. Stable mammalian cells can be selected by Neomycin, Puromycin or Hygromycin resistance.



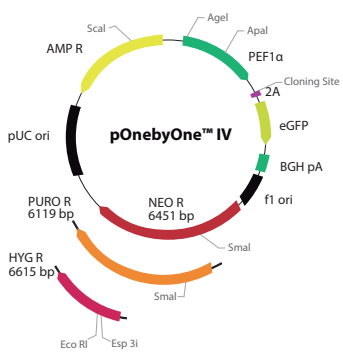
pOnebyOne™ IV

Ordering info:

IV-NEO (Neomycin):	
Cat No.	Size
ME004-N-S	10 rxn
ME004-N	20 rxn
IV-PURO (Puromycin):	
Cat No.	Size
ME004-P-S	10 rxn
ME004-P	20 rxn
IV-HYG (Hygromycin):	
Cat No.	Size
ME004-H-S	10 rxn
ME004-H	20 rxn

Description:

The expression cassette of pOnebyOne™ IV incorporates the Human elongation factor 1 alpha promoter that precedes 2A sequence in frame with the green fluorescent protein (eGFP) from *Aequoria victoria*. eGFP is optimized for brighter and higher expression in mammalian cells, it can be visualized by cytometry or microscopy (Excitation wavelength maximum=488 nm/ Emission wavelength maximum=507 nm). Positive cells can be sorted by means of a sorter cytometer. Stable mammalian cells can be selected by Neomycin, Puromycin or Hygromycin resistance.



pOnebyOne™ V

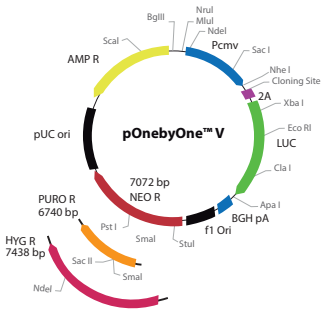
Ordering info:

V-NEO (Neomycin):	
Cat No.	Size
ME005-N-S	10 rxn
ME005-N	20 rxn
V-PURO (Puromycin):	
Cat No.	Size
ME005-P-S	10 rxn
ME005-P	20 rxn
V-HYG (Hygromycin):	
Cat No.	Size
ME005-H-S	10 rxn
ME005-H	20 rxn

Description:

The expression cassette of pOnebyOne™ V incorporates the cytomegalovirus early promoter that precedes 2A sequence in frame with the luciferase from the firefly *Photinus pyralis*.

Luciferase is a sensitive enzymatic reporter that can be assayed by standard luciferase activity reaction. Stable mammalian cells can be selected by Neomycin, Puromycin or Hygromycin resistance.



pOnebyOne™ VI

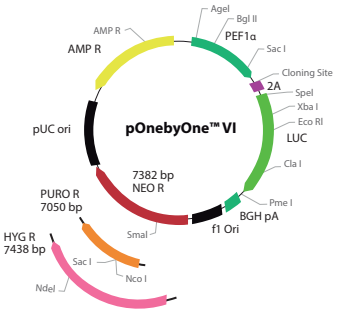
Ordering info:

VI-NEO (Neomycin):	
Cat No.	Size
ME006-N-S	10 rxn
ME006-N	20 rxn
VI-PURO (Puromycin):	
Cat No.	Size
ME006-P-S	10 rxn
ME006-P	20 rxn
VI-HYG (Hygromycin):	
Cat No.	Size
ME006-H-S	10 rxn
ME006-H	20 rxn

Description:

The expression cassette of pOnebyOne™ VI includes the Human elongation factor 1 alpha promoter that precedes 2A sequence in frame with the luciferase from the firefly *Photinus pyralis*.

Luciferase is a sensitive enzymatic reporter that can be assayed by standard luciferase activity reaction. Stable mammalian cells can be selected by Neomycin, Puromycin or Hygromycin resistance.



pOnebyOne™ Retroviral expression vectors

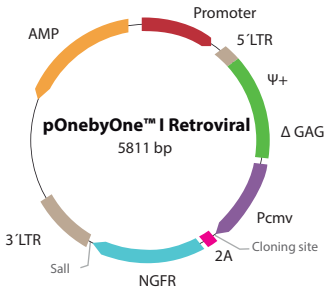
pOnebyOne™ I - Retroviral

Ordering info:

Cat No.	Size
ME0013-S	10 rxn
ME0013	20 rxn

Description:

The expression cassette of pOnebyOne™ I - Retroviral incorporates the cytomegalovirus early promoter that precedes 2A sequence in frame with the truncated nerve growth factor receptor (ΔNGFR). ΔNGFR is a complete solution to select positive clones. It can be visualized by cytometry using a specific antibody labelled with FITC or using a similar method and also, it can be enriched from negative clones with magnetic beads bearing anti-ΔNGFR antibody.



