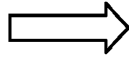
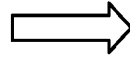


Provide a CRISPR-Cas system derived from Type II
CRISPR-Cas system



Contact a CRISPR-Cas system with a target DNA
to form a complex



Separating the complex through a label

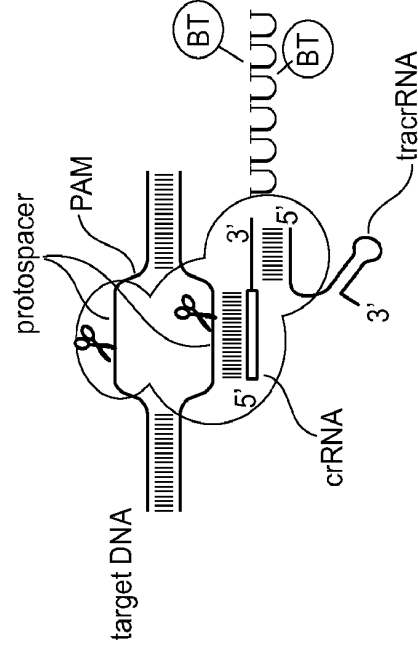


Fig. 1

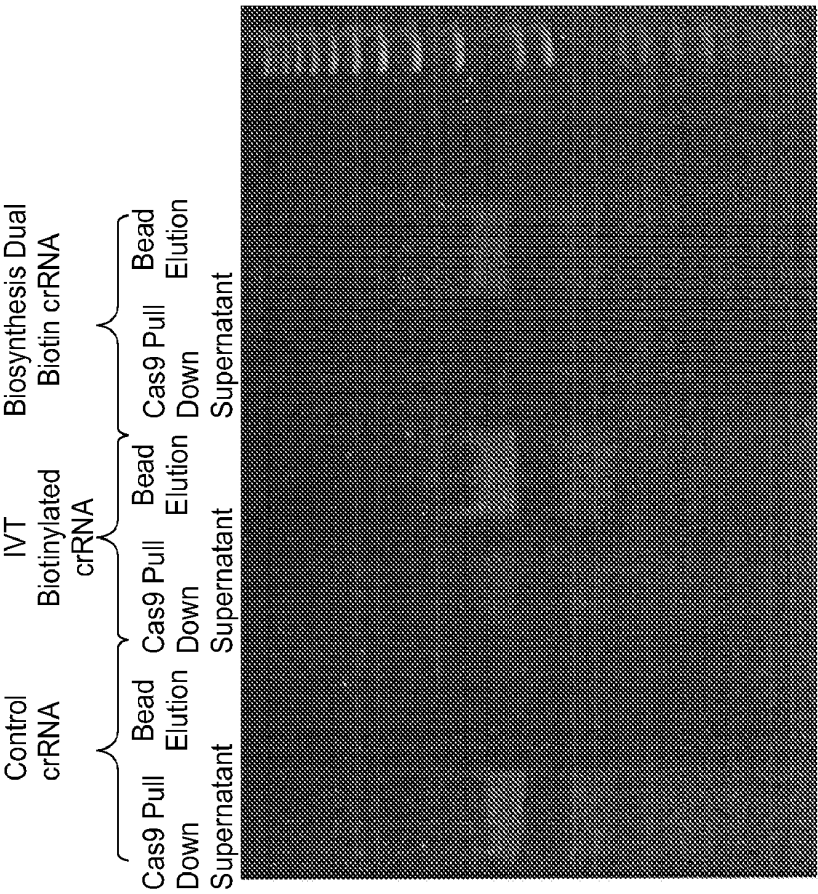
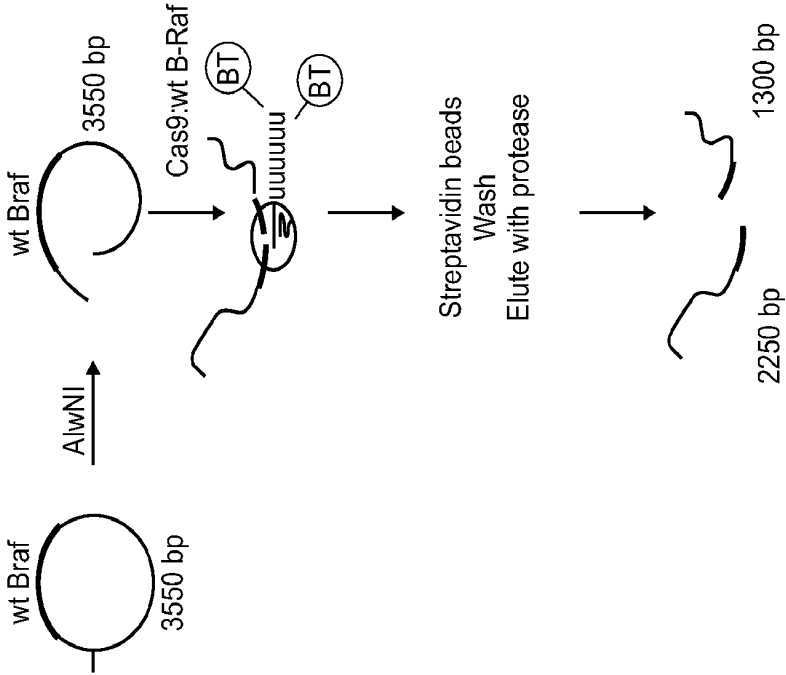


