

Product Information

pTAC-SBP-1 Expression Vector

Catalog Number **P3996**
 Storage Temperature $-20\text{ }^{\circ}\text{C}$

TECHNICAL BULLETIN

Product Description

The pTAC-SBP-1 Expression Vector is a 5270 bp *Escherichia coli* expression vector used for cloning and cytoplasmic expression of a properly inserted open reading frame. The protein is expressed as a C-terminal SBP fusion protein containing the 38 amino acid Streptavidin Binding Peptide (SBP) tag.¹ Transcription is under control of the tightly regulated IPTG inducible *tac* promoter.

pTAC-SBP-1 may be used in conjunction with the Director™ Universal Cloning System (Catalog Number RDC1) for a simple, rapid and universal method to directionally clone PCR products. The MCS has been optimized for use of the well-validated *Hind* III/*Bgl* II pair of 5' overhang producing restriction enzymes often used in the Director Universal Cloning System. The SBP tag may be detected using Streptavidin-AP (Catalog Number S2890) or Streptavidin-HRP (Catalog Number S5512) conjugates. The fusion may also be purified using Streptavidin-Agarose (Catalog Number S1638). Sigma offers a wide selection of streptavidin products; please visit www.sigma-aldrich.com for a complete listing of antibody conjugates, resins, and affinity capture plates.

Table 1 provides map positions to key features in the pTAC-SBP-1 vector. Sequence verification of the MCS and insert junctions can be performed using the N-26 primer (Catalog Number P7832) and the C-24 primer (Catalog Number P7957).

Reagents

pTAC-SBP-1 Expression Vector	10 μg
0.5 mg/ml in 10 mM Tris-HCl, pH 8.0, with 1 mM EDTA (Catalog Number E0905)	
pT7-SBP-1+BAP Control Vector	1 μg
0.05 mg/ml in 10 mM Tris-HCl, pH 8.0, with 1 mM EDTA (Catalog Number C0364)	

Table 1.
pTAC-SBP-1 Features

Feature	Map Position
<i>tac</i> Promoter	448-508
<i>lacO</i>	648-672
N-26 Sequencing Primer Binding Site	578-603
Ribosomal Binding Site	509-514
SBP tag	556-675
MCS	692-723
C-24 Sequencing Primer Binding Site	867-890
T1/T2 terminator	730-1100
β -lactamase (<i>amp</i> ^r)	1199-2056
pBR322 ori	2264-2383
f1 ori	3047-3510
<i>lacI</i>	4188-5270

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

This product ships on dry ice and storage at $-20\text{ }^{\circ}\text{C}$ is recommended.

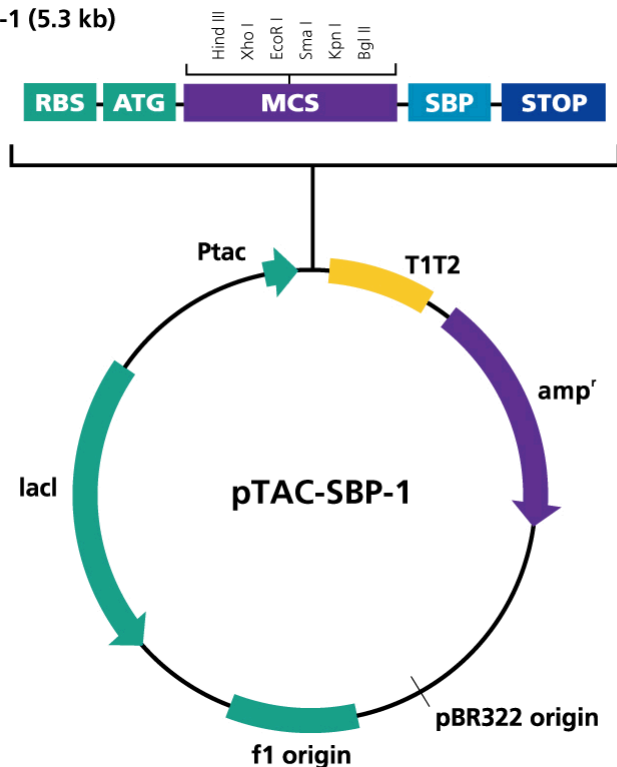
References

- Keefe, A. D., et al., Protein Expr. Purif., **23**, 440-446 (2001).

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KH,MS,MAM,JWM 06/07-1

pTAC-SBP-1 (5.3 kb)



Multiple Cloning Site
(pTAC-SBP-1)

	Hind III	Xho I	EcoR I	Sma I	Kpn I	Bgl II
Met						
AT	GAA GCT	TCT CGA	GAA TTC	CCG GGT	ACC AGA	TCT
TA	CTT CGA	AGA GCT	CTT AAG	GGC CCA	TGG TCT	AGA

SBP Sequence																		
Met	Asp	Glu	Lys	Thr	Thr	Gly	Trp	Arg	Gly	Gly	His	Val	Val	Glu	Gly	Leu	Ala	Gly
ATG	GAC	GAA	AAA	ACC	ACC	GGT	TGG	CGT	GGT	GGT	CAC	GTT	GTT	GAA	GGT	CTG	GCT	GGT
TAC	CTG	CTT	TTT	TGG	TGG	CCA	ACC	GCA	CCA	CCA	GTG	CAA	CAA	CTT	CCA	GAC	CGA	CCA

SBP Sequence																		
Glu	Leu	Glu	Gln	Leu	Arg	Ala	Arg	Leu	Glu	His	His	Pro	Gln	Gly	Gln	Arg	Glu	Pro
GAA	CTG	GAA	CAG	CTG	CGT	GCT	CGT	CTG	GAA	CAC	CAC	CCG	CAG	GGT	CAG	CGT	GAA	CCG
CTT	GAC	CTT	GTC	GAC	GCA	CGA	GCA	GAC	CTT	GTG	GTG	GGC	GTC	CCA	GTC	GCA	CTT	GGC
																		STOP

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