



Title

**Description of Vector pSF10**

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APPROVALS PAGE

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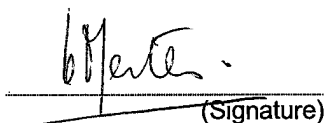
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## INTRODUCTION

The genetic elements to be transferred into the plant have been isolated by a *Sa*I enzymatic digestion of the vector pSF10. Only the linear fragment containing genes of interest has been used for the transformation of soybean.

The genetic elements are represented on the vector map (see Figure 1, page 6) and are further described in Table 1 (see page 7).

## A. VECTOR MAP

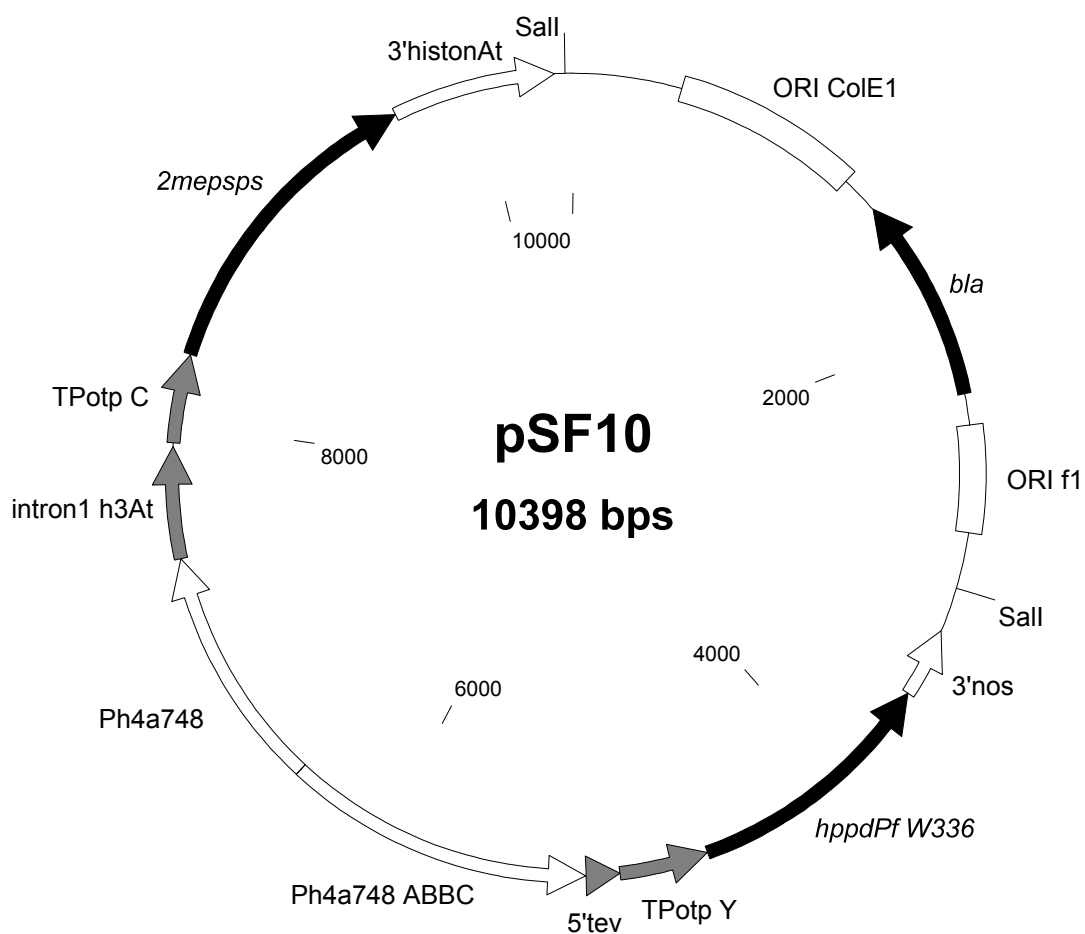


Figure 1: map of vector pSF10



## B. DESCRIPTION OF THE GENETIC ELEMENTS

Table 1: Description of the genetic elements of pSF10.