Fig. 2A



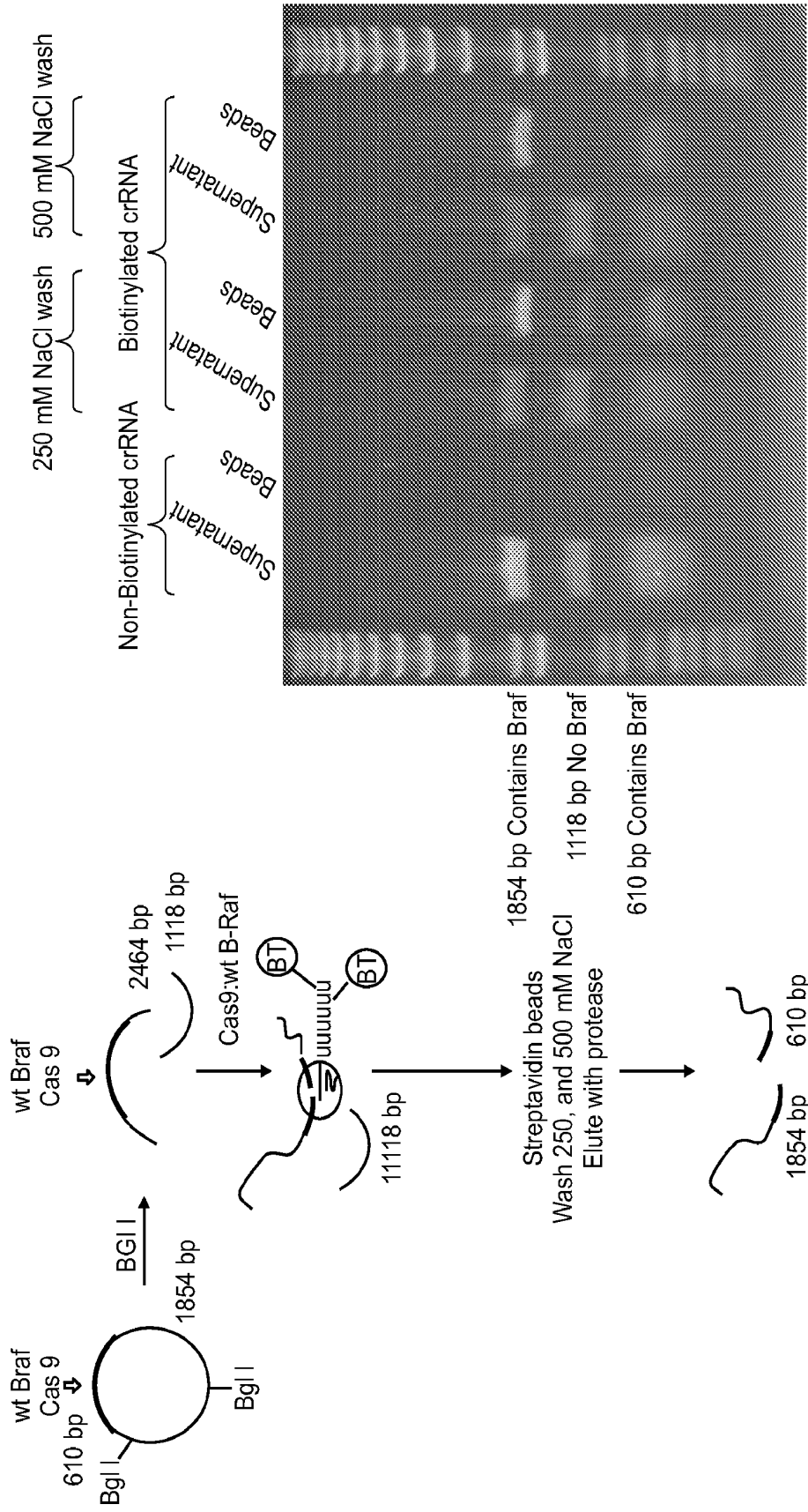