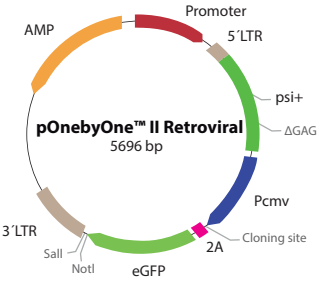
pOnebyOne™ II - Retroviral

Ordering info:

Cat No.	Size
ME0014-S	10 rxn
ME0014	20 rxn

Description:

The expression cassette of pOnebyOne™ II - Retroviral includes the cytomegalovirus early promoter that precedes 2A sequence in frame with the green fluorescent protein (eGFP) from *Aequoria victoria*. eGFP is optimized for brighter and higher expression in mammalian cells, it can be visualized by cytometry or microscopy (Excitation wavelength maximum=488 nm/ Emission wavelength maximum=507 nm). Positive cells can be sorted by means of a sorter cytometer.



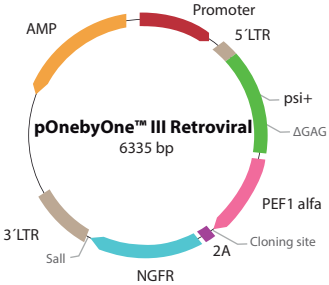
pOnebyOne™ III - Retroviral

Ordering info:

Cat No.	Size
ME0015-S	10 rxn
ME0015	20 rxn

Description:

The expression cassette of pOnebyOne™ III - Retroviral incorporates the Human elongation factor 1 alpha promoter that precedes 2A sequence in frame with the truncated nerve growth factor receptor (ΔNGFR). ΔNGFR is a complete solution to select positive clones. It can be visualized by cytometry using a specific antibody labelled with FITC or using a similar method and also, it can be enriched from negative clones with magnetic beads bearing an anti-ΔNGFR antibody.

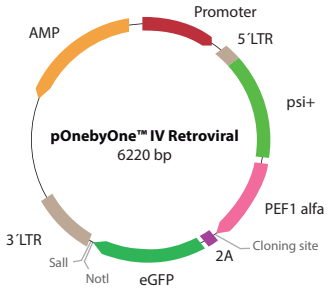


pOnebyOne™ IV - Retroviral

Ordering info:

Cat No.	Size
ME0016-S	10 rxn
ME0016	20 rxn

Description:
The expression cassette of pOnebyOne™ IV - Retroviral includes the Human elongation factor 1 alpha promoter that precedes 2A sequence in frame with the green fluorescent protein (eGFP) from *Aequoria victoria*. eGFP is optimized for brighter and higher expression in mammalian cells, it can be visualized by cytometry or microscopy (Excitation wavelength maximum=488 nm/ Emission wavelength maximum=507 nm). Positive cells can be sorted by means of a sorter cytometer.



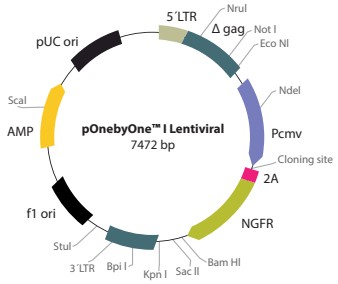
pOnebyOne™ Lentiviral expression vectors

pOnebyOne™ I - Lentiviral

Ordering info:

Cat No.	Size
ME0017-S	10 rxn
ME0017	20 rxn

Description:
The expression cassette of pOnebyOne™ I - Lentiviral includes the Human cytomegalovirus promoter that precedes 2A sequence in frame with the truncated nerve growth factor receptor (ΔNGFR). ΔNGFR is a complete solution to select positive clones as they can be visualized by cytometry using a specific antibody labelled with FITC or using a similar method, and also, they can be enriched from negative clones with magnetic beads bearing an anti ΔNGFR antibody.

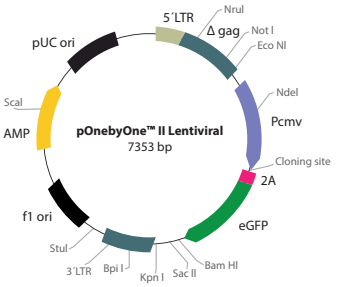


pOnebyOne™ II - Lentiviral

Ordering info:

Cat No.	Size
ME0018-S	10 rxn
ME0018	20 rxn

Description:
The expression cassette of pOnebyOne™ II - Lentiviral incorporates the Human cytomegalovirus promoter that precedes 2A sequence in frame with the Enhanced green fluorescent protein (eGFP) from *Aequoria victoria*. eGFP is optimized for brighter and higher expression in mammalian cells, it can be visualized by cytometry or microscopy (Excitation wavelength maximum=488 nm/ Emission wavelength maximum=507 nm). Positive cells can be sorted by means of a sorter cytometer.

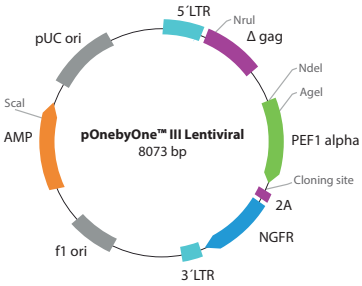


pOnebyOne™ III - Lentiviral

Ordering info:

Cat No.	Size
ME0019-S	10 rxn
ME0019	20 rxn

Description:
The expression cassette of pOnebyOne™ III - Lentiviral incorporates the Human elongation factor 1 alpha promoter that precedes 2A sequence in frame with the truncated nerve growth factor receptor (ΔNGFR). ΔNGFR is a complete solution to select positive clones as they can be visualized by cytometry using a specific antibody labelled with FITC or using a similar method and also, they can be enriched from negative clones with magnetic beads bearing an anti-ΔNGFR antibody.

