

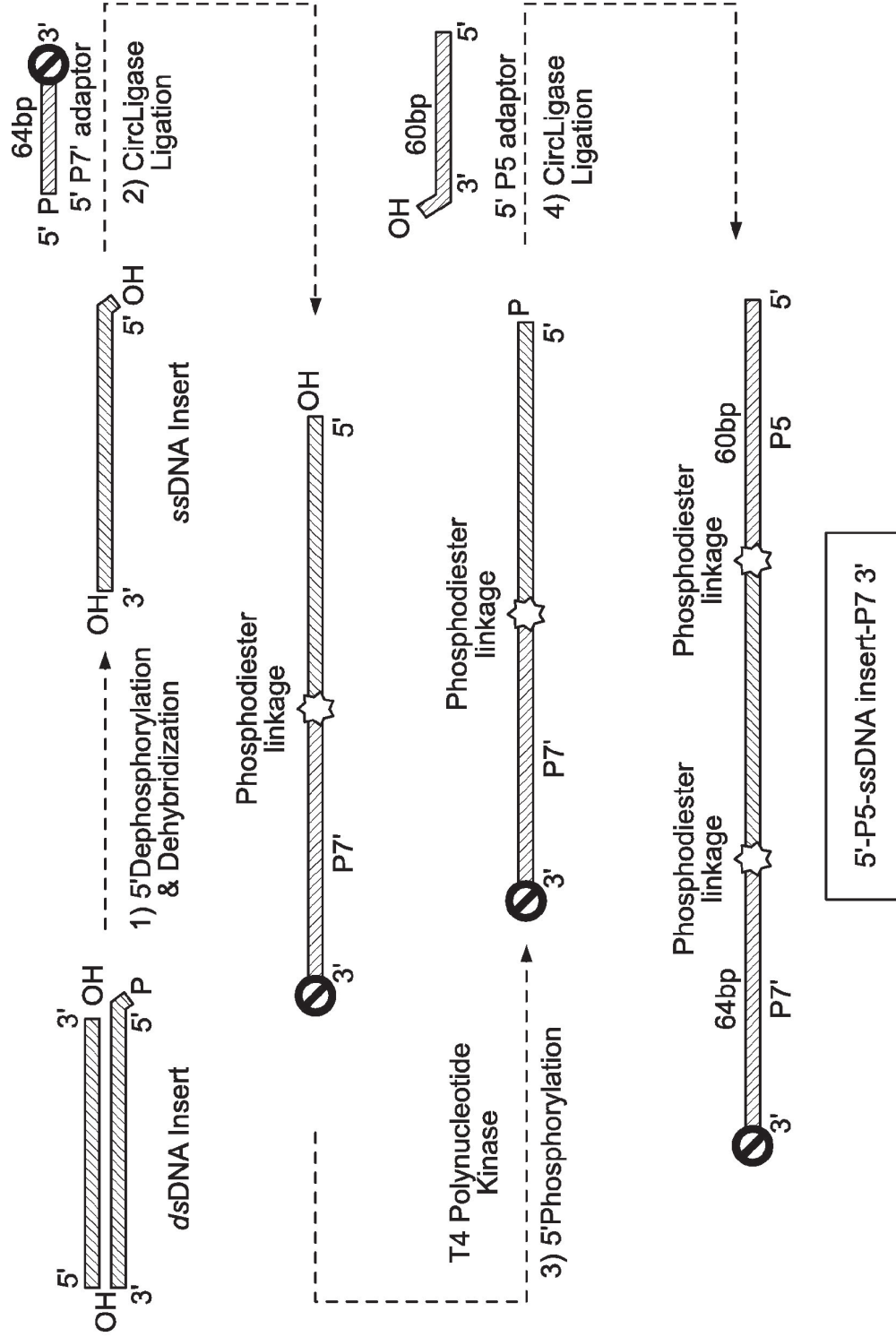


FIG. 1

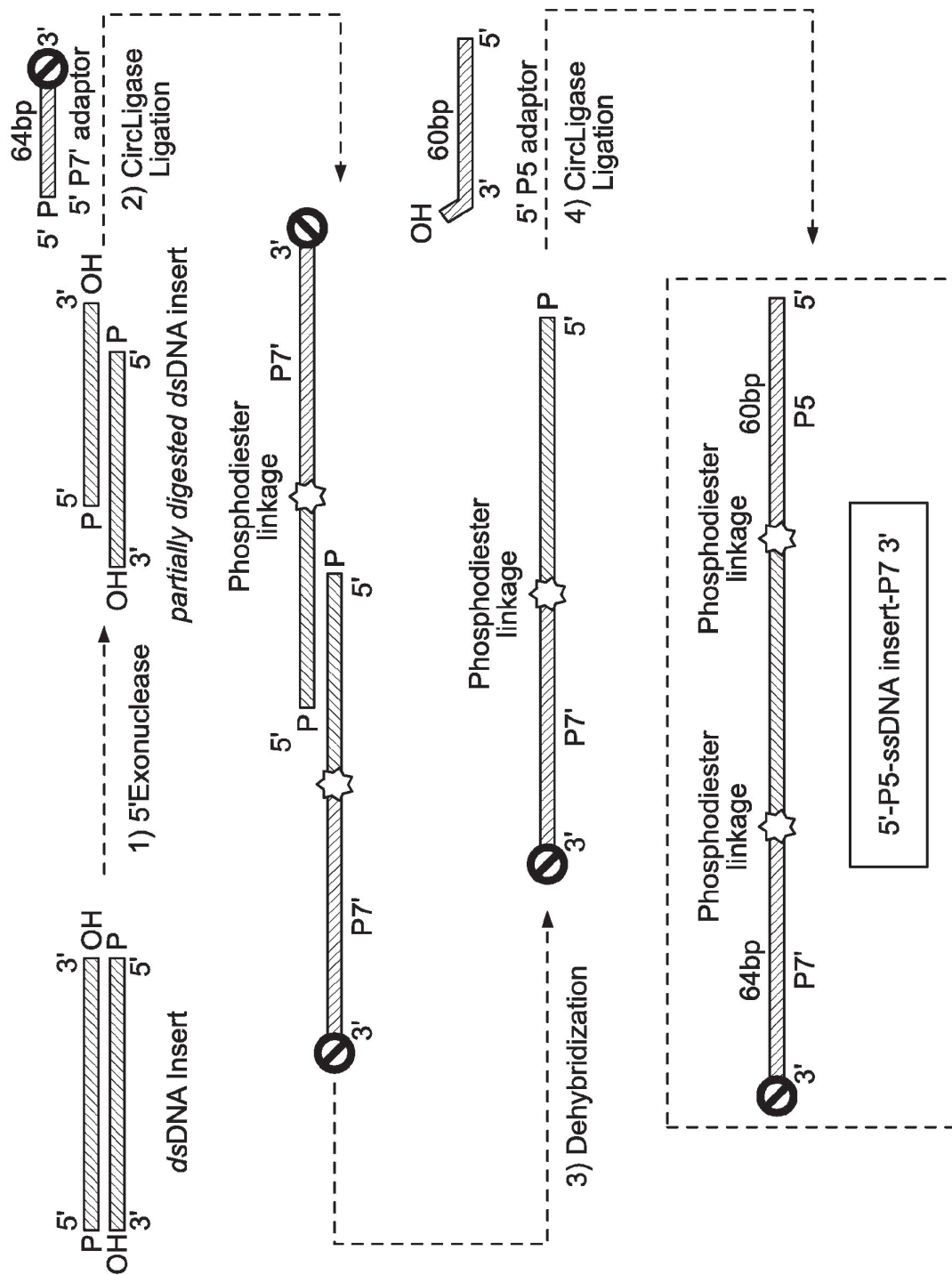


FIG. 2

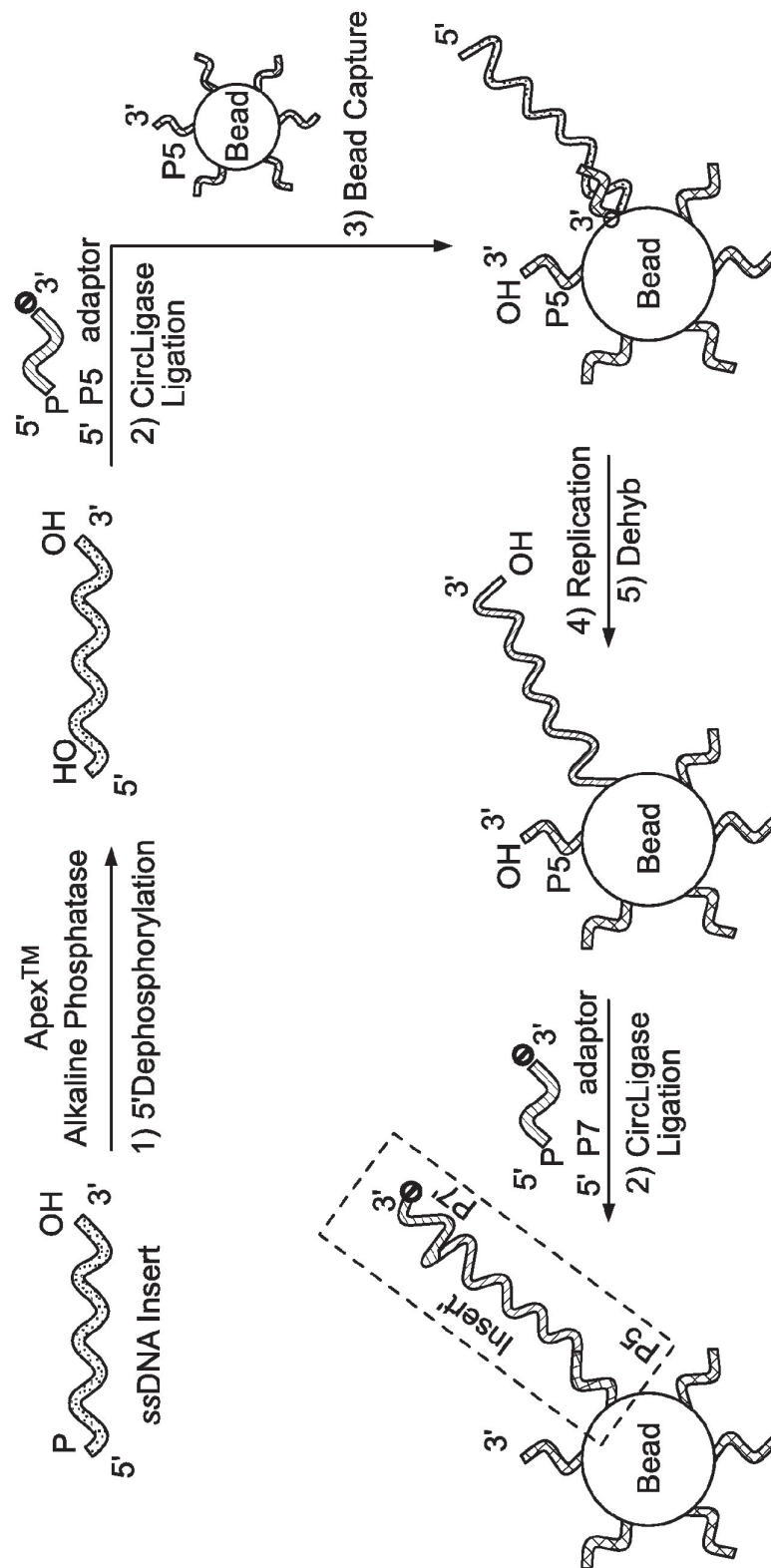


FIG. 3

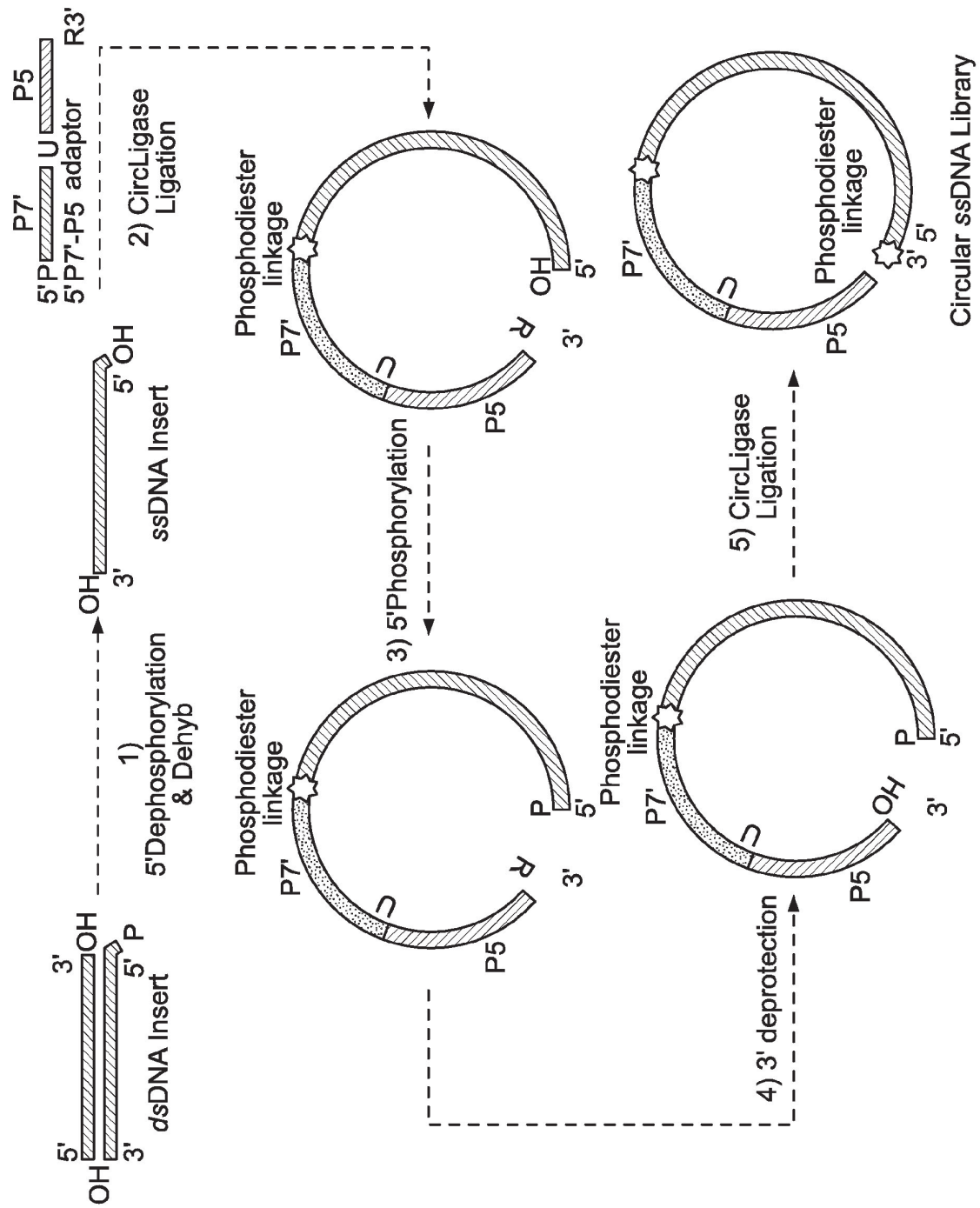


FIG. 4A

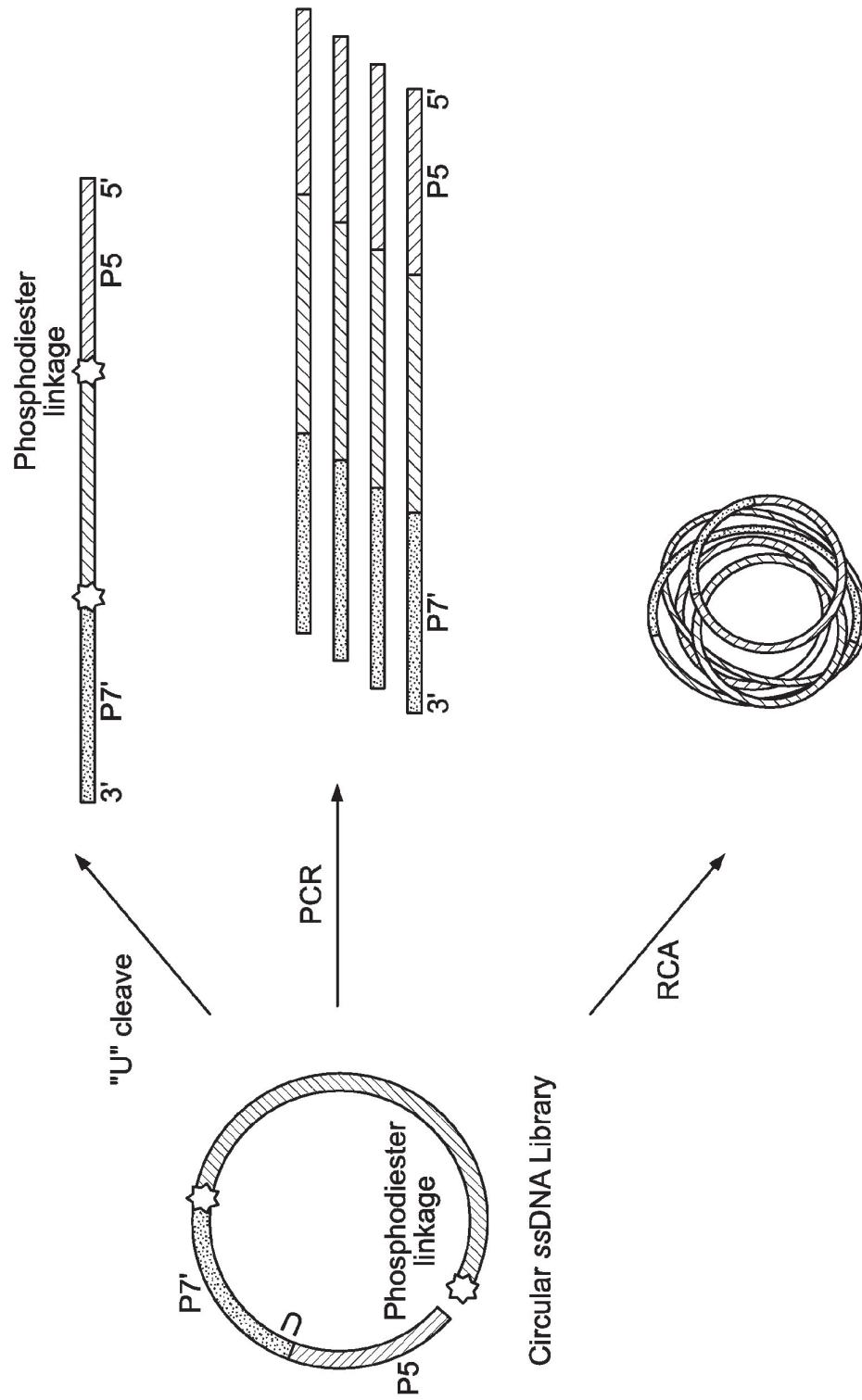


FIG. 4B

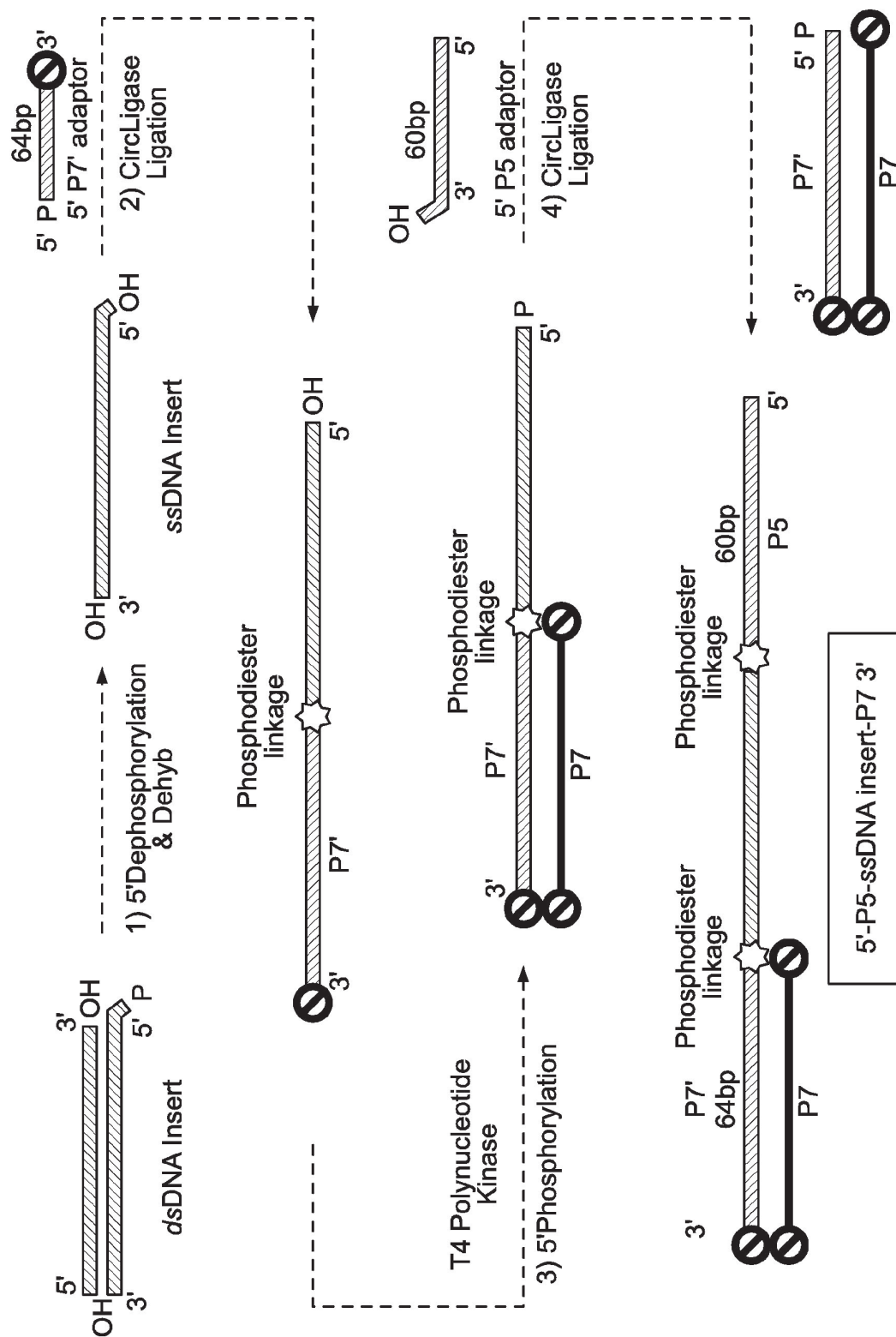


