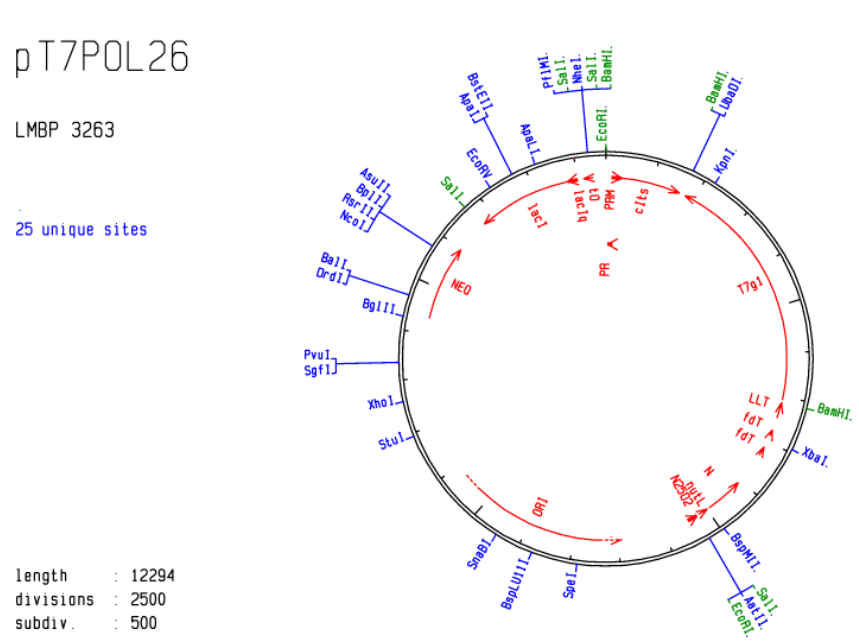
Name:	**pT7POL26**
Circular map:	
Catalogue number:	**34-pT7POL26**
Medium:	LB
Cloned DNA:	Phage T7 RNA polymerase gene (T7g1) Phage λ cIts temperature-sensitive repressor gene (λ cI857) Escherichia coli lac repressor gene (lacI)
Promoters:	Phage T5 N25 promoter and two lac operator sequences (N25/O2) Escherichia coli lac repressor promoter; mutant ($lacI^q$) Phage λ major rightward promoter (λ PR) Phage λ promoter for repressor maintenance (λ PRM)
Ribosome binding sites:	-
Terminators:	Phage fd terminator Phage λ early leftward terminator (λ L) Phage λ's O region terminator (λ tO)
Selection markers:	Neomycin (neo; kanamycin (kan))
Replicon:	Plasmid pSC101 origin derived from R6-5
Host range:	Escherichia coli
Further information:	Start of the nucleotide sequence file in the middle of the non-unique EcoRI site upstream of the cI857 gene. This is a low-copy auxiliary vector for T7 promoter-based expression. The expression of the T7 RNA polymerase gene is controlled by the IPTG-inducible T5 N25/O2 promoter and is attenuated by a series of three tandemly arranged transcription terminators (two fd terminators and the λ early leftward terminator) placed between the T5 N25/O2 promoter and the coding sequence of the T7g1 gene. Upon induction, this attenuation can be overcome because of the presence of the phage λ-derived nutL/ N protein antitermination system. This provides a tighter control on gene expression. The promoter/operator element T5 N25/O2 consists of the highly efficient Escherichia coli phage T5 N25 promoter and two lac operator sequences (Bujard et al. (1987)). pT7POL26 carries the pSC101 replication origin. As a result, it is compatible with ColE1-/pMB1- or

	p15A-derived plasmids, and as such, with the majority of expression vectors currently in use. As compared to pT7POL23, the use of this plasmid results in higher background expression of the gene of interest during precultivation, but it is very useful for the controlled induction (IPTG induction) of the attenuated T7g1 gene at lower temperatures. To use the plasmid, proceed as follows: first transform this auxiliary plasmid to the expression strain, make the transformants competent again and then transform the expression plasmid. Other name of the plasmid is pSCM26.
Authenticity tests:	Restriction enzyme pattern analysed at LMBP: BamHI, BglII, FspI and NruI. Restriction enzyme pattern analysed at the Department of Molecular Biology (Ghent University, Belgium): AatII, BamHI, BglII, BstEII, EcoRI, KpnI, NcoI, NheI, SalI, XbaI and XhoI.
Sequence details:	–
Parental clone:	pT7POL24; pDS12
Type:	Plasmid
History of deposit:	This plasmid was deposited by Dr N. Mertens and Prof. E. Remaut (Dept of Molecular Biology, Ghent University, Belgium).
References:	Mertens et al., Bio/Technology 13 (1995), 175-179 [PMID: 9634760]
Related references:	Bujard et al., Methods Enzymol. 155 (1987), 416-433 [PMID: 2828874]

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