Nt Positions	Orientation	Origin
3262 - 3553	Counter clockwise	<b>3'nos:</b> sequence including the 3' untranslated region of the nopaline synthase gene from the T-DNA of pTiT37 (Depicker <i>et al.</i> , 1982)
3554 - 4630	Counter clockwise	<b>hppdPf W336:</b> the coding sequence of the 4-hydroxyphenylpyruvate dioxygenase of <i>Pseudomonas fluorescens</i> strain A32 modified by the replacement of the amino acid Glycine 336 with a Tryptophane, as described by Boudec <i>et al.</i> (2001)
4631 - 5002	Counter clockwise	<b>TPotp Y:</b> coding sequence of an optimized transit peptide derivative (position 55 changed into Tyrosine), containing sequence of the RuBisCO small subunit genes of <i>Zea mays</i> (corn) and <i>Helianthus annuus</i> (sunflower), as described by Lebrun <i>et al.</i> (1996)
5003 - 5143	Counter clockwise	<b>5'tev:</b> sequence including the leader sequence of the tobacco etch virus as described by Carrington and Freed (1990)
5144 - 6433	Counter clockwise	<b>Ph4a748 ABBC:</b> sequence including the promoter region of the histone H4 gene of <i>Arabidopsis thaliana</i> , containing an internal duplication (Chabouté <i>et al.</i> , 1987)
6434 - 7448	Clockwise	<b>Ph4a748:</b> sequence including the promoter region of the histone H4 gene of <i>Arabidopsis thaliana</i> (Chabouté <i>et al.</i> , 1987)
7449 - 7929	Clockwise	<b>intron1 h3At:</b> first intron of gene II of the histone H3.III variant of <i>Arabidopsis thaliana</i> (Chaubet <i>et al.</i> , 1992)
7930 - 8301	Clockwise	<b>TPotp C:</b> coding sequence of the optimized transit peptide, containing sequence of the RuBisCO small subunit genes of <i>Zea mays</i> (corn) and <i>Helianthus annuus</i> (sunflower), as described by Lebrun <i>et al.</i> (1996)
8302 - 9639	Clockwise	<b>2mepsps:</b> the coding sequence of the double-mutant 5-enol-pyruvylshikimate-3-phosphate synthase gene of <i>Zea mays</i> (corn) (Lebrun <i>et al.</i> , 1997)
9640 - 10326	Clockwise	<b>3'histonAt:</b> sequence including the 3' untranslated region of the histone H4 gene of <i>Arabidopsis thaliana</i> (Chabouté <i>et al.</i> , 1987)
10327 - 10398		Sequence of the pMCS5 vector (Hoheisel, 1994)
1 - 232		
233 - 457		Sequences of the pUC19 vector (Yanisch-Perron <i>et al.</i> , 1985)
458 - 1244		<b>ORI ColE1:</b> fragment including the origin of replication from the plasmid pBR322 for replication in <i>Escherichia coli</i> (Bolivar <i>et al.</i> , 1977)
1245 - 1403		Sequences of the pUC19 vector (Yanisch-Perron <i>et al.</i> , 1985)
1404 - 2264	Counter clockwise	<b>bla:</b> fragment including the beta-lactamase gene of plasmid pBR322 of <i>Escherichia coli</i> (Bolivar <i>et al.</i> , 1977)
2265 - 2394		Sequences of the pUC19 vector (Yanisch-Perron <i>et al.</i> , 1985)
2395 - 2840		<b>ORI f1:</b> fragment including the origin of replication of the filamentous phage f1 (Dotto <i>et al.</i> , 1982)
2841 - 3261		Sequences of the pUC19 vector (Yanisch-Perron <i>et al.</i> , 1985)



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