FIG. 5

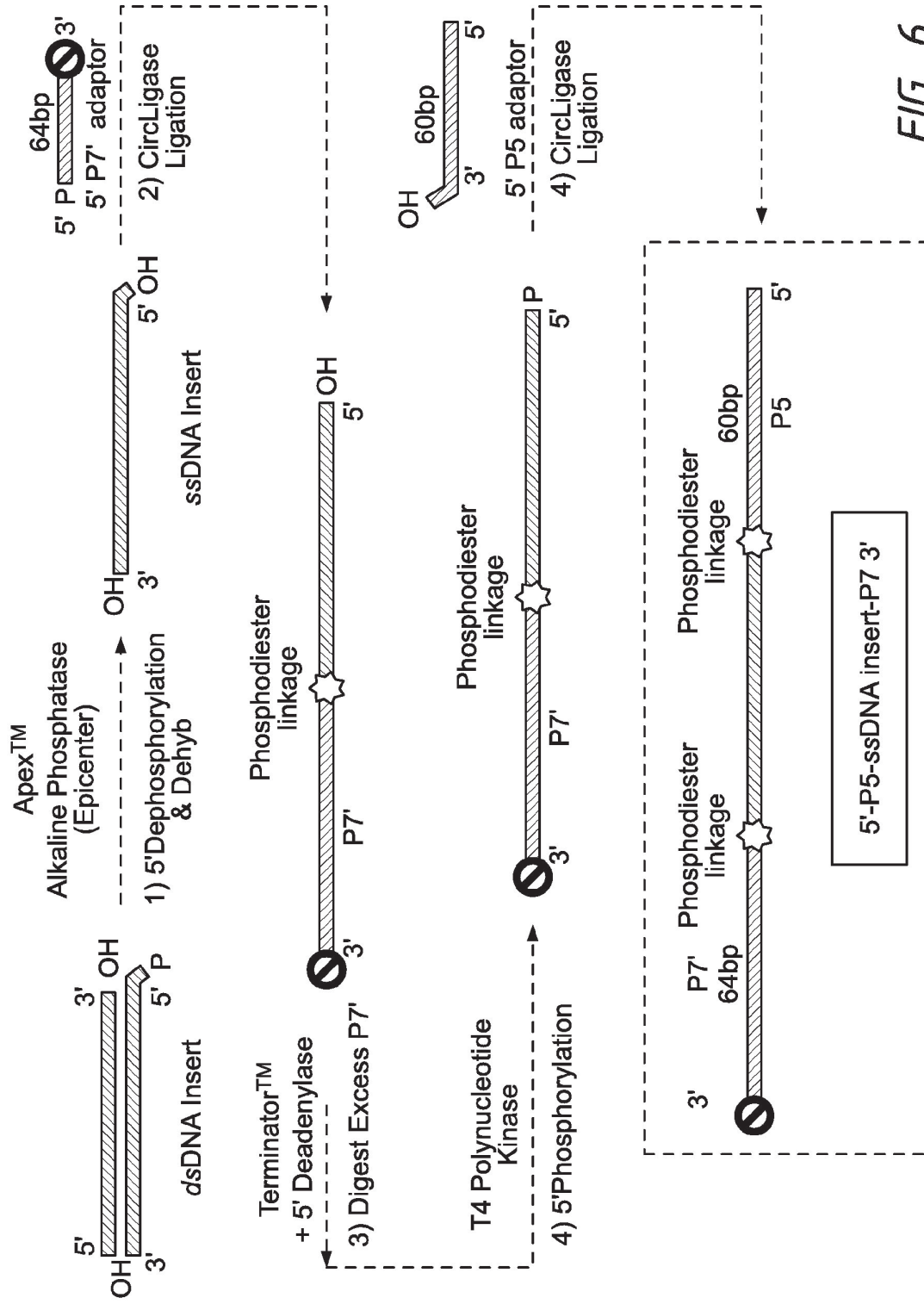


FIG. 6

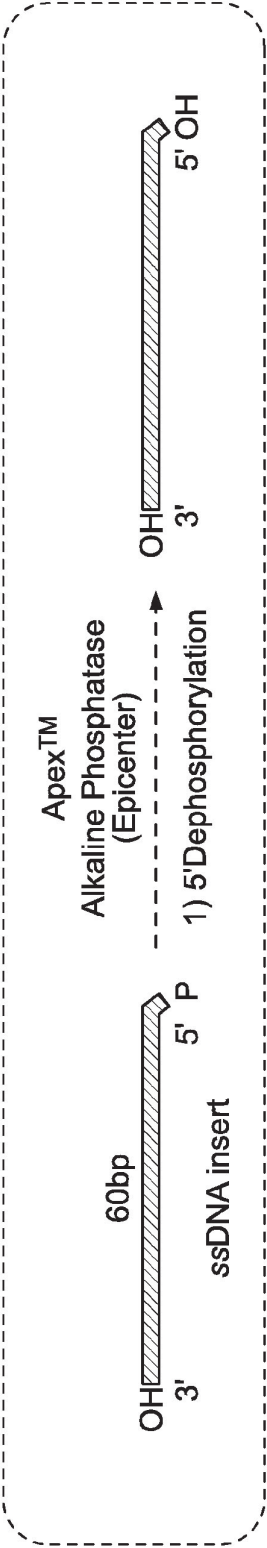
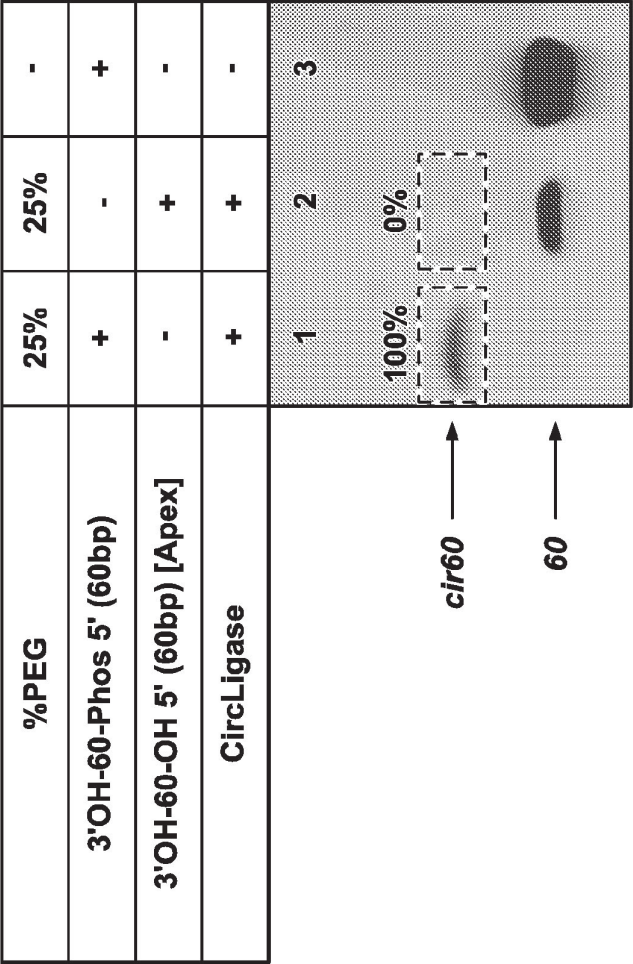
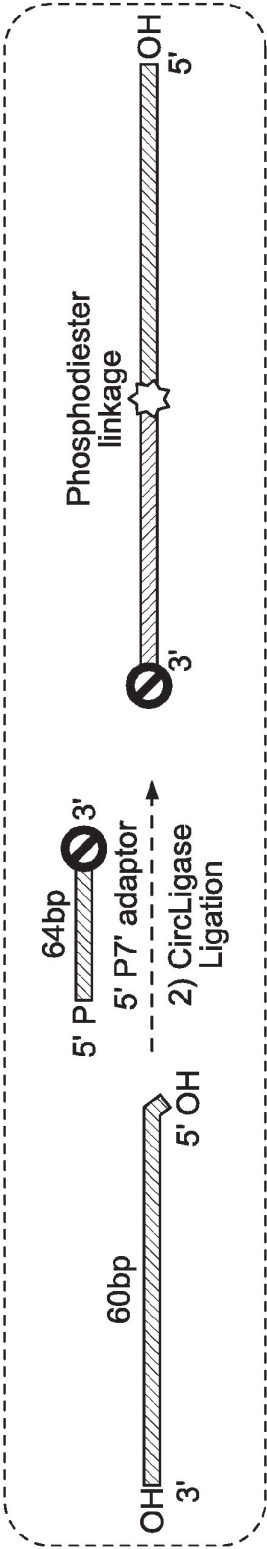


FIG. 7



%PEG	25%	25%	-	-
Rxn Time	3h	3h	-	-
3'OH-60-0H 5' (60BP) [Apex]	+	+	+	-
3'C3-P7-Phos 5' (64bp)	+	+	-	+