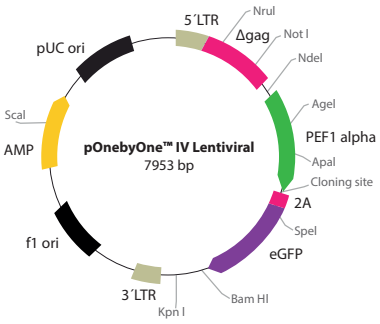


pOnebyOne™ IV - Lentiviral

Ordering info:

Cat No.	Size
ME0020-S	10 rxn
ME0020	20 rxn

Description:
The expression cassette of pOnebyOne™ IV - Lentiviral includes the Human elongation factor 1 alpha promoter that precedes 2A sequence in frame with the enhanced green fluorescent protein (eGFP) from *Aequoria victoria*. eGFP is optimized for brighter and higher expression in mammalian cells, it can be visualized by cytometry or microscopy (Excitation wavelength maximum=488 nm/ Emission wavelength maximum=507 nm). Positive cells can be sorted by means of a sorter cytometer.



Dual reporter Plasmids

FastCONTROL™ Dual Reporter Plasmid Control Selection Guide:

			Reporter Proteins					Promoters		Resistance Markers		
Page Number	Catalog Number	Vector	LUC	SEAP	LacZ	eGFP	ΔNGFR	P_{CMV}	$P_{EF1\alpha}$	Neo	Puro	Hyg
30	PC0101	p2V-SEAP/eGFP-I		✓		✓		✓		✓		
30	PC0102	p2V-SEAP/ΔNGFR-I		✓			✓	✓		✓		
30	PC0104	p2V-LacZ/ΔNGFR-I			✓		✓	✓		✓		
30	PC0103	p2V-SEAP/LUC-I	✓	✓				✓		✓		
30	PC0105	p2V-SEAP/eGFP-Ia		✓		✓			✓	✓		
30	PC0106	p2V-SEAP/ΔNGFR-Ia		✓			✓		✓	✓		
30	PC0108	p2V-LacZ/ΔNGFR-Ia			✓		✓		✓	✓		
30	PC0107	p2V-SEAP/LUC-Ia	✓	✓					✓	✓		
30	PC0110	p2V-SEAP/ΔNGFR-II		✓			✓	✓			✓	
30	PC0112	p2V-LacZ/ΔNGFR-II			✓		✓	✓			✓	
31	PC0111	p2V-SEAP/LUC-II	✓	✓				✓			✓	
31	PC0114	p2V-SEAP/ΔNGFR-IIa		✓			✓		✓		✓	
31	PC0116	p2V-LacZ/ΔNGFR-IIa			✓		✓		✓		✓	
31	PC0115	p2V-SEAP/LUC-IIa	✓	✓					✓		✓	
31	PC0118	p2V-SEAP/ΔNGFR-III		✓			✓	✓				✓
31	PC0120	p2V-LacZ/ΔNGFR-III			✓		✓	✓				✓
31	PC0119	p2V-SEAP/LUC-III	✓	✓				✓				✓
31	PC0122	p2V-SEAP/ΔNGFR-IIIa		✓			✓		✓			✓
31	PC0124	p2V-LacZ/ΔNGFR-IIIa			✓		✓		✓			✓
31	PC0123	p2V-SEAP/LUC-IIIa	✓	✓					✓			✓
RETROVIRAL VECTOR												
32	PC0126	p2RVc-SEAP/ΔNGFR		✓			✓	✓				
32	PC0127	p2RVc-SEAP/eGFP		✓		✓		✓				
32	PC0128	p2RVc-LacZ/ΔNGFR			✓		✓	✓				
32	PC0129	p2RVc-LacZ/eGFP			✓	✓		✓				
32	PC0135	p2RVa-SEAP/ΔNGFR		✓			✓		✓			
32	PC0136	p2RVa-SEAP/eGFP		✓		✓			✓			
32	PC0137	p2RVa-LacZ/ΔNGFR			✓		✓		✓			
32	PC0138	p2RVa-LacZ/eGFP			✓	✓			✓			
LENTIVIRAL VECTOR												
33	PC0140	p2LVc-SEAP/ΔNGFR		✓			✓	✓				
33	PC0141	p2LVc-SEAP/eGFP		✓		✓		✓				
33	PC0142	p2LVa-SEAP/ΔNGFR		✓			✓		✓			
33	PC0143	p2LVa-SEAP/eGFP		✓		✓			✓			

FastCONTROL™ Dual Reporter Plasmid Controls

To fast, convenient and flexible target cell transfection control for high co-expression of two reporter genes

Includes for 100 assays:

· 15 µL FastCONTROL™ Dual Reporter Plasmid Control (1 µg/µL)

Plus Version

Includes for 100 assays:

· 15 µL FastCONTROL™ Dual Reporter Plasmid Control (1 µg/µL)
· 0.2 mL CANFAST™ Transfection reagent (1 mg/mL)

Related Products:

· pOnebyOne™ Mammalian expression vectors (p.22)
· WideUSE™ Plasmid Purification Kit (p.92)
· Custom Cloning services (p.140)
· Ampicillin (p.126)
· pOnebyOne™ MCS1-2A-MCS2

Description:

FastCONTROL™ Dual Reporter Plasmid Controls are fast, convenient and flexible target cell transfection control ideal for high co-expression of two reporter genes drive for ubiquitous, strong and constitutive promoters [cytomegalovirus promoter (Pcmv) or elongation factor 1 alpha promoter (PEF1α)].

