# pFN2K (GST) Flexi® Vector:

Part No.	Size (units)
C847A	20µg

**Description:** The pFN2K (GST) Flexi<sup>®</sup> Vector<sup>(a,b,c)</sup> is designed for use with the Flexi<sup>®</sup> System, Entry/Transfer (Cat.# C8640), and the Flexi<sup>®</sup> System, Transfer (Cat.# C8820). The vector contains a T7 promoter for bacterial or in vitro protein expression of a protein-coding region. The vector appends an N-terminal glutathione-S-transferase (GST) coding region that can be used to purify the expressed protein. The GST tag contains a TEV protease site for removal of the tag after purification. The vector also contains the lethal barnase gene for positive selection of the insert, a kanamycin-resistance gene for selection of the plasmid and unique Sgfl and Pmel sites that allow easy insertion or transfer of the sequence of interest. Inserts containing a protein-coding region can easily be transferred from the pFN2K (GST) Flexi<sup>®</sup> Vector to other Flexi<sup>®</sup> Vectors with different expression options (Table 1). For more information, see the *Flexi<sup>®</sup> Vector Systems Technical Manual* #TM254.

### Table 1. Vectors Available for Use With the Flexi® Vector Systems.

Cat.#	Flexi <sup>®</sup> Vector	Utility	Expression	Drug Selection	
C8441	pF1A T7 Flexi <sup>®</sup> Vector	Protein expression	E. coli and in vitro (T7 promoter)	Ampicillin	
C8451	pF1K T7 Flexi <sup>®</sup> Vector			Kanamycin	
C8461	pFN2A (GST) Flexi <sup>®</sup> Vector	Protein expression	E. coli and in vitro (T7 promoter)	Ampicillin	
C8471	pFN2K (GST) Flexi® Vector	and purification		Kanamycin	
L5671	pF3A WG (BYDV) Flexi® Vector	Protein expression	Wheat Germ in vitro (T7, SP6)	Ampicillin	
L5681	pF3K WG (BYDV) Flexi® Vector	Protein expression	Wheat Germ in vitro (T7, SP6)	Kanamycin	
C8481	pF4A CMV Flexi <sup>®</sup> Vector	Protein expression	Mammalian (CMV promoter)	Ampicillin	
C8491	pF4K CMV Flexi <sup>®</sup> Vector		and in vitro (T7 promoter)	Kanamycin	

## **Usage Information**

Concentration: 100ng/µl.

GenBank® Accession Number: AY753579.

Storage Buffer: The pFN2K (GST) Flexi® Vector is supplied in 10mM Tris-HCI (pH 8.0), 1mM EDTA.

Storage Conditions: Store the vector at -20°C. Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes. These fluctuations can greatly alter product stability.

Usage Notes: Concentration gradients may form in frozen products and should be dispersed upon thawing. Mix well prior to use.

# **Quality Control Assays**

**Nuclease Assay:** Following incubation of 1µg of pFN2K (GST) Flexi® Vector in Restriction Enzyme Buffer B at 37°C for 16 hours, no evidence of nuclease activity is detected by agarose gel electrophoresis.

### Physical Purity: $A_{260}/A_{280}\!>\!\!1.80.$

**Restriction Digestion:** The presence of unique restriction sites for *Pme* I and *Sgf* I is confirmed by showing that the vector yields the expected fragment sizes after digesting 1µg vector for 2 hours with 10 units of *Pme* I, *Sgf* I and *Bg/* II.

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Stevens

Signed by:

J. Stevens, Quality Assurance



# **Usage Information**

## pFN2K (GST) Flexi<sup>®</sup> Vector Features and Circle Map

The following features are present in the vector based on nucleotide sequence.

The following fourth of procent in the vector be	2000 011 11001001100 00900110
T7 RNA polymerase promoter	21-40
GST coding region	70-723
TEV protease site	742-762
Sgfl site	760-767
barnase coding region	791-1126
Pmel site	11281135
T7 terminator	1255-1302
kanamycin resistance coding region	1683-2477
ColE1-derived plasmid origin of replication	2646-2682
cer site (site for <i>E. coli</i> XerCD recombinase)	3353-3638
rrnB transcription terminator	3689-4090

### rrnB Terminato GST TEV protease ce , Sgf I pFN2K (GST) Barnase Flexi® Vector (4132bp) Pme I Terminator Kan 1818MA

### Figure 1. pFN2K (GST) Flexi® Vector circle map and sequence reference points.

### **Related Products**

Product		Size	Cat.#
Flexi <sup>®</sup> System, Entry/Transfer	5 entry and 20 transfe	r reactions	C8640
Flexi <sup>®</sup> System, Transfer	100 transfe	r reactions	C8820
Carboxy Flexi <sup>®</sup> System, Transfer	50 transfe	r reactions	C9320
10X Flexi® Enzyme Blend (Sgfl & Pme	el)	25µl	R1851
		100µl	R1852
Carboxy Flexi Enzyme Blend (Sgfl & EcolCRI) 50µl		R1901	
HaloTag <sup>®</sup> Flexi <sup>®</sup> Vectors-CMV Dilution	on Series Sample Pack	9 × 2µg	G3780
Single Step (KRX) Competent Cells		5 x 200µl	L3001

There are Flexi® Vectors available for many different applications. Visit: www.promega.com/applications/cloning to find out more.

(a)Patent Pending.

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