CircLigase	-	+	-	-

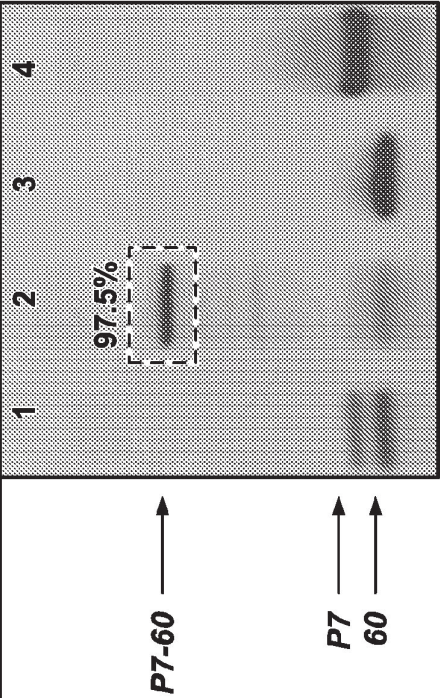
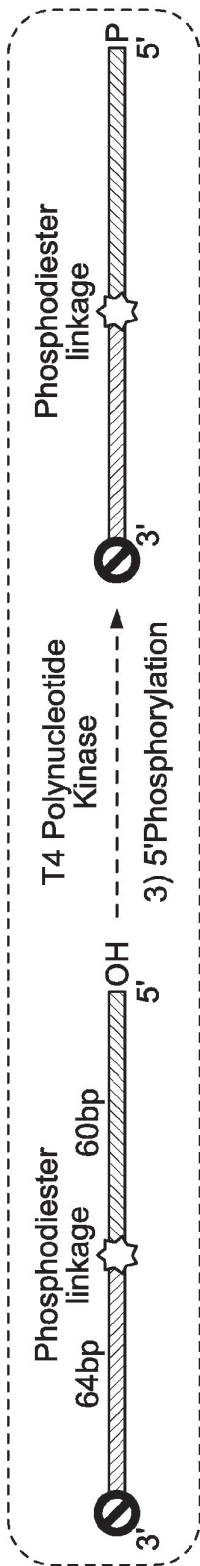


FIG. 8



%PEG	3.1%	3.1%	3.1%	3.1%	-
Rxn Time	1h	1h	1h	1h	-
3'C3-P7-60-OH (124bp)	-	-	+	+	-
3'OH-60-OH 5' (60bp) [Apex]	+	+	-	+	-
3'C3-P7-Phos 5' (64bp)	-	-	-	-	+
PNK	-	+	-	+	-
CircLigase	+	+	+	+	-