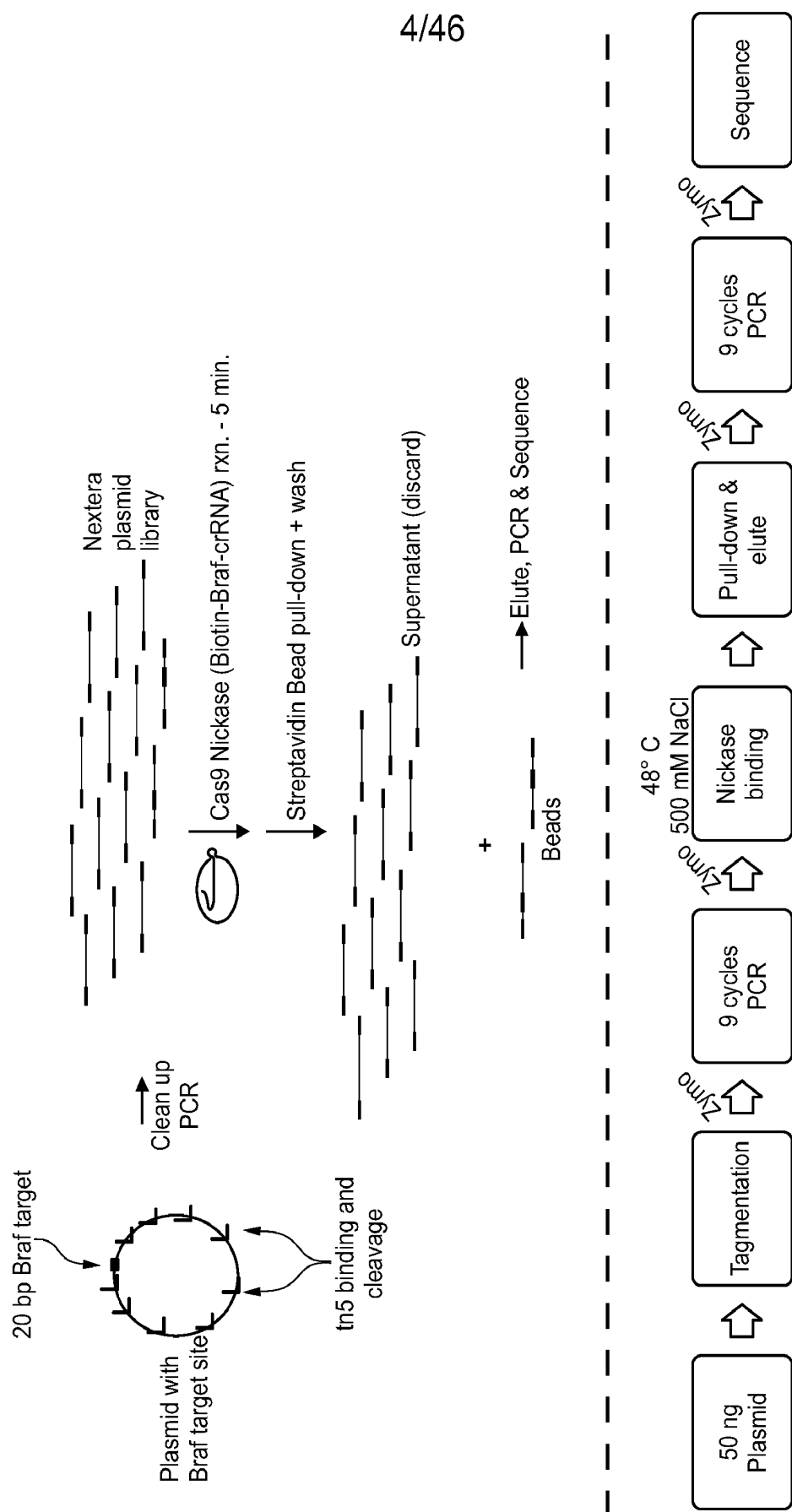


