pVectOZ-CAT
(Chloramphenicol Acetyltransferase Expression Vector)

Description

The pVectOZ-CAT vector has been created to produce the highest levels of Chloramphenicol Acetyltransferase expression in a broad range of mammalian cells and tissues. It contains a proprietary modified human cytomegalovirus (CMV) promoter followed by a specific intron, enhancer and a terminator. The expression vector is engineered in an optimized plasmid backbone to achieve the highest levels of transgene expression in mammalian cells and high copy number production in *Escherichia coli*.

Kit contents

Ref. #PL00110
100µg pVectOZ-CAT (encoding for Chloramphenicol Acetyltransferase) plasmid in 100µl sterile TE buffer.

Storage

Store at -20°C.

Selection Marker

Kanamycin is the selection gene included for producing the plasmid in *Escherichia coli*.

Applications

pCMV-CAT (Chloramphenicol Acetyltransferase) vector is suitable for all transfection applications (*in vitro* & *in vivo*).

Presentation. The transgene expression level depends mainly on the promoter, enhancer, terminator and plasmid backbone. The pVectOZ-CAT expression cassette was designed to express very high levels of transgene product in many mammalian cells and tissues. This vector has been modified to eliminate sequences affecting transgene expression levels while optimizing those critical for high levels of expression. The final expression cassette accommodates high levels of transgene expression in mammalian cells as well as high yield of plasmid production in *Escherichia coli*. The resulting plasmid is the ideal vector to reach high levels of expression *in vitro* and *in vivo*.

Use. For high levels of transgene expression in mammalian cells and tissues. For optimal results, this vector can be used with all OZ Biosciences transfection reagents to transfect a wide variety of mammalian cells and tissues.