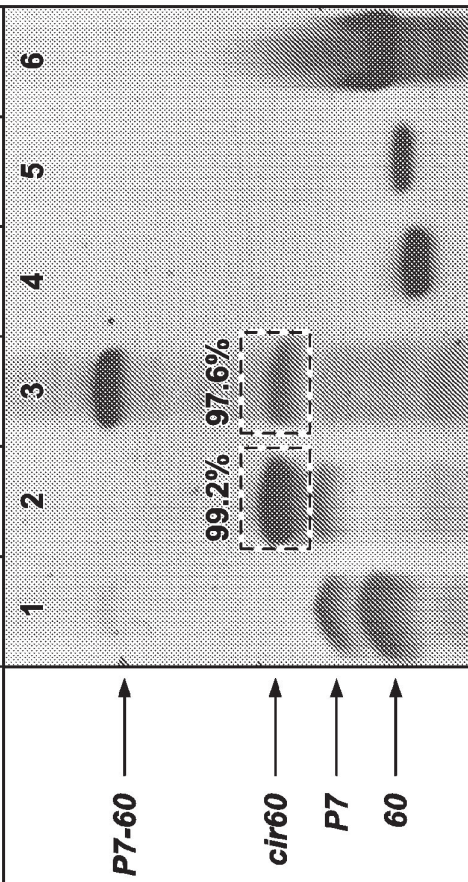
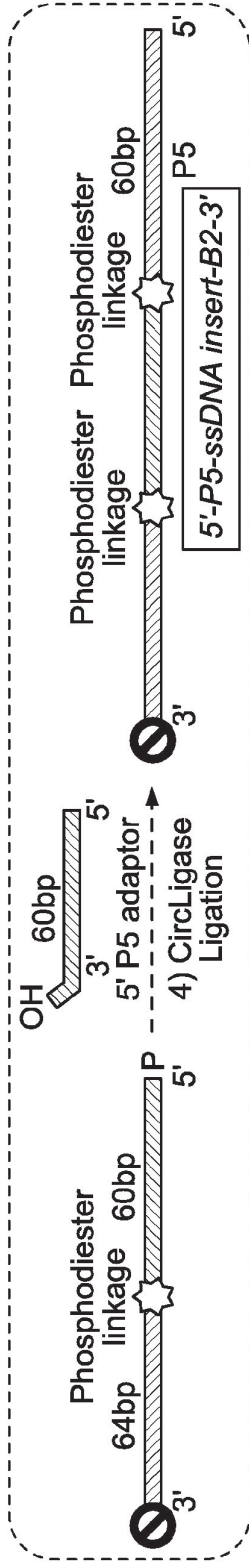


FIG. 9



%PEG	1.6%	1.6%	-	-	-
Rxn Time	3h	3h	-	-	-
3'C3-60-B2-phos (124bp) [PNK]	+	+	+	-	-
3'C3-P7-phos 5' (64bp)	-	-	-	+	-
5'P5-OH (60bp)	+	+	-	-	+
CircLigase	-	+	-	-	-