The reporter proteins are produced in stoichiometric proportion because the expression cassettes are based on 2A sequence.

This family of vectors 2A-like sequence are used by several families of viruses for producing multiple polypeptides. Unlike IRES based vectors where protein expression from the insert downstream IRES is lower than of the upstream insert, 2A based vectors allow both proteins are produced in identical proportion.

2A-mediated cleavage is a universal phenomenon in all eukaryotic cells. The 2A peptides have been used successfully to generate multiple proteins from a single promoter in some biological models: plants, zebrafish, transgenic mice and human cell lines.

Advantages & Features:

- ✔ **Fast:** available combination of 2 cell location markers in one vector.
- ✔ **Convenient:** available in Lentiviral, Retroviral or non-viral vectors, for immediate *in vivo* and *in vitro* expression.
- ✔ **Compatible with transient or stable transfections.**
- ✔ **Flexible:** available with different mammalian resistance markers and Dual Reporter genes combination for different cell location.

Applications:

- ✔ Control for assessing the efficiency of transfection in mammalian cells.
- ✔ Targering of different cell locations.
- ✔ Obtention of cell lines with reporter proteins.

Quality control:

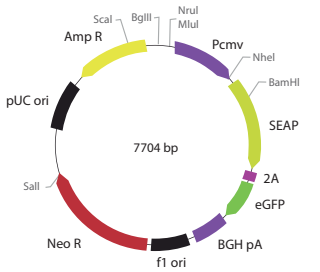
- ✔ The quantity and quality of purified DNA attend to:
  - · Ratio 260/280 (1.8-2.0).
  - · Agarose gel electrophoresis.
  - · Digestion with restriction endonucleases.
- ✔ Transient Transfection CHO-K1 (625 cells / well with these vectors) provides a SEAP activity >1,000 fold higher than untransfected cells themselves.
- ✔ The surface expression of NGFR in transiently transfected CHO > 60%.
- ✔ Expression of eGFP in transient intracellular CHO > 60%.

p2V-SEAP/eGFP-I

Description:
p2V-SEAP/ eGFP-I FastCONTROL™ Dual Reporter Plasmid incorporates Pcmv to conduct the expression of both SEAP and GFP. GFP from *Aequoria victoria* has been optimized for brighter and higher expression in mammalian cells.

Ordering info:

Cat No.	Size
PC0101	15 µL
PC0101-Plus	15 µL + 0.2 mL

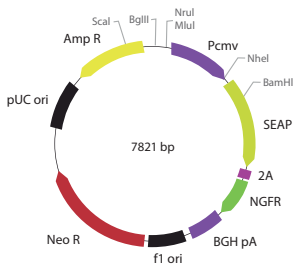


p2V-SEAP/ΔNGFR-I

Description:
p2V-SEAP/ ΔNGFR-I FastCONTROL™ Dual Reporter Plasmid incorporates Pcmv to drive the expression of both SEAP and ΔNGFR.

Ordering info:

Cat No.	Size
PC0102	15 µL
PC0102-Plus	15 µL + 0.2 mL

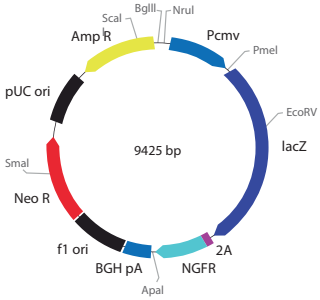


p2V-*LacZ*/ ΔNGFR-I

Description:
p2V-*LacZ*/ ΔNGFR-I Dual Reporter Plasmid incorporates Pcmv to drive the expression of both *lacZ* gene and ΔNGFR.

Ordering info:

Cat No.	Size
PC0104	15 µL
PC0104-Plus	15 µL + 0.2 mL

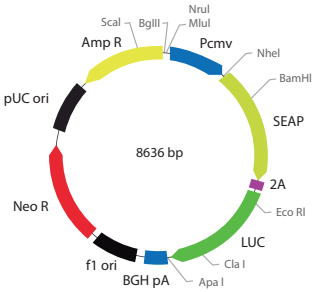


p2V-SEAP/ LUC-I

Description:
p2V-SEAP/ LUC-I FastCONTROL™ Dual Reporter Plasmid incorporates Pcmv to conduct the expression of both SEAP and LUC.

Ordering info:

Cat No.	Size
PC0103	15 µL
PC0103-Plus	15 µL + 0.2 mL

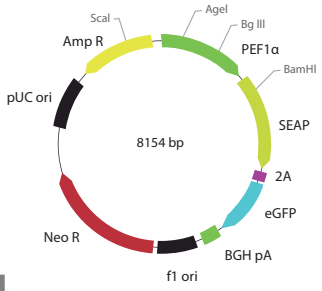


p2V-SEAP/eGFP-Ia

Description:
p2V-SEAP/ eGFP-Ia FastCONTROL™ Dual Reporter Plasmid incorporates PEF1α to conduct the expression of both SEAP and GFP. GFP from *Aequoria victoria* has been optimized for brighter and higher expression in mammalian cells.

