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APPENDICES

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APPENDIX A

Culturing media

1. Non sporulating agar, 1 liter

Soluble starch	20 g
Yeast extract	4 g
Casamino acid	20 g

2. Luria-Bertani (LB) medium, 1 liter

Bacto tryptone	10 g
Yeast extract	5 g
NaCl	5 g

3. Oatmeal agar, 1 liter

Oatmeal	20 g
Trace salt solution	1 ml
Agar	18-20 g
Adjust with 1 N NaOH to pH 7.2	

Boil oatmeal in a water , autoclave before add trace salt solution

4. Trace salt solution (100 ml)

$FeSO_4$ $7H_2O$	0.1 g
$MnCl_2$ 4 H_2O	0.1 g
$ZnSO_4$ $7H_2O$	0.1 g

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APPENDIX B

Dot Blot hybridization buffers

1. Standard hybridization buffer

   5x SSC (0.075M Sodium citrate, 0.75M NaCl)

   N-lauroylsarcosine, 0.1% (W/V)

   SDS, 0.02% (W/V)

   1X blocking reagent

2. Buffer 1 (Maleic acid buffer)

   0.1 maleic acid

   0.15 M NaCl

   Adjust with solid NaOH to pH 7.5

3. Buffer 2 (Blocking solution)

   1X blocking solution in maleic acid buffer

4. Buffer 3 (Detection buffer)

   0.1M Tris-HCl

   0.1M NaCl

   50 mM $MgCl_2$

   Adjust with NaOH to pH 9.5

5. Washing buffer

   0.3% Tween 20 (V/V)

   maleic acid buffer

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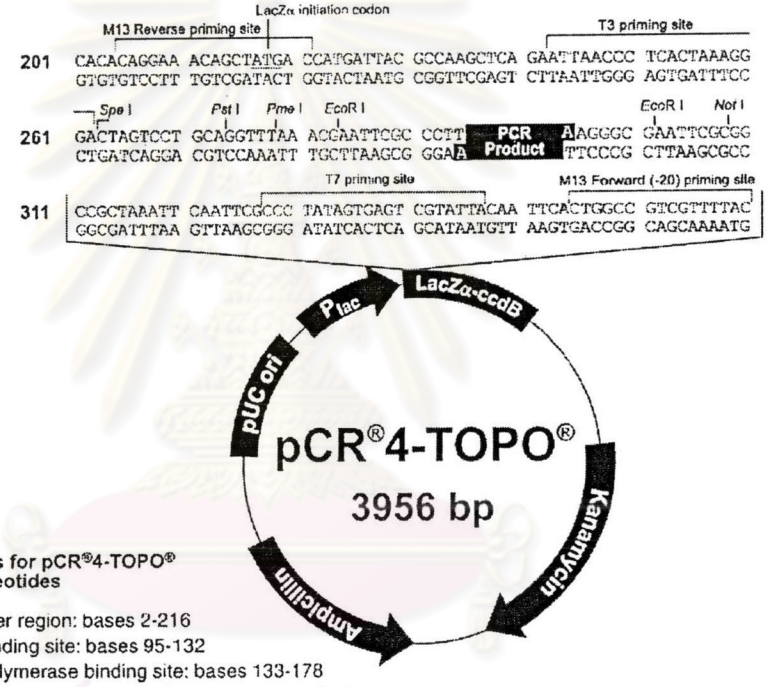
APPENDIX C

Map of pCR®4-TOPO®

pCR®4-TOPO® Map The map below shows the features of pCR®4-TOPO® and the sequence surrounding the TOPO® Cloning site. Restriction sites are labeled to indicate the actual cleavage site. **The complete sequence of pCR®4-TOPO® is available for downloading from our Web site (www.invitrogen.com) or by contacting Technical Service (page 28).**



Comments for pCR®4-TOPO®
3956 nucleotides

lac promoter region: bases 2-216
  CAP binding site: bases 95-132
  RNA polymerase binding site: bases 133-178
  Lac repressor binding site: bases 179-199
Start of transcription: base 179
M13 Reverse priming site: bases 205-221
LacZα-*ccdB* gene fusion: bases 217-810
  LacZα portion of fusion: bases 217-497
  *ccd*B portion of fusion: bases 508-810
T3 priming site: bases 243-262
TOPO® Cloning site: bases 294-295
T7 priming site: bases 328-347
M13 Forward (-20) priming site: bases 355-370
Kanamycin promoter: bases 1021-1070
Kanamycin resistance gene: bases 1159-1953
Ampicillin (*bla*) resistance gene: bases 2203-3063 (c)
Ampicillin (*bla*) promoter: bases 3064-3160 (c)
pUC origin: bases 3161-3834
(c) = complementary strand

BIOGRAPHY

Miss Sittinee Saenmee was born on May 15rd , 1979 in Lopburi. She graduated with the Bachelor Degree of Science in Department of Genetics, Faculty of Science, Kasetsart University in 2000. Then, she has been a graduate student in the Master's Degree in Biotechnology program, Faculty of Science, Chulalongkorn University since 2000.

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