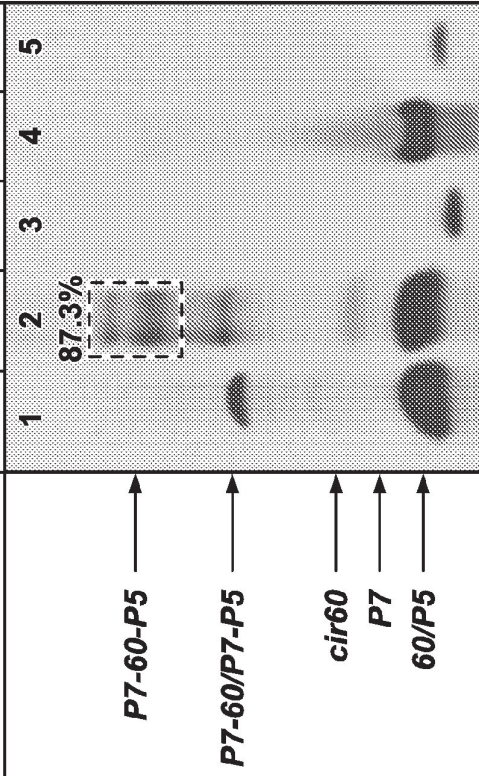


FIG. 10

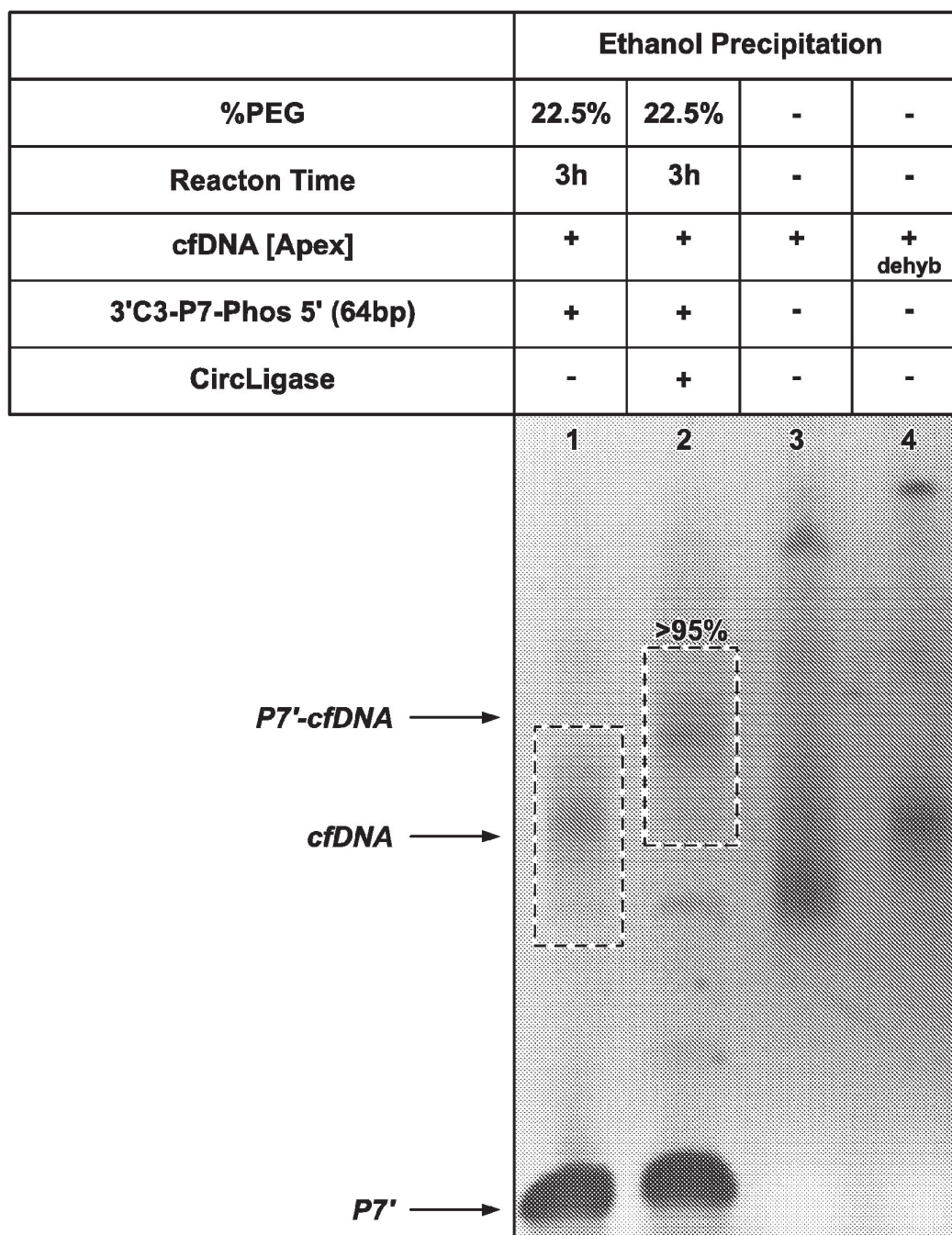


FIG. 11

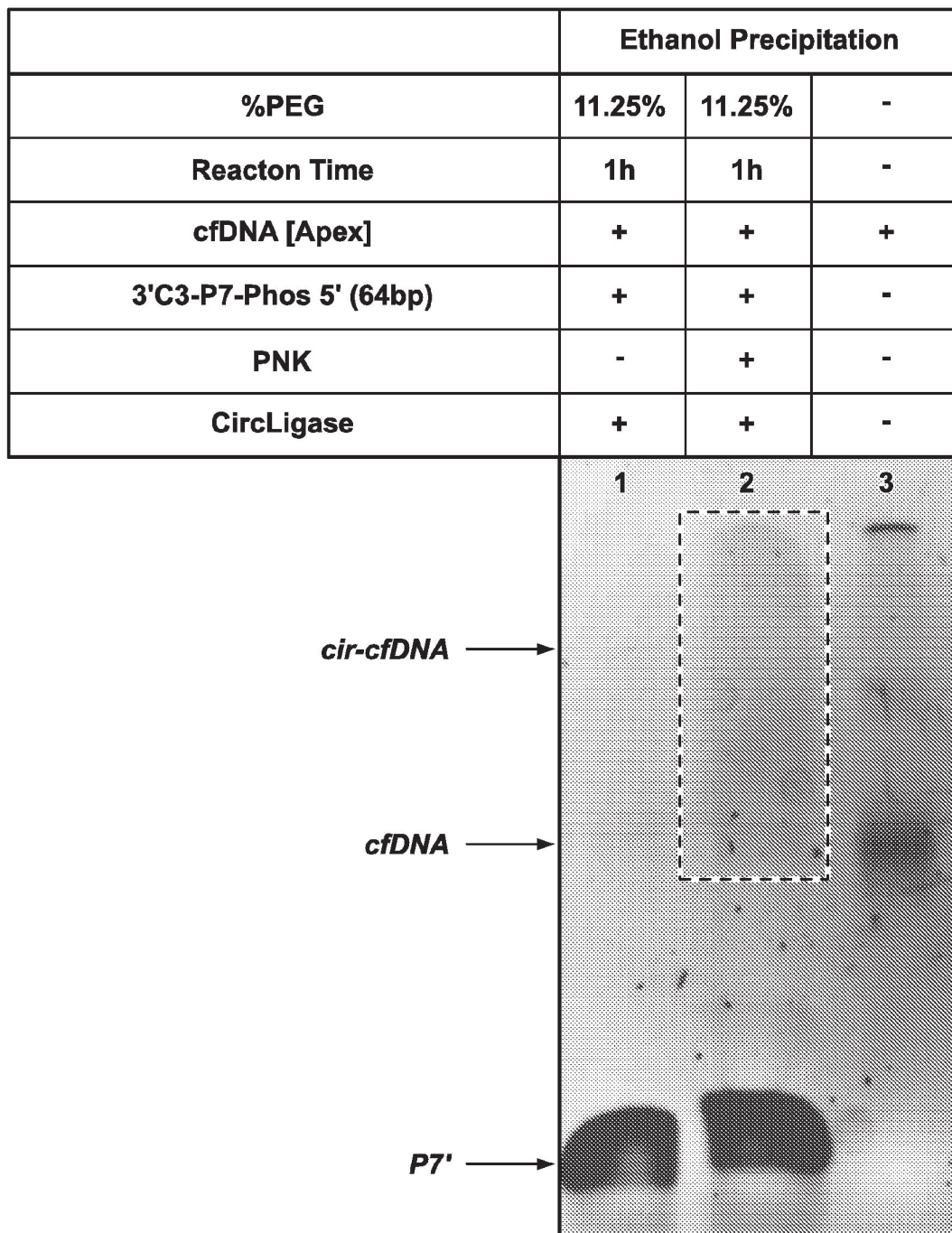


FIG. 12

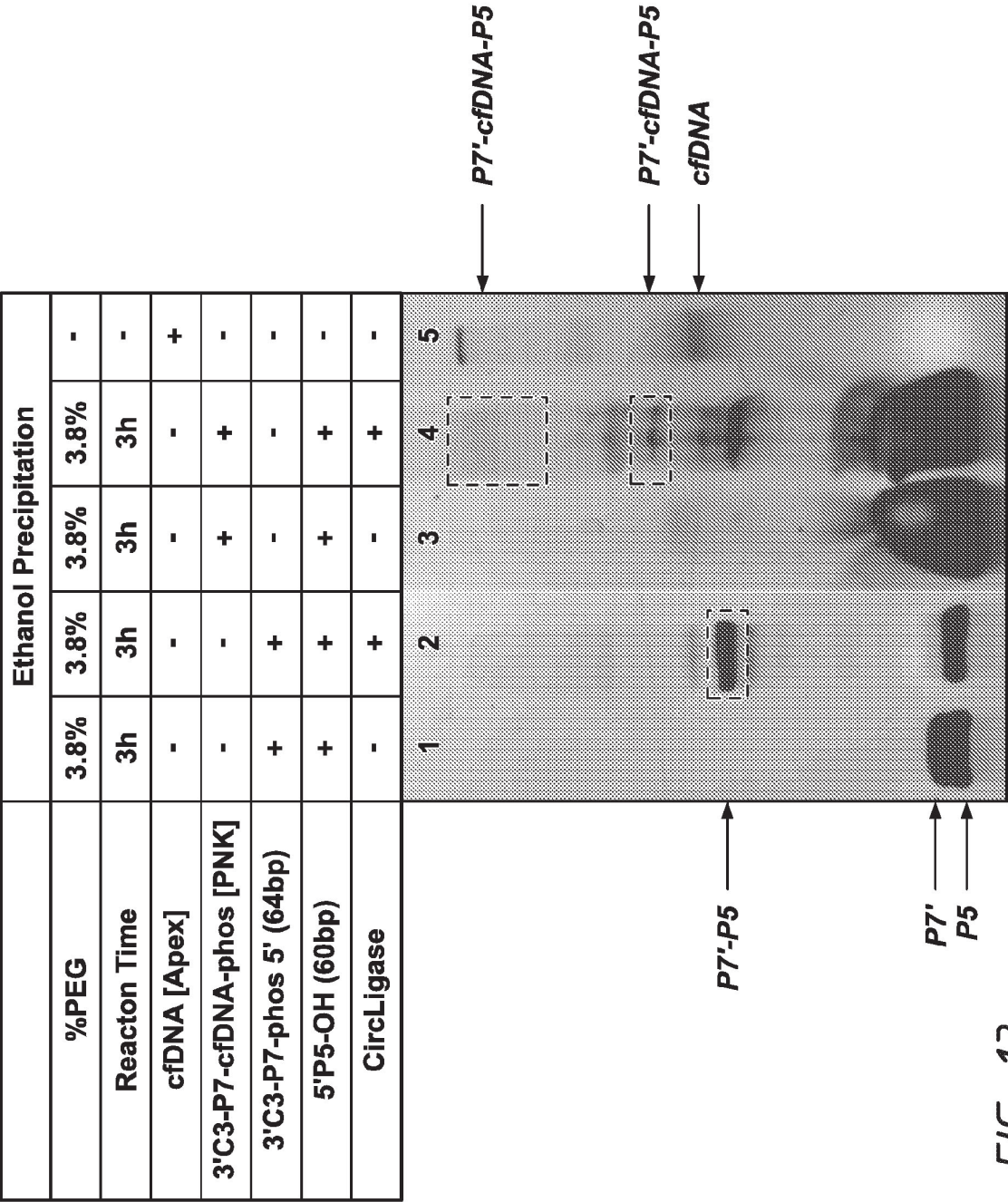


FIG. 13

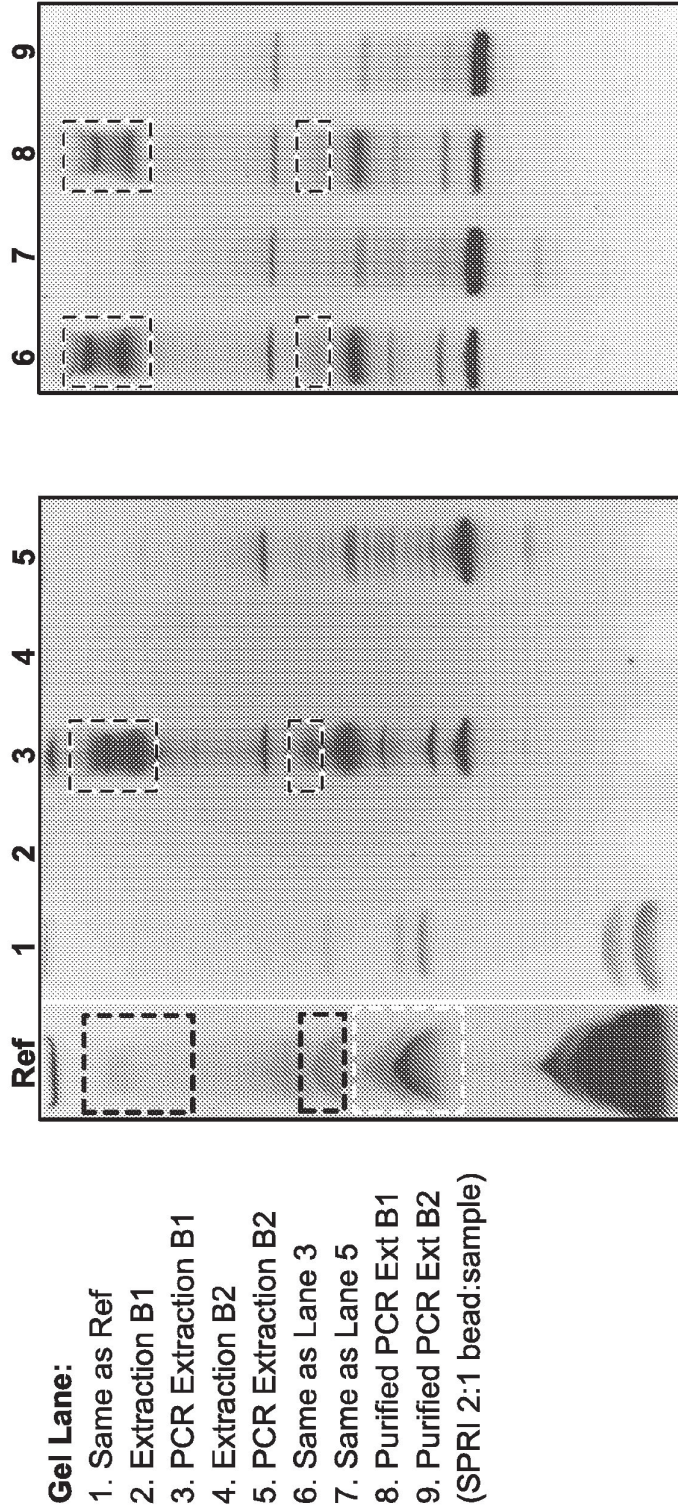


FIG. 14

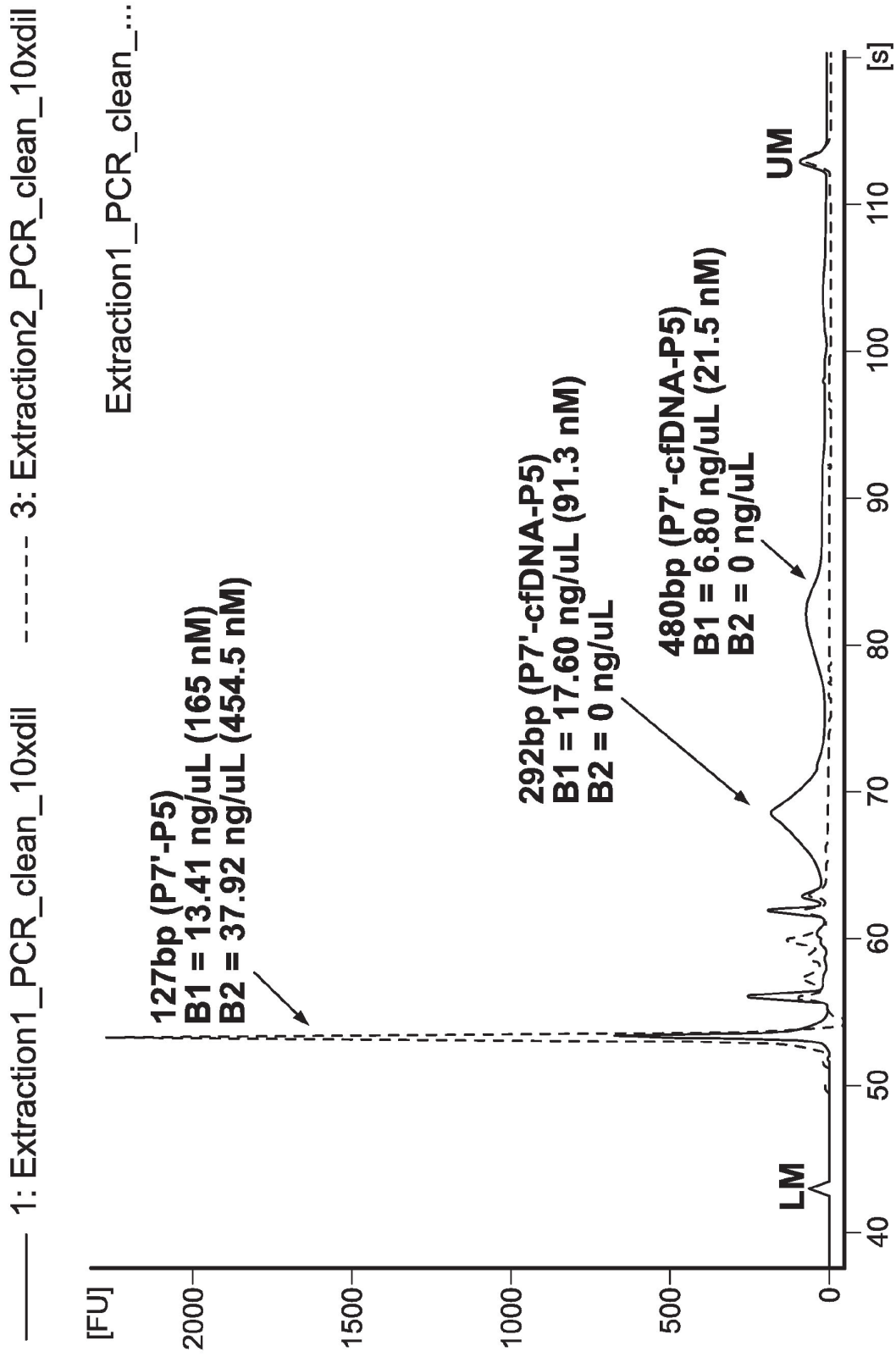


FIG. 15

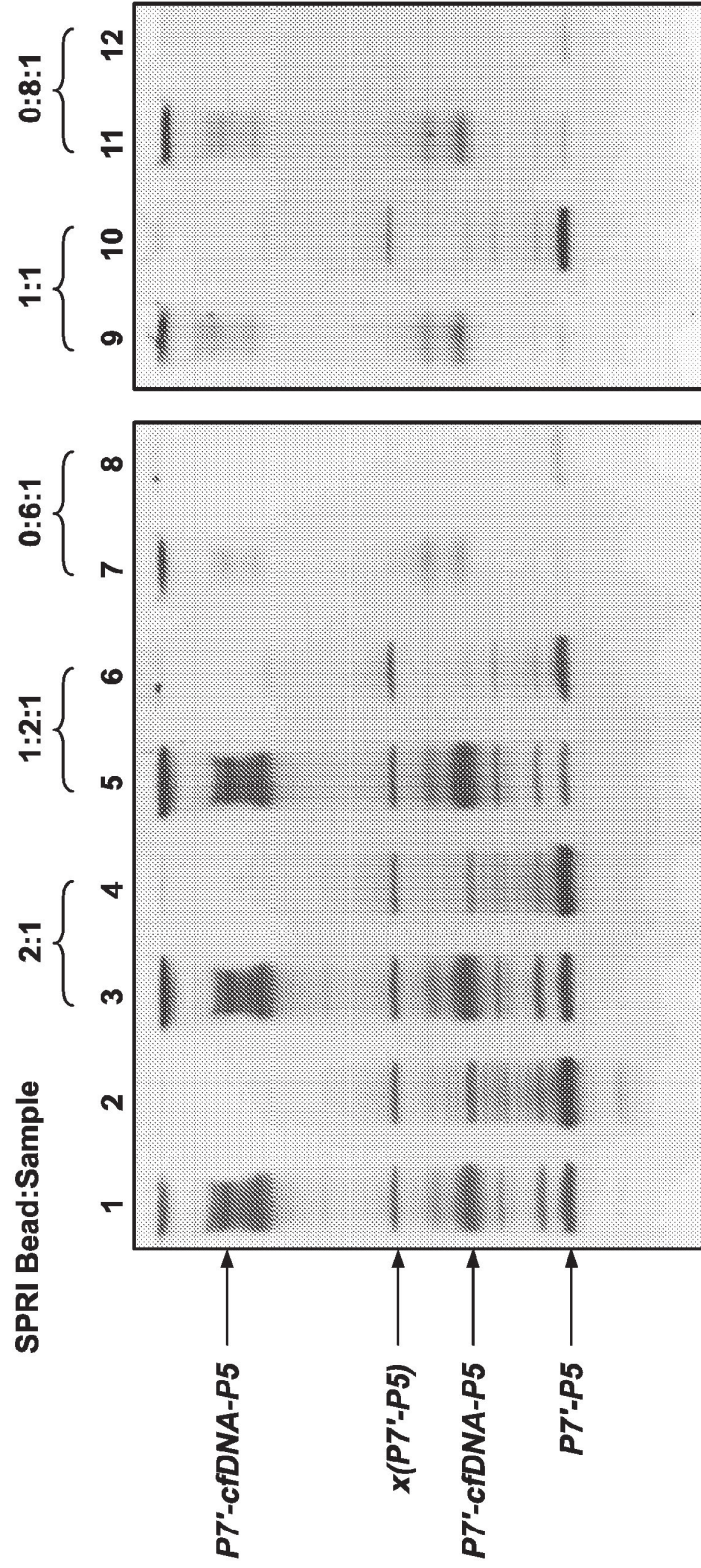


FIG. 16

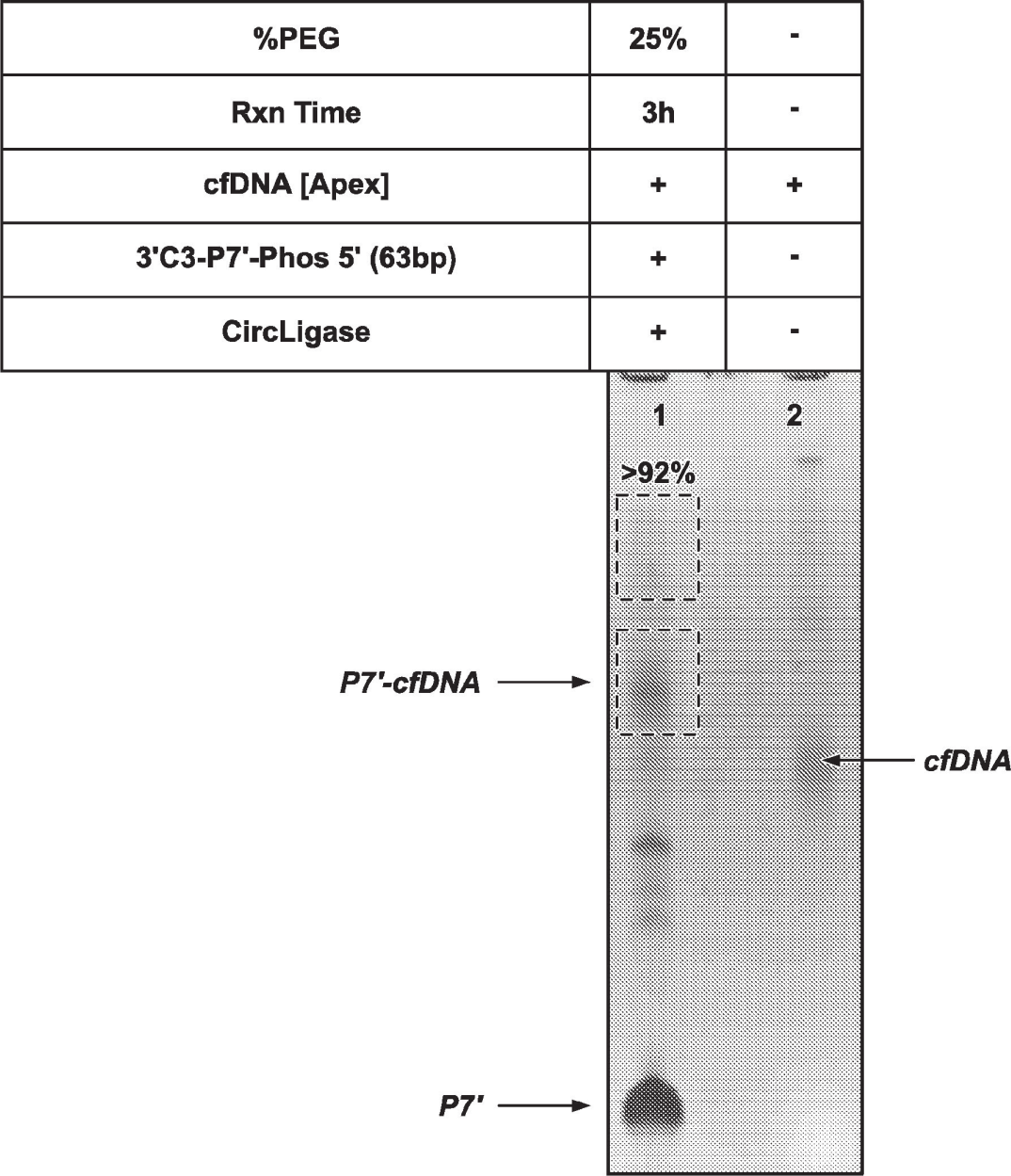


FIG. 17

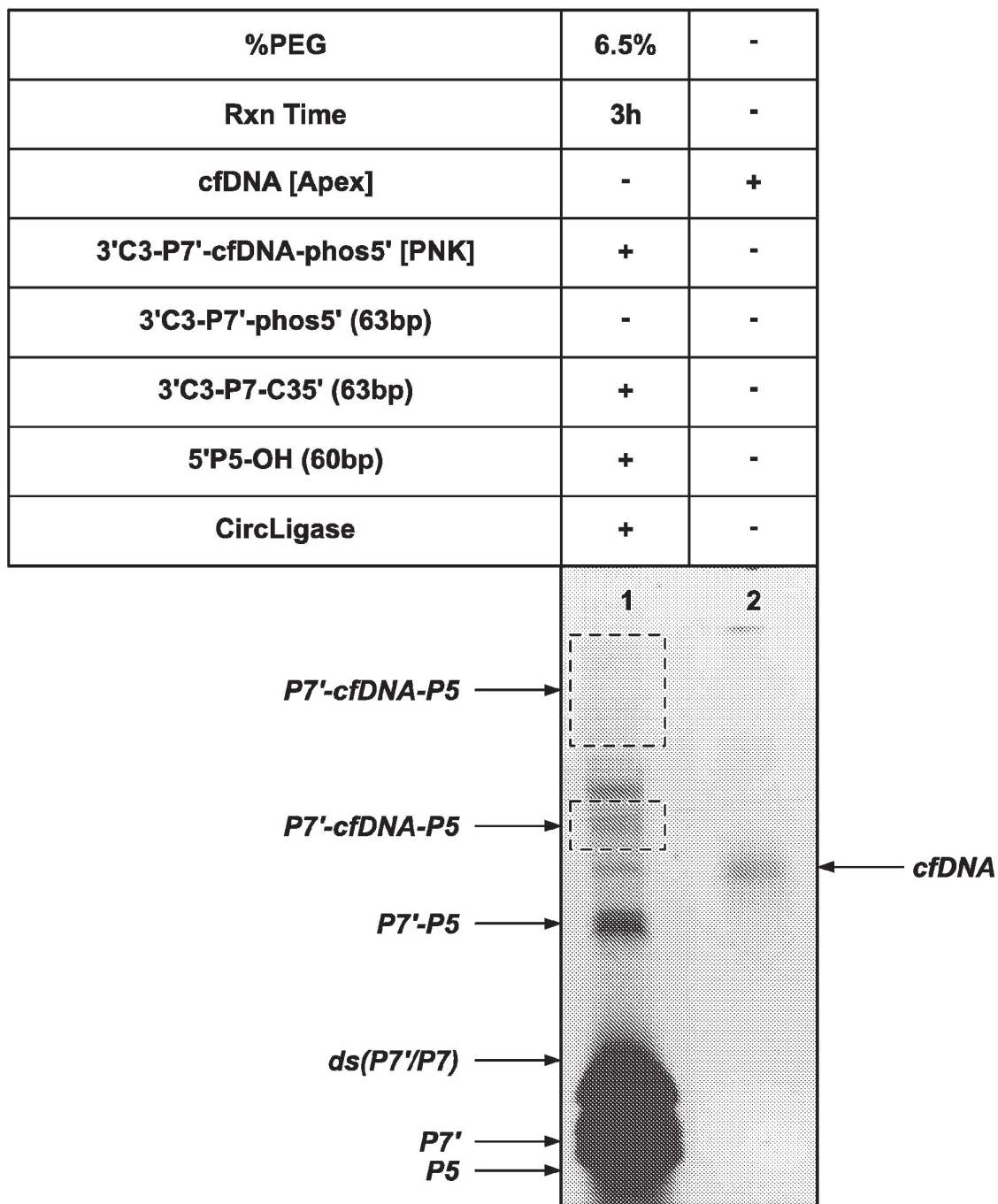
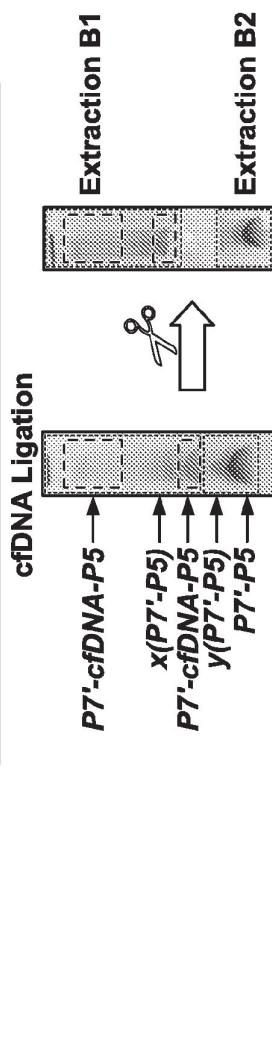


FIG. 18

1: GelCut/Extraction_PCR_SPRI_2x_REF ----- 3: dsP7_PCR_SPRI_1.2x

128bp (P7'-P5)
Gel Cut/Extract = 13.6 ng/uL (160.8 nM)
dsP7_PCR_SPRI_1.2x = 6.1 ng/uL (59.5 nM)

Samples	[P7'-P5]/[cfDNA lib]
Gel Cut/Extract_PCR_SPRI_2x	1.5
Gel Cut/Extract_PCR_SPRI_1.2x	0.28
dsP7_PCR_SPRI_1.2x	0.58



292bp (P7'-cfDNA-P5)
Gel Cut/Extract = 16.4 ng/uL (84.9 nM)
dsP7_PCR_SPRI_1.2x = 14.1 ng/uL (71.5 nM)

480bp (P7'-cfDNA-P5)
Gel Cut/Extract = 9.5 ng/uL (27.5 nM)
dsP7_PCR_SPRI_1.2x = 10.95 ng/uL (30.7 nM)