Ordering info:

Cat No.	Size
PC0105	15 µL
PC0105-Plus	15 µL + 0.2 mL

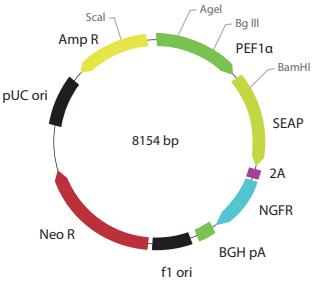


p2V-SEAP/ΔNGFR-Ia

Description:
p2V-SEAP/ ΔNGFR-Ia Dual Reporter vector incorporates PEF1α to drive the expression of both SEAP and ΔNGFR.

Ordering info:

Cat No.	Size
PC0106	15 µL
PC0106-Plus	15 µL + 0.2 mL

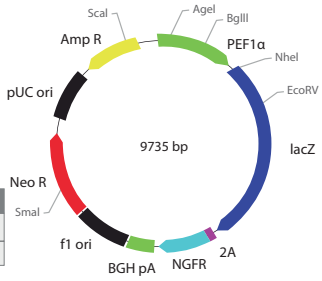


p2V-*LacZ*/ ΔNGFR-Ia

Description:
p2V-*LacZ*/ ΔNGFR-Ia FastCONTROL™ Dual Reporter Plasmid incorporates PEF1α to conduct the expression of both *lacZ* gene and ΔNGFR.

Ordering info:

Cat No.	Size
PC0108	15 µL
PC0108-Plus	15 µL + 0.2 mL

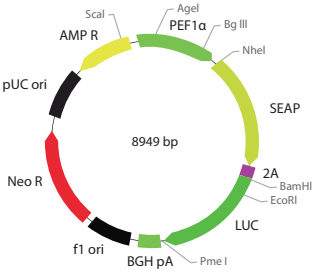


p2V-SEAP/ LUC-Ia

Description:
p2V-SEAP/ LUC-Ia Dual Reporter Plasmid incorporates PEF1α to conduct the expression of both SEAP and LUC.

Ordering info:

Cat No.	Size
PC0107	15 µL
PC0107-Plus	15 µL + 0.2 mL

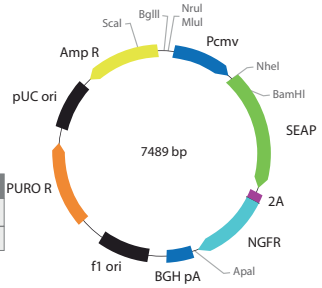


p2V-SEAP/ΔNGFR-II

Description:
p2V-SEAP/ ΔNGFR-II Dual Reporter Plasmid incorporates Pcmv to drive the expression of both SEAP and ΔNGFR.

Ordering info:

Cat No.	Size
PC0110	15 µL
PC0110-Plus	15 µL + 0.2 mL

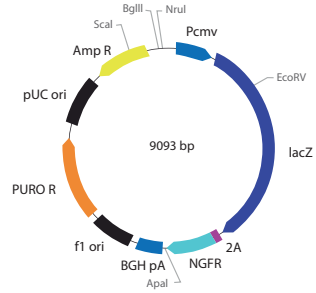


p2V-*LacZ*/ ΔNGFR-II

Description:
p2V-*LacZ*/ ΔNGFR-II FastCONTROL™ Dual Reporter Plasmid incorporates Pcmv to conduct the expression of both *lacZ* gene and ΔNGFR.

Ordering info:

Cat No.	Size
PC0112	15 µL
PC0112-Plus	15 µL + 0.2 mL

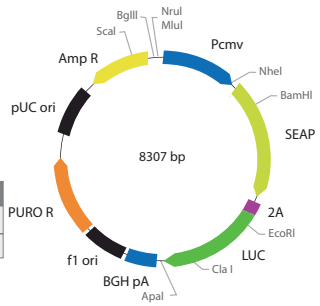


p2V-SEAP/ LUC-II

Description:
p2V-SEAP/ LUC-II Dual Reporter Plasmid incorporates Pcmv to conduct the expression of both SEAP and LUC.

Ordering info:

Cat No.	Size
PC0111	15 µL
PC0111-Plus	15 µL + 0.2 mL

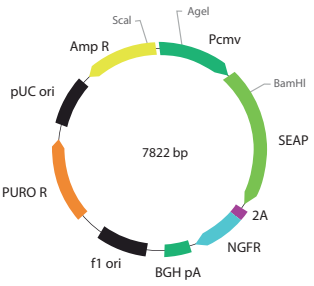


p2V-SEAP/ΔNGFR-IIa

Description:
p2V-SEAP/ ΔNGFR-IIa Dual Reporter vector incorporates PEF1α to drive the expression of both SEAP and ΔNGFR.

Ordering info:

Cat No.	Size
PC0114	15 µL
PC0114-Plus	15 µL + 0.2 mL

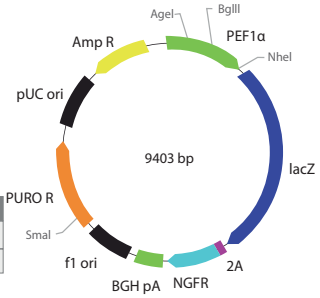


p2V-*LacZ*/ΔNGFR-IIa

Description:
p2V-*LacZ*/ ΔNGFR-IIa FastCONTROL™ Dual Reporter Plasmid incorporates PEF1α to drive the expression of both *lacZ* gene and ΔNGFR.