Fig. 2B



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Fig. 2C

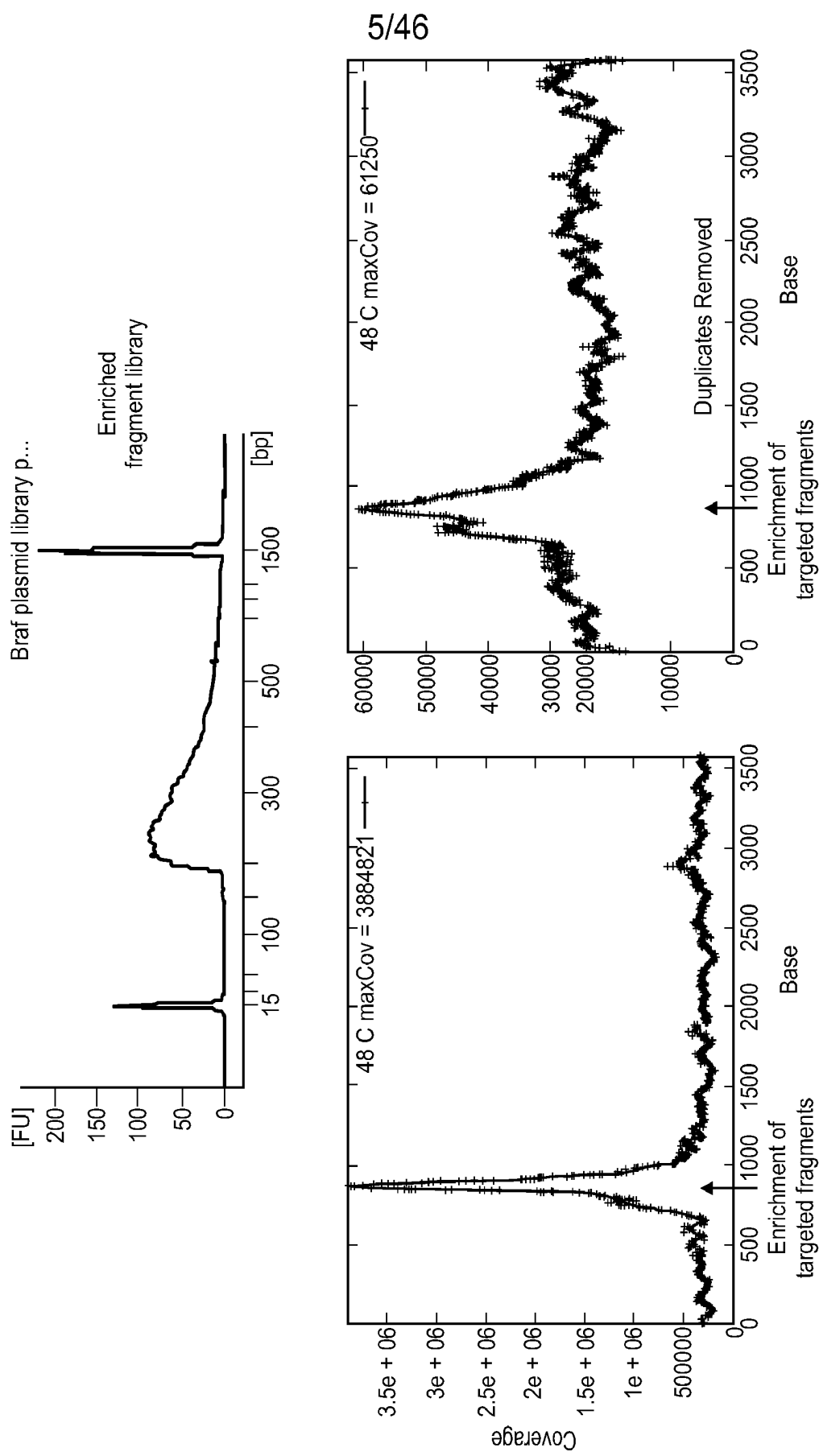


Fig. 2D

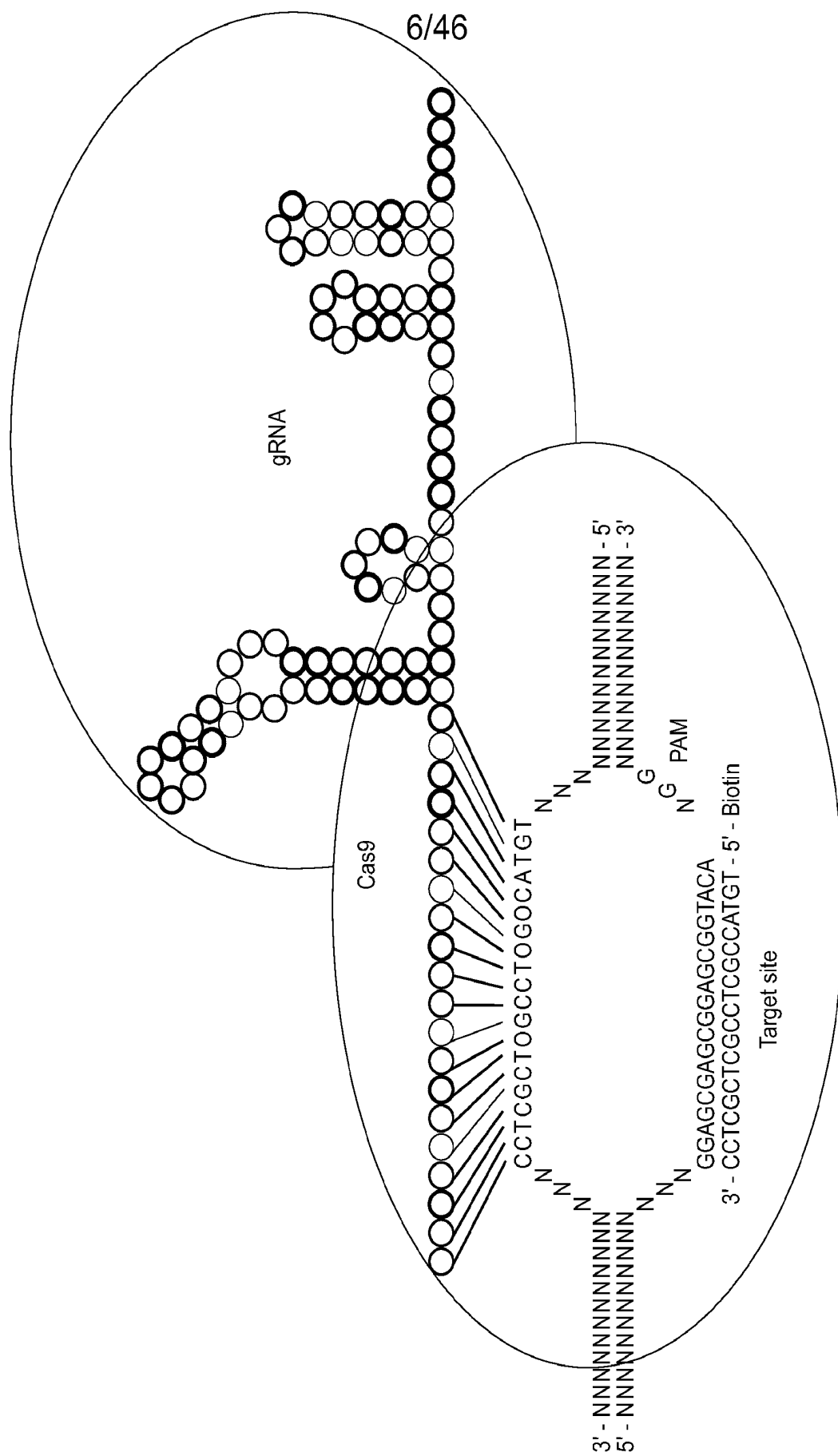


