pMCS5 Multiple Cloning Site Vector, lyophilized DNA

Product Information Sheet
PMCS5

SUMMARY

shipped at room temperature; store at 4 °C

For research use only

Product Description and Application

- standard cloning into a site upstream from a T7-RNA-Polymerase-promoter
- end-cloning
- labeling
- linearization of recombinant clones
- blue/white selection
- generation of single-strand DNA (using the f1 origin)

The new cloning vector pMCS5 contains the ultimate multiple cloning site (MCS) with 59 unique restriction sites. Included are the recognition sites for many commonly used restriction enzymes, providing a suitable cloning site for almost any application. The scientist can chose between 46 unique hexamer sites, two heptamer sites and the recognition sites for all ten known octanucleotidespecific endonucleases. In addition, the well-defined 18-mer sequence of the extremely rarely cutting enzyme I-SceI (Thierry *et al*. 1991) is located at one terminus of the MCS, enabling the linearization of recombinant clones. I-SceI does not recognize a palindrome and can thus be used for labeling and end-cloning. Further it can be utilized for strand protection in unidirectional deletion experiments. Included in the MCS are also restriction sites which occur very infrequently in human DNA such as MluI, NruI and SplI.

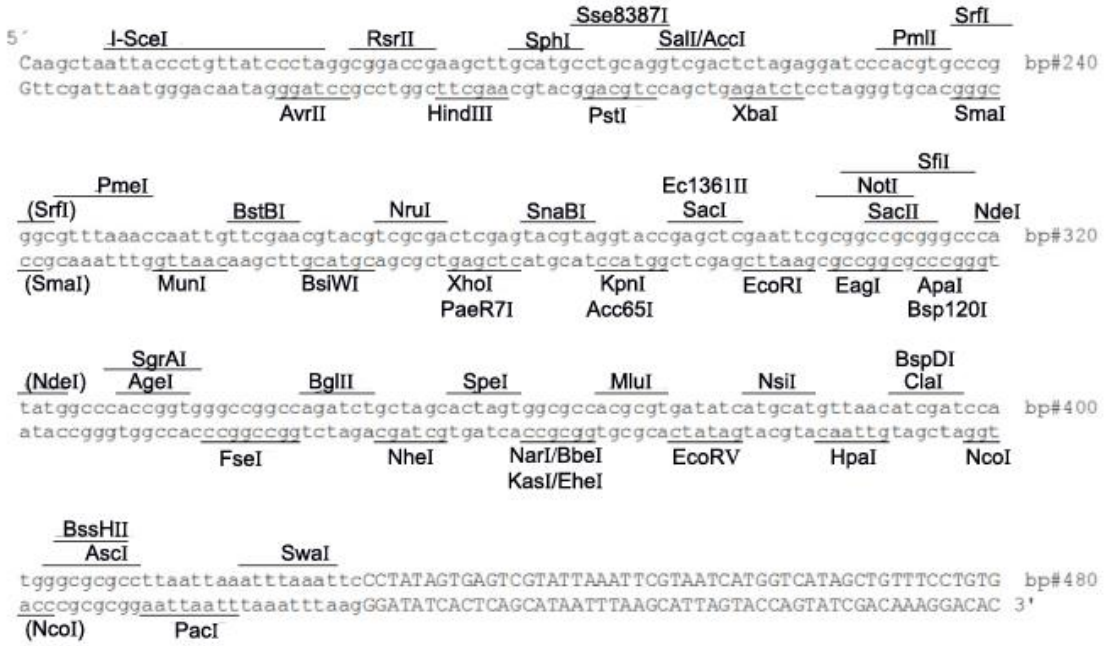
Restriction Enzyme Recognition Sites in the 259-BP MCS Cassette

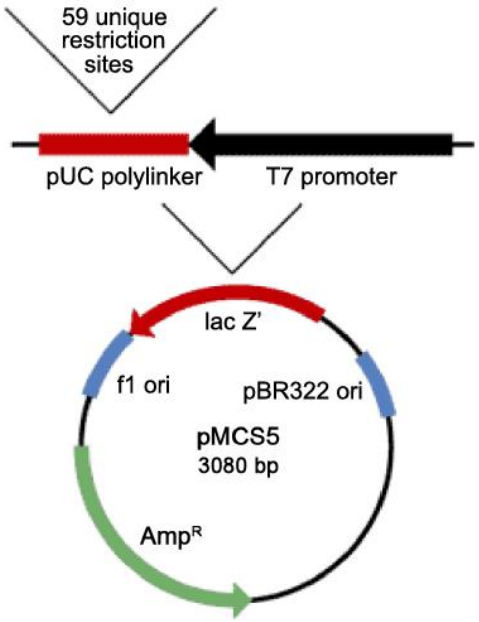
Recognition Sequences	Enzymes	Properties
Heptamer sequences	BaeI, RSrII	
Octamer sequences	AscI, FseI, NotI, SrfI PacI, SwaI PmeI, SgrAI, Sse8387I, SfiI	only GC pairs only AT pairs
Hexamer sequences	MluI, NruI, SplI, ClaI* AccI, Acc65I, AgeI, ApaI, AvrII, BamHI, BbeI, BglII, Bsp120I, BspDI, BspMI, BssHII, BstBI, Ecl136II, EcoRI, EcoRV, EheI, HindIII , HpaI, KasI, KpnI, MunI, NarI, NcoI, NdeI, NheI, NsiI, Nsp7524V, PmlI, Ppu10I, PstI, SacI, SacII, SalI, SmaI, SnaBI, SpeI, SphI, XbaI, XhoI, XmaI, XmaIII	very infrequent in human DNA
18-mer sequence	I-SceI[2]	highly unlikely in any DNA

* since the plasmid was produced in the dam+ strain DH5α, the ClaI site is methylated and cannot be cleaved

MoBiTec GmbH, Germany Phone: +49 551 70722 0 Fax: +49 551 70722 22 E-Mail: info@mobitec.com www.mobitec.com

Multiple Cloning Site & Vector Map





Map and multiple cloning site of vector pMCS5

Amp^R: ampicillin resistance,
f1 ori: filamentous phage f1 origin,
***lac Z´*:** β-galactosidase,
pBR322 ori: plasmid pBR322 origin (Col E1),
T7 promoter: RNA polymerase T7 promoter,
polylinker: from pUC18, new MCS inserted;
sequence and restriction sites listed above.

Note: *Depending on the DNA vector program used, the number of restriction enzyme cleavage sites may vary. We have determined the number of sites using DNA Strider 1.2.*

References

Hoheisel, J., *BioTechniques* 17, 3 (1994) 456-459
Thierry *et al., Nucl Acid Res*. 19 (1991) 189-190

Order Information, Shipping and Storage

Order#	Product	Quantity
PMCS5	pMCS5 Multiple Cloning Site Vector, lyophilized DNA	10 µg
shipped at room temperature; store at 4 °C		

Contact and Support

MoBiTec GmbH ● Lotzestrasse 22a ● D-37083 Goettingen ● Germany

Customer Service – General inquiries & orders
phone: +49 (0)551 707 22 0
fax: +49 (0)551 707 22 22
e-mail: order@mobitec.com

Technical Service – Product information
phone: +49 (0)551 707 22 70
fax: +49 (0)551 707 22 77
e-mail: info@mobitec.com

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