Ordering info:

Cat No.	Size
PC0116	15 µL
PC0116-Plus	15 µL + 0.2 mL

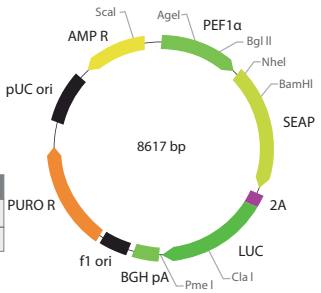


p2V-SEAP/ LUC-IIa

Description:
p2V-SEAP/ LUC-IIa Dual Reporter Plasmid incorporates PEF1α to drive the expression of both SEAP and LUC.

Ordering info:

Cat No.	Size
PC0115	15 µL
PC0115-Plus	15 µL + 0.2 mL

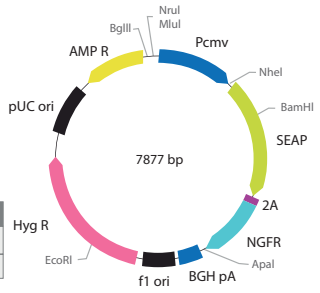


p2V-SEAP/ΔNGFR-III

Description:
p2V-SEAP/ ΔNGFR-III Dual Reporter Plasmid incorporates Pcmv to conduct the expression of both SEAP and ΔNGFR.

Ordering info:

Cat No.	Size
PC0118	15 µL
PC0118-Plus	15 µL + 0.2 mL

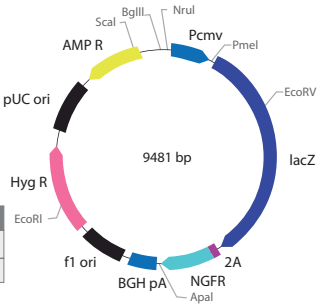


p2V-*LacZ*/ ΔNGFR-III

Description:
p2V-*LacZ*/ ΔNGFR-III FastCONTROL™ Dual Reporter Plasmid incorporates Pcmv to conduct the expression of both *lacZ* gene and ΔNGFR.

Ordering info:

Cat No.	Size
PC0120	15 µL
PC0120-Plus	15 µL + 0.2 mL

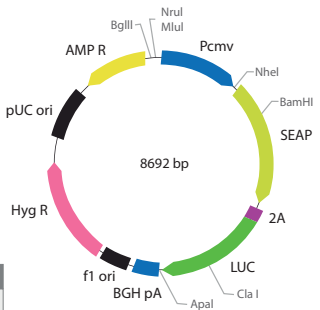


p2V-SEAP/ LUC-III

Description:
p2V-SEAP/ LUC-III Dual Reporter Plasmid incorporates cytomegalovirus promoter (Pcmv) to drive the expression of both secreted embryonic alkaline phosphatase (SEAP) and firefly luciferase from *Photinus pyralis* (LUC).

Ordering info:

Cat No.	Size
PC0119	15 µL
PC0119-Plus	15 µL + 0.2 mL

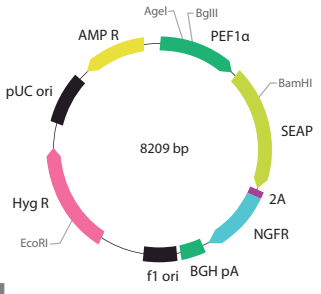


p2V-SEAP/ΔNGFR-IIIa

Description:
p2V-SEAP/ ΔNGFR-IIIa Dual Reporter Plasmid incorporates elongation factor 1 alpha promoter (PEF1α) to conduct the expression of both secreted embryonic alkaline phosphatase (SEAP) and truncated nerve growth factor receptor (ΔNGFR).

Ordering info:

Cat No.	Size
PC0122	15 µL
PC0122-Plus	15 µL + 0.2 mL

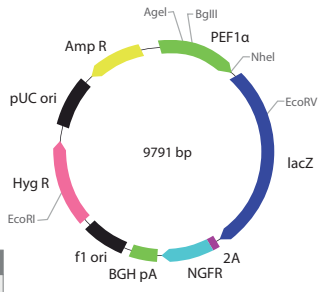


p2V-*LacZ*/ ΔNGFR-IIIa

Description:
p2V-*LacZ*/ ΔNGFR-IIIa Dual Reporter Plasmid incorporates elongation factor 1 alpha promoter (PEF1α) to drive the expression of both beta galactosidase enzyme (*lacZ* gene) and truncated nerve growth factor receptor (ΔNGFR).

Ordering info:

Cat No.	Size
PC0124	15 µL
PC0124-Plus	15 µL + 0.2 mL

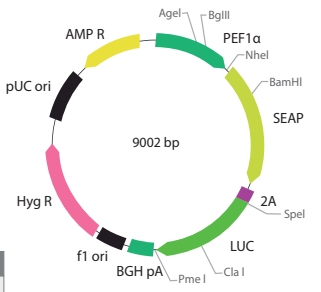


p2V-SEAP/ LUC-IIIa

Description:
p2V-SEAP/ LUC-IIIa Dual Reporter Plasmid incorporates elongation factor 1 alpha promoter (PEF1α) to drive the expression of both secreted embryonic alkaline phosphatase (SEAP) and firefly luciferase from *Photinus pyralis* (LUC).