FIG. 19



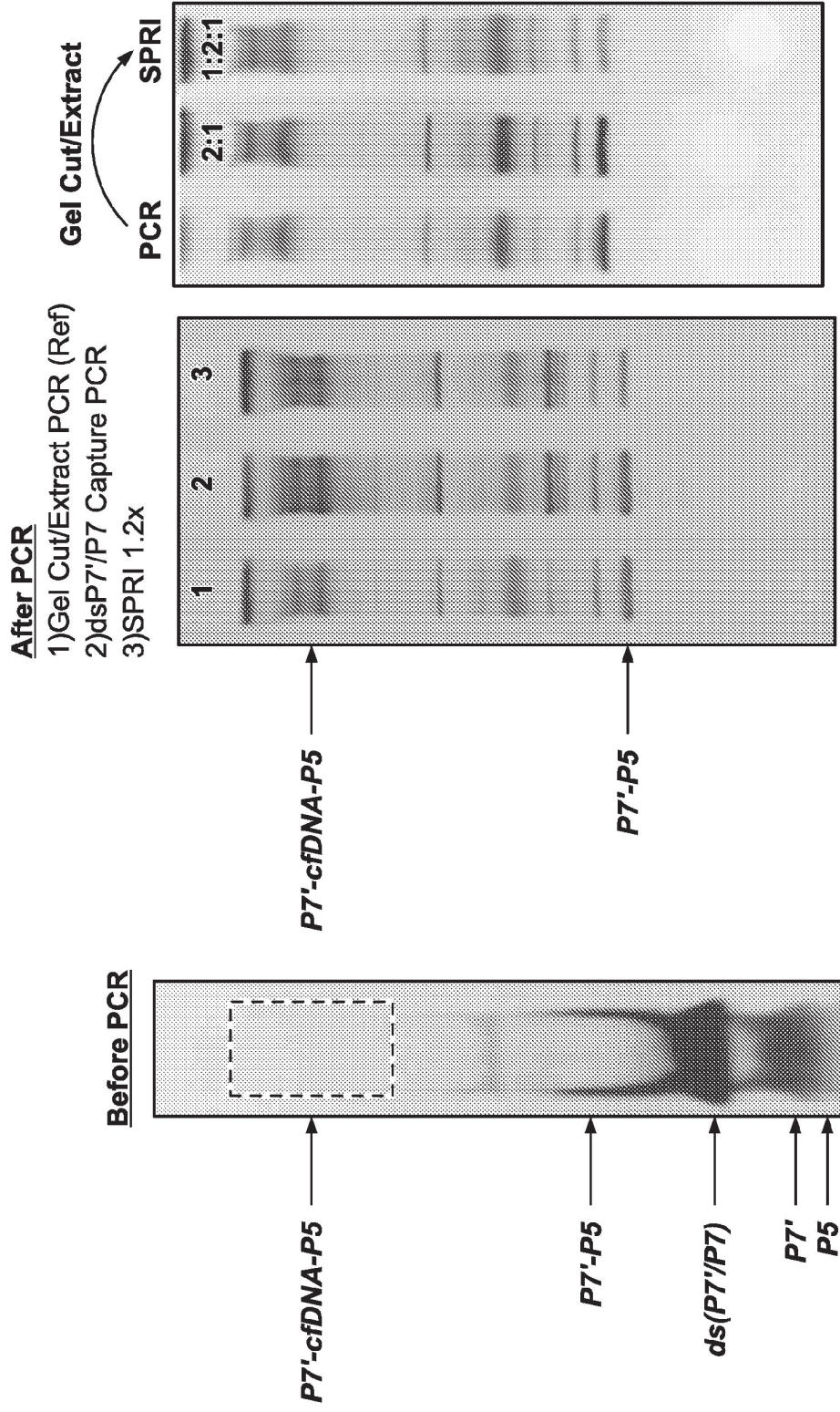


FIG. 20

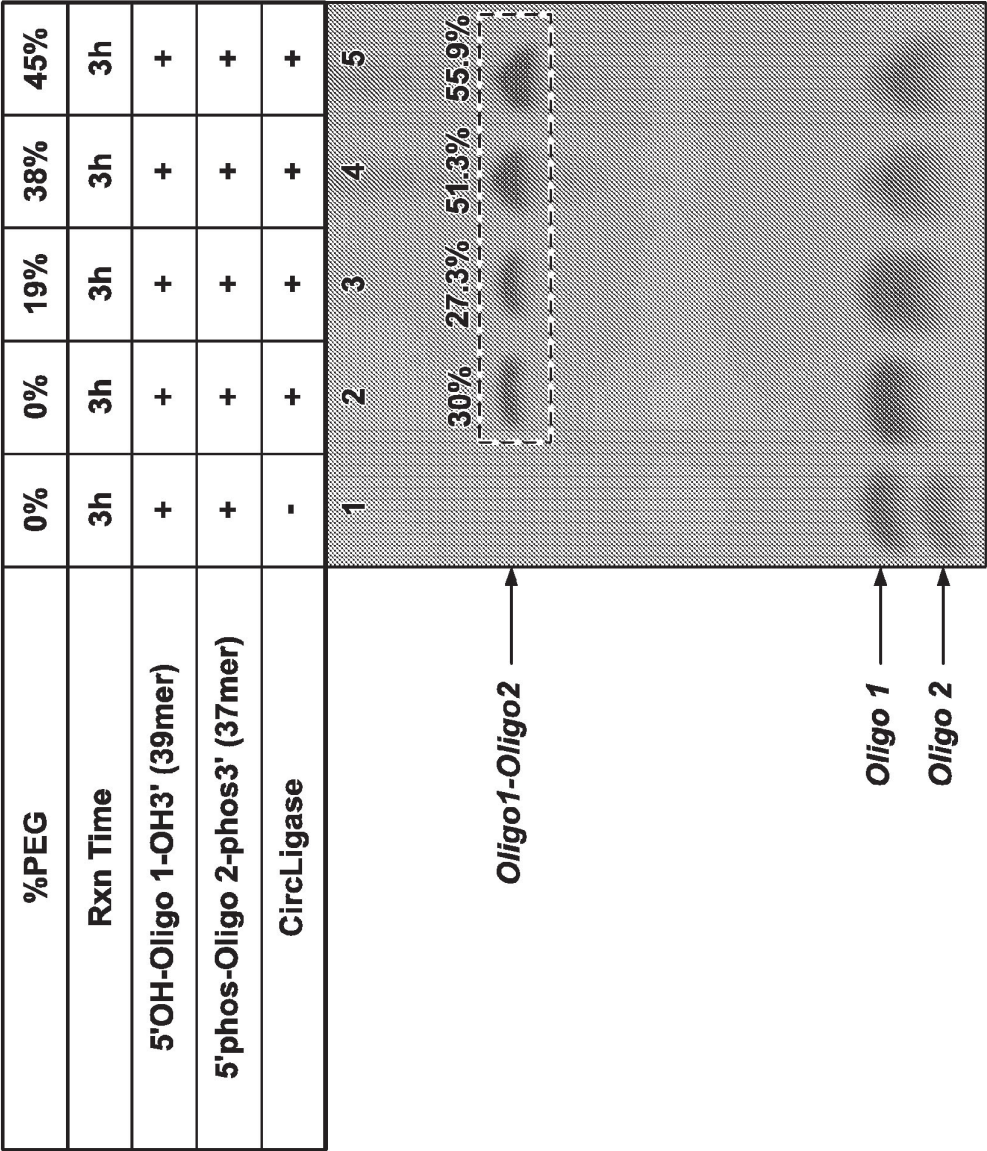


FIG. 21

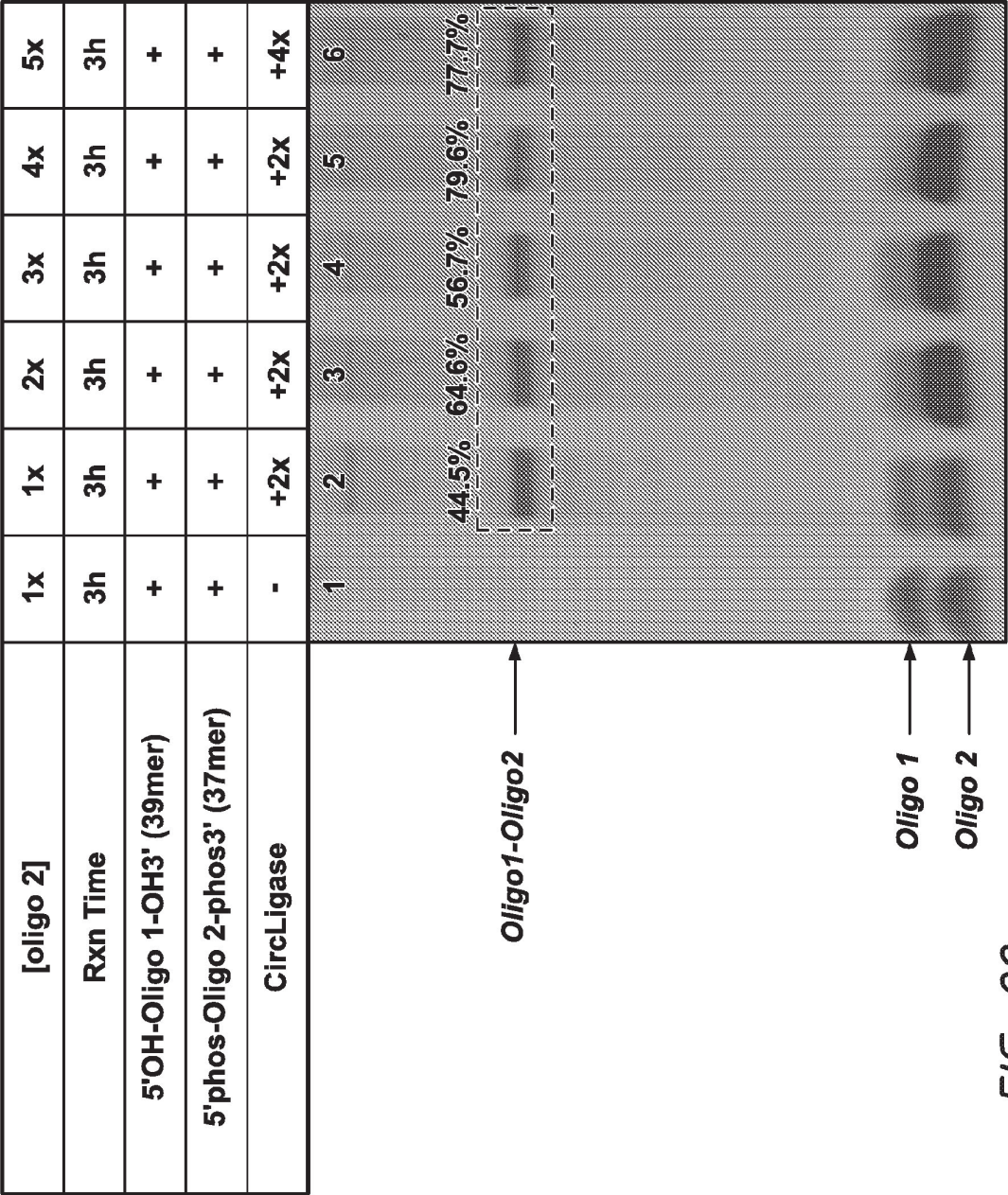


FIG. 22

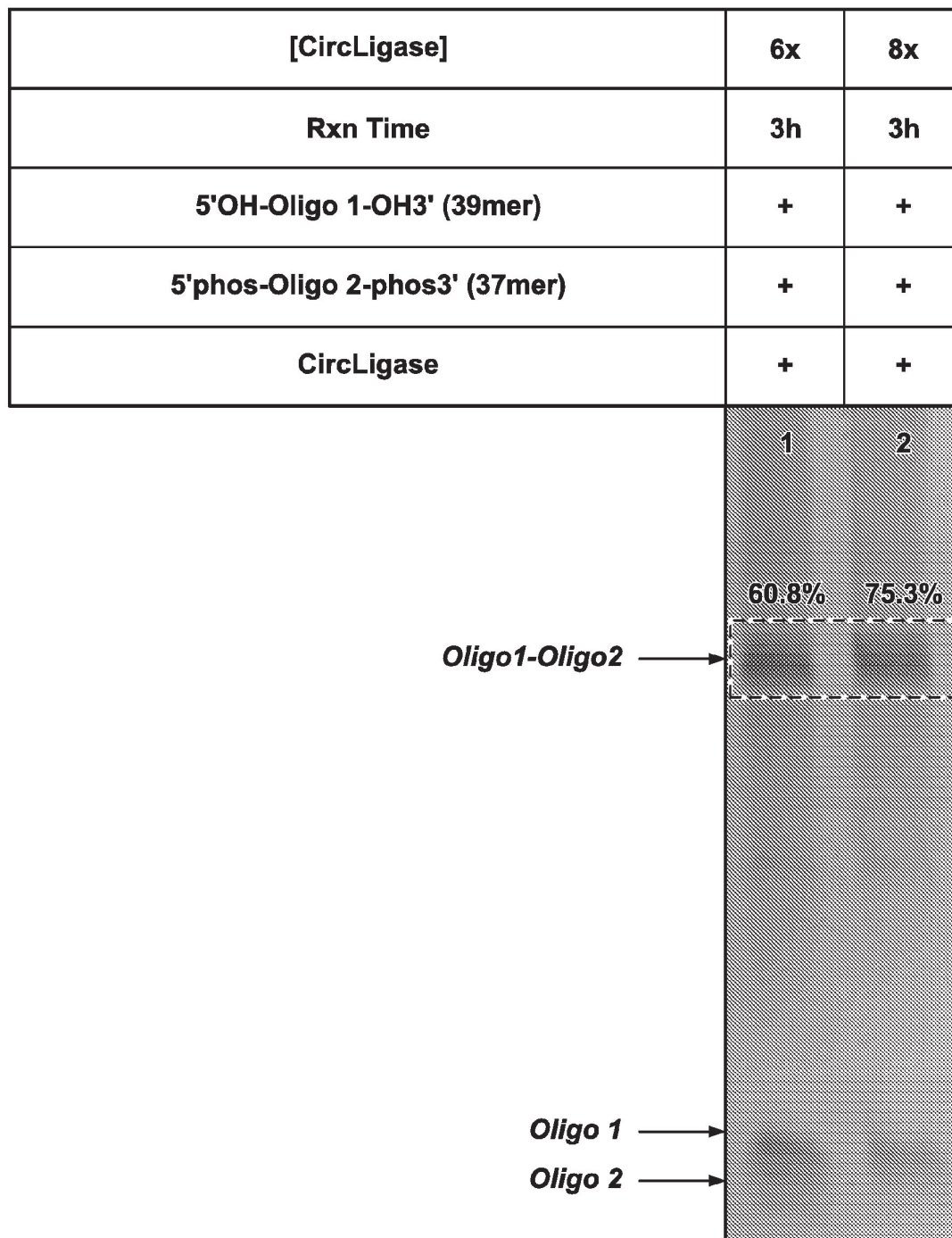


FIG. 23

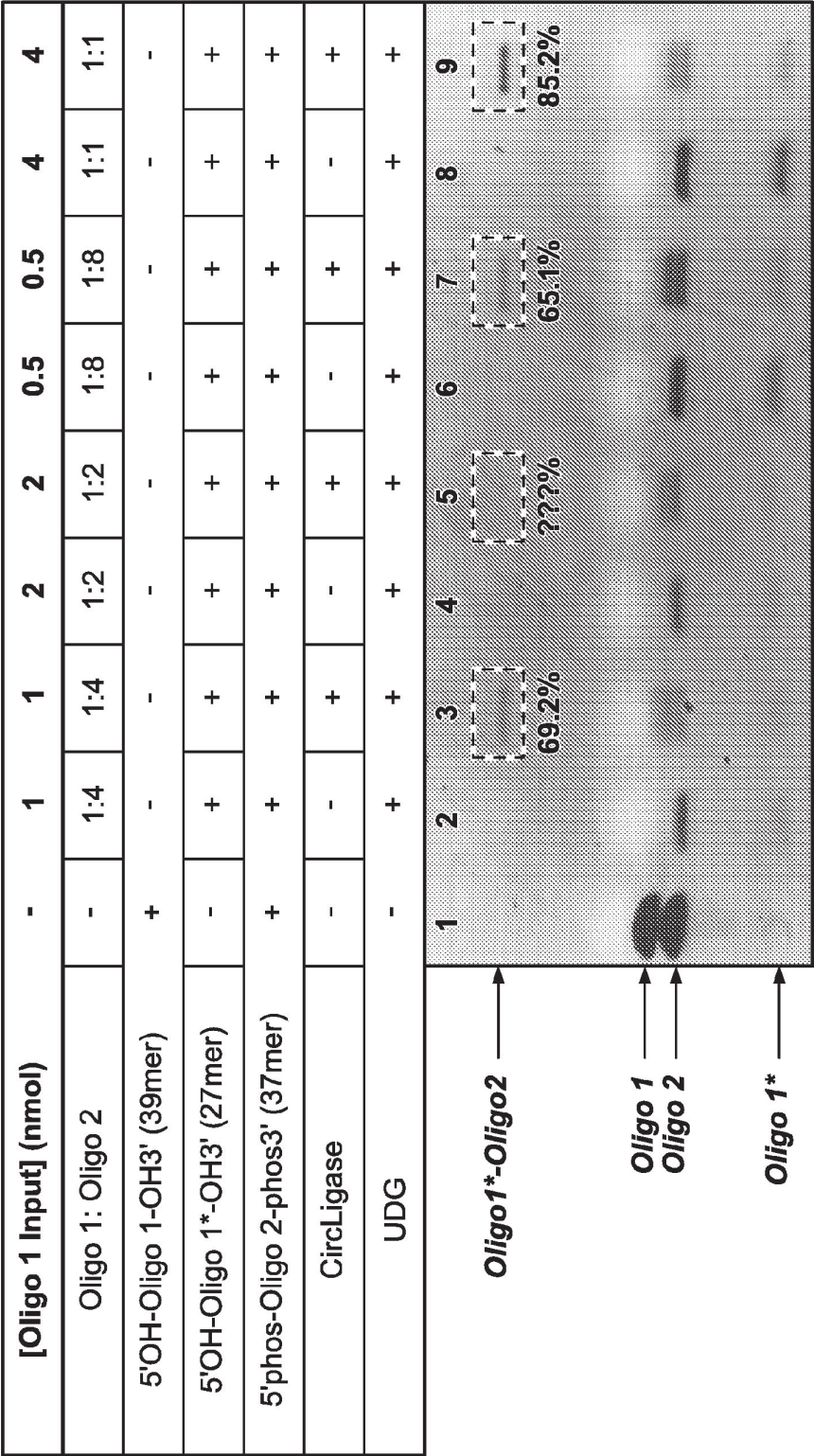


FIG. 24

[Oligo 1 Input] (nmol)	0.5	1	2	4	-
Oligo 1: Oligo 2	1:8	1:4	1:2	1:1	-