Fig. 3

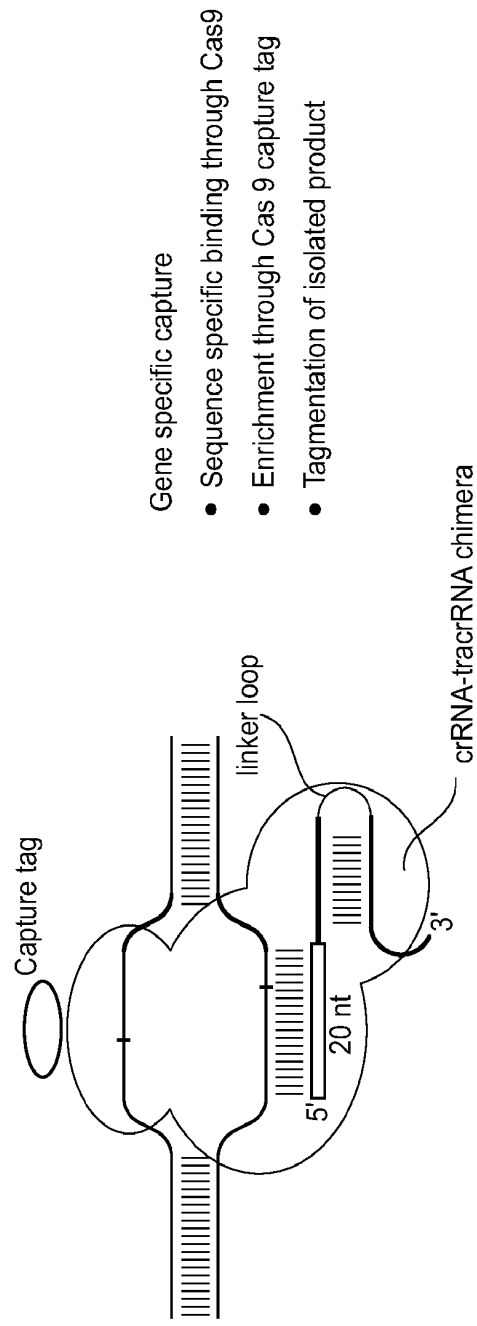


Fig. 4A