Ordering info:

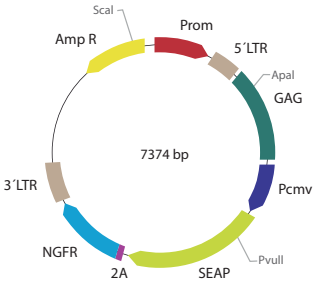
Cat No.	Size
PC0123	15 µL
PC0123-Plus	15 µL + 0.2 mL



Retroviral Dual Reporter Plasmid Controls

p2RVc-SEAP/ΔNGFR - Retroviral

Description:
p2RVc-SEAP/ ΔNGFR Dual Reporter is a Retroviral vector that incorporates cytomegalovirus promoter (Pcmv) to drive the expression of both secreted embryonic alkaline phosphatase (SEAP) and truncated nerve growth factor receptor (ΔNGFR). This is a self-inactivating Retroviral vector that lack viral promoter and enhancer activity in their 3′ long terminal repeat.

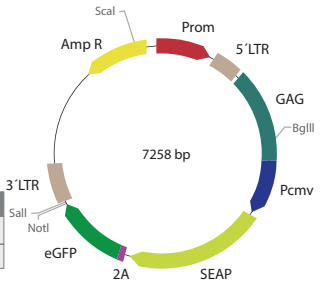


Ordering info:

Cat No.	Size
PC0126	15 µL
PC0126-Plus	15 µL + 0.2 mL

p2V-SEAP/ LUC-Ia - Retroviral

Description:
p2RVc-SEAP/ eGFP FastCONTROL™ Dual Reporter is a Retroviral vector that incorporates Pcmv to drive the expression of both SEAP and eGFP.

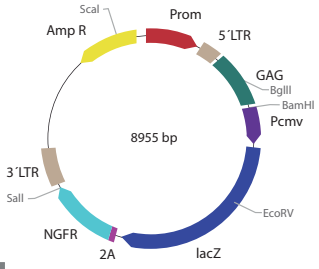


Ordering info:

Cat No.	Size
PC0127	15 µL
PC0127-Plus	15 µL + 0.2 mL

p2RVc-*LacZ*/ ΔNGFR - Retroviral

Description:
p2RVc-*lacZ*/ ΔNGFR Dual Reporter is a Retroviral vector that includes Pcmv to drive the expression of both *lacZ* gene and ΔNGFR. This is a self-inactivating Retroviral vector that lack viral promoter and enhancer activity in their 3′ long terminal repeat.

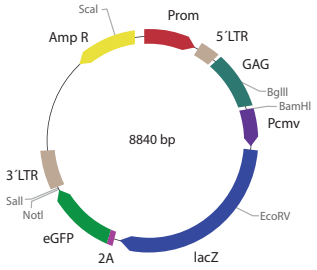


Ordering info:

Cat No.	Size
PC0128	15 µL
PC0128-Plus	15 µL + 0.2 mL

p2RVc-*LacZ*/ eGFP - Retroviral

Description:
p2RVc-*LacZ*/ eGFP Dual Reporter is a Retroviral vector that includes Pcmv to drive the expression of both *LacZ* gene and eGFP. This is a self-inactivating Retroviral vector that lack viral promoter and enhancer activity in their 3′ long terminal repeat.

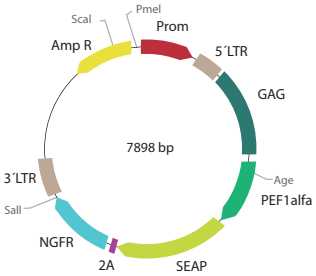


Ordering info:

Cat No.	Size
PC0129	15 µL
PC0129-Plus	15 µL + 0.2 mL

p2RVa-SEAP/ΔNGFR - Retroviral

Description:
p2RVa-SEAP/ ΔNGFR Dual Reporter is a Retroviral vector that incorporates PEF1α to drive the expression of both SEAP and ΔNGFR. This is a self-inactivating Retroviral vector that lack viral promoter and enhancer activity in their 3′ long terminal repeat.

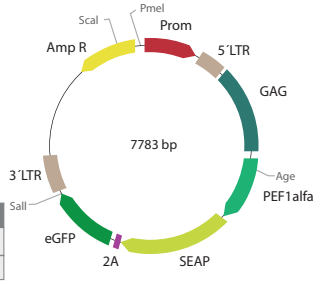


Ordering info:

Cat No.	Size
PC0135	15 µL
PC0135-Plus	15 µL + 0.2 mL

p2RVa-SEAP/eGFP - Retroviral

Description:
p2RVa-SEAP/ eGFP FastCONTROL™ Dual Reporter is a Retroviral vector that includes PEF1α to drive the expression of both SEAP and eGFP.