5'OH-Oligo 1-OH3' (39mer)	-	-	-	-	+
5'OH-Oligo 1*-OH3' (27mer)	+	+	+	+	-
5'phos-Oligo 2-phos3' (37mer)	+	+	+	+	+
CircLigase	+	+	+	+	+
UDG	+	+	+	+	-

Oligo1-Oligo2
 Oligo1*-Oligo2
 Oligo 1
 Oligo 2
 Oligo 1*

1 2 3 4 5 6
 76.8% 84.5% 81.7% 84.5%

FIG. 25

FIG. 25

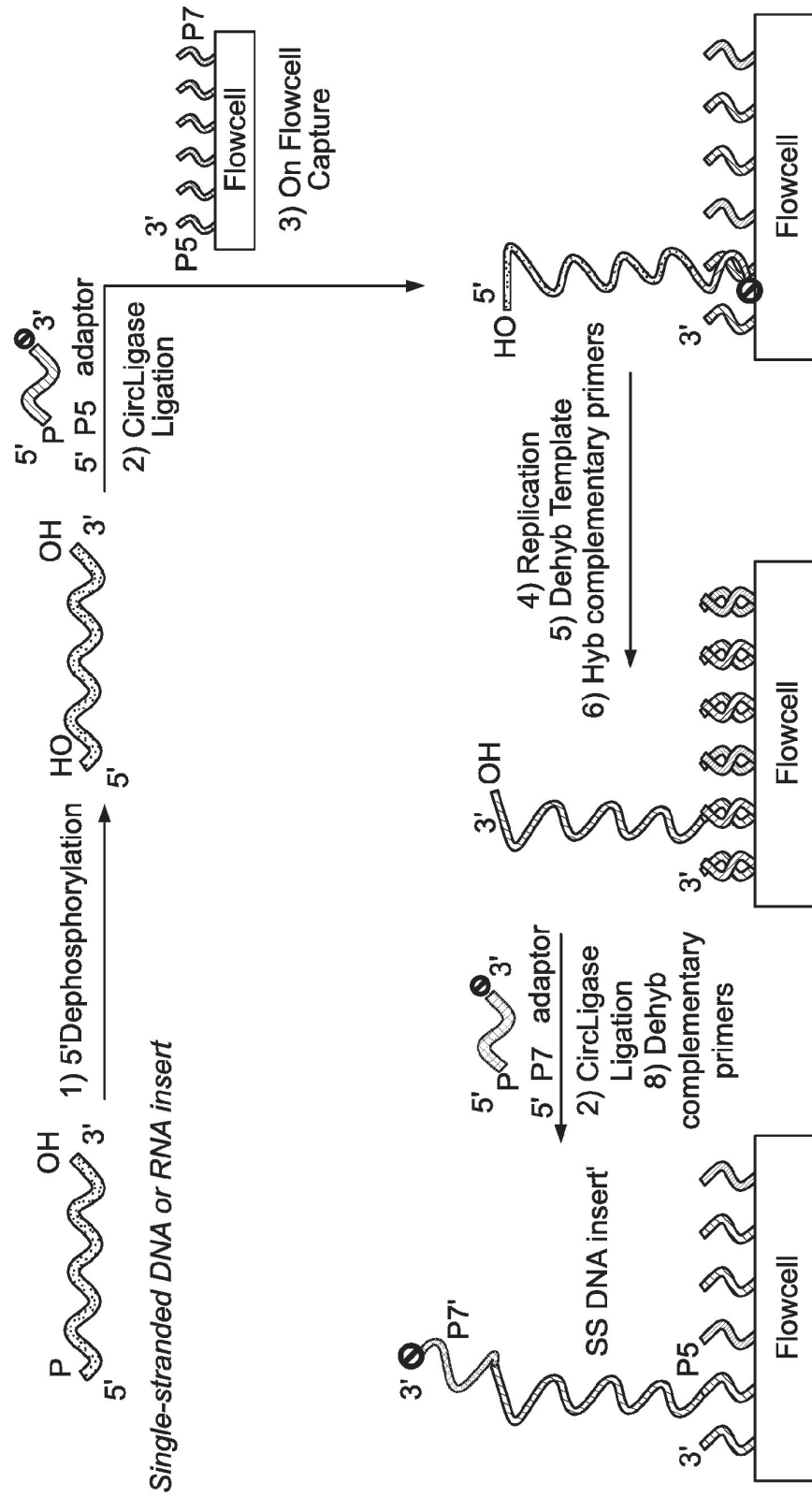


FIG. 26