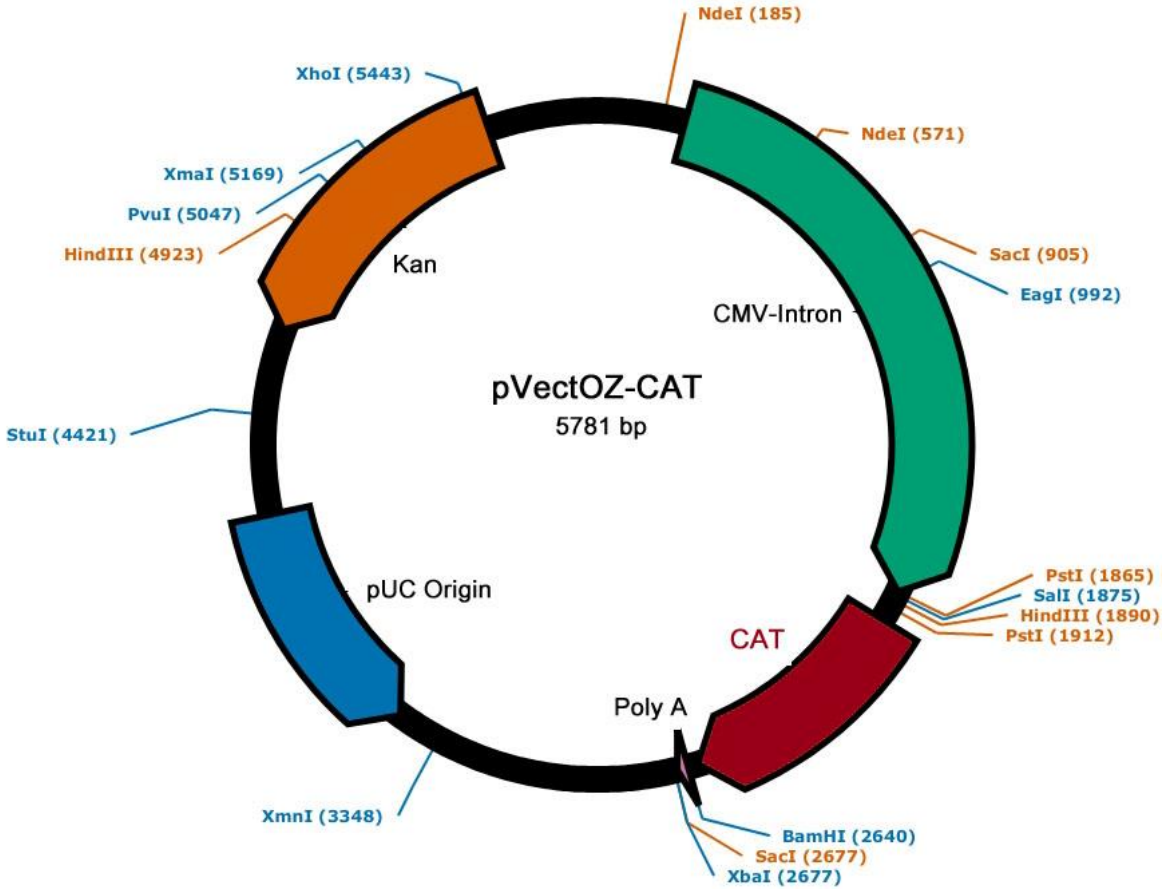
CAT detection

For transfections performed with pVectOZ-CAT plasmids, the detection can be realized by using standard Chloramphenicol Acetyltransferase assay kits. Chloramphenicol acetyltransferase (CAT), encoded by a bacterial drug-resistance gene, is not found in eukaryotes, and therefore eukaryotic cells contain no background of CAT activity. The CAT kit generally offers several methods for monitoring CAT enzyme activity in transfected cells: liquid scintillation counting, thin layer chromatography, fluorimetric or immuno-assay.

References

1. Gorman, C.M. *et al*. (1982). *Mol. Cell. Biol.* **2**: 1044.
2. Seed, B. *et al*. (1988). *Gene*. **67**: 271.
3. Shaw, W. *et al*. (1991). *Ann Rev Bioph Chem.* **20**: 363.
4. Nickel, R. *et al*. (1994). *PNAS*. **91**: 7095.
5. Davey, M. *et al.* (1995). *Methods Mol Biol.* **49**: 143.

Plasmid Map



Related Products

Description	Reference
Magnetofection Technology	
Mega Magnetic Plate	MF14000
Super Magnetic Plate	MF10000
Magnetic Plate 96-magnets	MF10096
PolyMag 1mL *(for all nucleic acids)*	PN31000
PolyMag Neo 1mL (for all nucleic acids)	PG61000
CombiMag 1mL *(boost transfection reagent)*	CM21000
SilenceMag 500µL *(for siRNA applications)*	SM10500
NeuroMag 1mL *(for neuron transfection)*	NM51000
Lipofection (lipid-based reagents)	
DreamFect Gold Transfection reagent 1mL	DG81000
DreamFect Transfection reagent 1mL	DF41000
Lullaby siRNA Transfection reagent 1mL	LL71000
VeroFect Transfection Reagent 1mL	VF61000
FlyFectin Transfection Reagent 1mL	FF51000

Description	Reference
Gene & Protein Tools	
Bradford – Protein Assay Kit	BA00100
GeneBlaster selection kit	GB20010
β-Galactosidase (ONPG) assay kit	GO10001
β-Galactosidase (CPRG) assay kit	GC10002
X-Gal Staining Kit	GX10003
Plasmids	
pVectOZ-CAT 25µg	PL00010
pVectOZ-GFP 25µg	PL00020
pVectOZ-LacZ 25µg	PL00030
pVectOZ-Luc 25µg	PL00040
pVectOZ-SEAP 25µg	PL00050
pVectOZ-GFP 100µg	PL00120
pVectOZ-LacZ 100µg	PL00130
pVectOZ-Luc 100µg	PL00140
pVectOZ-SEAP100µg	PL00150