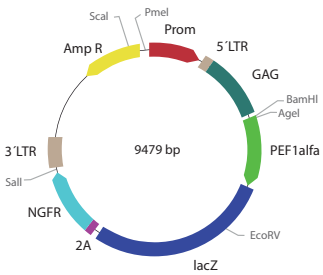


Ordering info:

Cat No.	Size
PC0136	15 µL
PC0136-Plus	15 µL + 0.2 mL

p2RVa-*LacZ*/ ΔNGFR - Retroviral

Description:
p2RVa-*lacZ*/ ΔNGFR Dual Reporter is a Retroviral vector that includes elongation factor 1alpha promoter (PEF1α) to drive the expression of both beta galactosidase (*lacZ* gene) and truncated nerve growth factor receptor (ΔNGFR). This is a self-inactivating Retroviral vector that lack viral promoter and enhancer activity in their 3′ long terminal repeat.

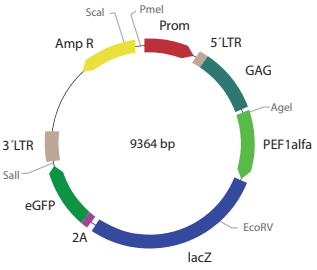


Ordering info:

Cat No.	Size
PC0137	15 µL
PC0137-Plus	15 µL + 0.2 mL

p2RVa-*LacZ*/ eGFP - Retroviral

Description:
p2RVa-*LacZ*/ eGFP Dual Reporter is a Retroviral vector that incorporates PEF1α to drive the expression of both *LacZ* gene and eGFP. This is a self-inactivating Retroviral vector that lack viral promoter and enhancer activity in their 3′ long terminal repeat.



Ordering info:

Cat No.	Size
PC0138	15 µL
PC0138-Plus	15 µL + 0.2 mL

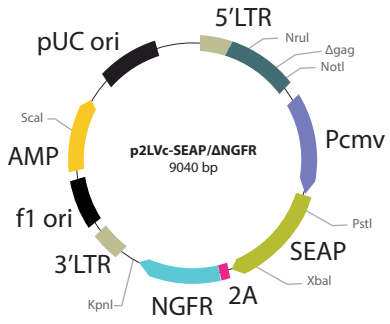
Lentiviral Dual Reporter Plasmid controls

p2LVc-SEAP/ΔNGFR - Lentiviral

Description:
p2LVc-SEAP/ ΔNGFR FastCONTROL™ Dual Reporter is a Lentiviral vector that contains the cytomegalovirus promoter (Pcmv) to drive the expression of both secreted embryonic alkaline phosphatase (SEAP) and truncated nerve growth factor receptor (ΔNGFR). It is a HIV based lentivector, self-inactivating (SIN), lacking viral promoter and enhancer activity in its 3′ long terminal repeat (LTR).

Ordering info:

Cat No.	Size
PC0140	15 µL
PC0140-Plus	15 µL + 0.2 mL

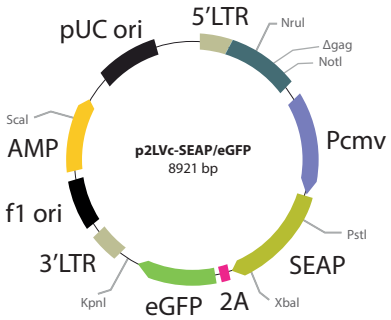


p2LVc-SEAP/eGFP - Lentiviral

Description:
p2LVc-SEAP/ eGFP FastCONTROL™ Dual Reporter is a Lentiviral vector that contains the cytomegalovirus promoter (Pcmv) to drive the expression of both secreted embryonic alkaline phosphatase (SEAP) and green fluorescent protein (eGFP). It is a HIV based lentivector, self-inactivating (SIN), lacking viral promoter and enhancer activity in its 3′ long terminal repeat (LTR).

Ordering info:

Cat No.	Size
PC0141	15 µL
PC0141-Plus	15 µL + 0.2 mL

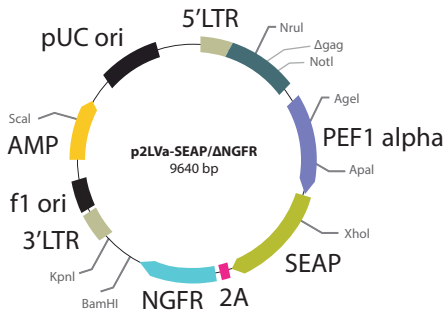


p2LVa-SEAP/ΔNGFR - Lentiviral

Description:
p2LVa-SEAP/ ΔNGFR FastCONTROL™ Dual Reporter is a Lentiviral vector that contains the human elongation factor 1 alpha promoter (PEF1α) to drive the expression of both secreted embryonic alkaline phosphatase (SEAP) and truncated nerve growth factor receptor (ΔNGFR). It is a HIV based lentivector, self-inactivating (SIN), lacking viral promoter and enhancer activity in its 3′ long terminal repeat (LTR).

Ordering info:

Cat No.	Size
PC0142	15 µL
PC0142-Plus	15 µL + 0.2 mL



p2LVa-SEAP/eGFP - Lentiviral

Description:
2LVa-SEAP/ eGFP FastCONTROL™ Dual Reporter is a Lentiviral vector that contains the human elongation factor 1 alpha promoter (PEF1α) to drive the expression of both secreted embryonic alkaline phosphatase (SEAP) and green fluorescent protein (eGFP). It is a HIV based lentivector, self-inactivating (SIN), lacking viral promoter and enhancer activity in its 3′ long terminal repeat (LTR).

Ordering info:

Cat No.	Size
PC0143	15 µL
PC0143-Plus	15 µL + 0.2 mL