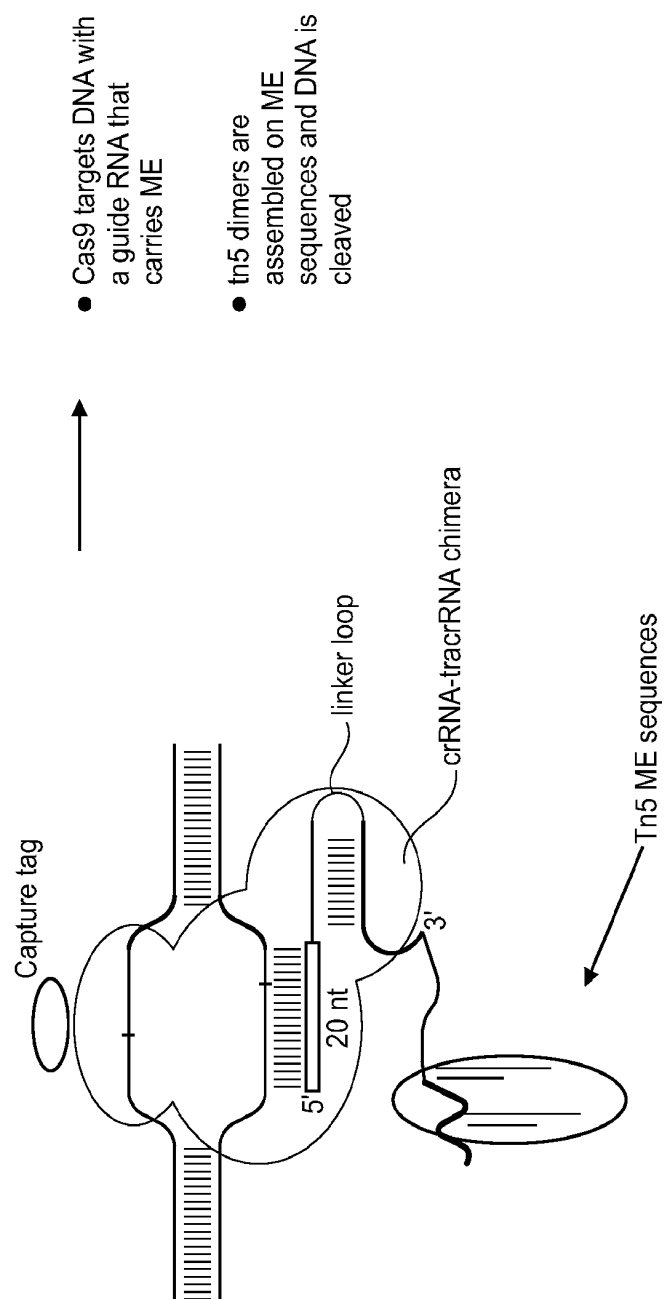
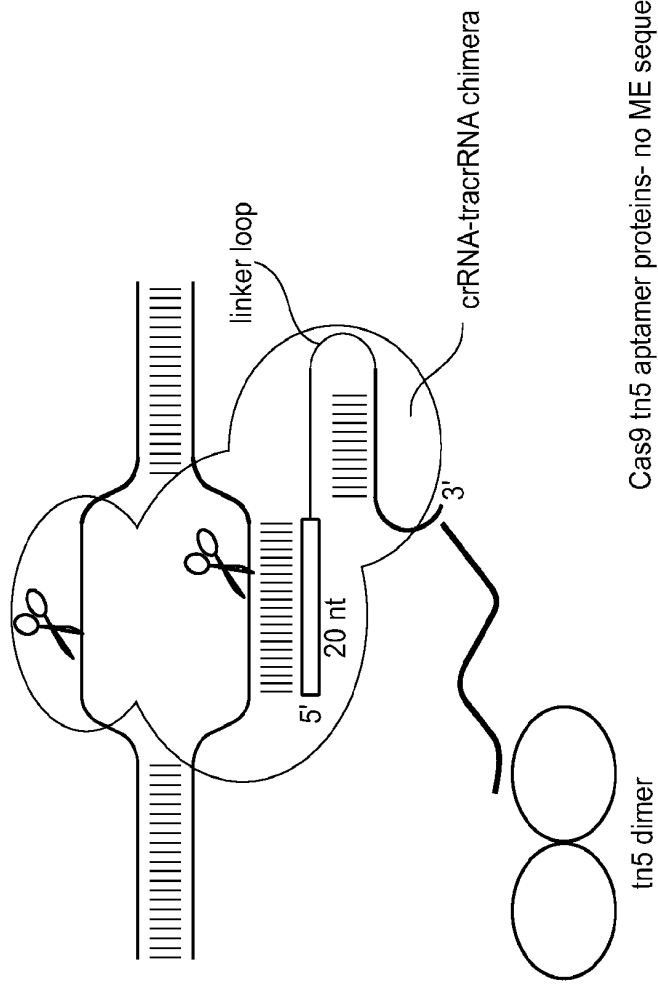


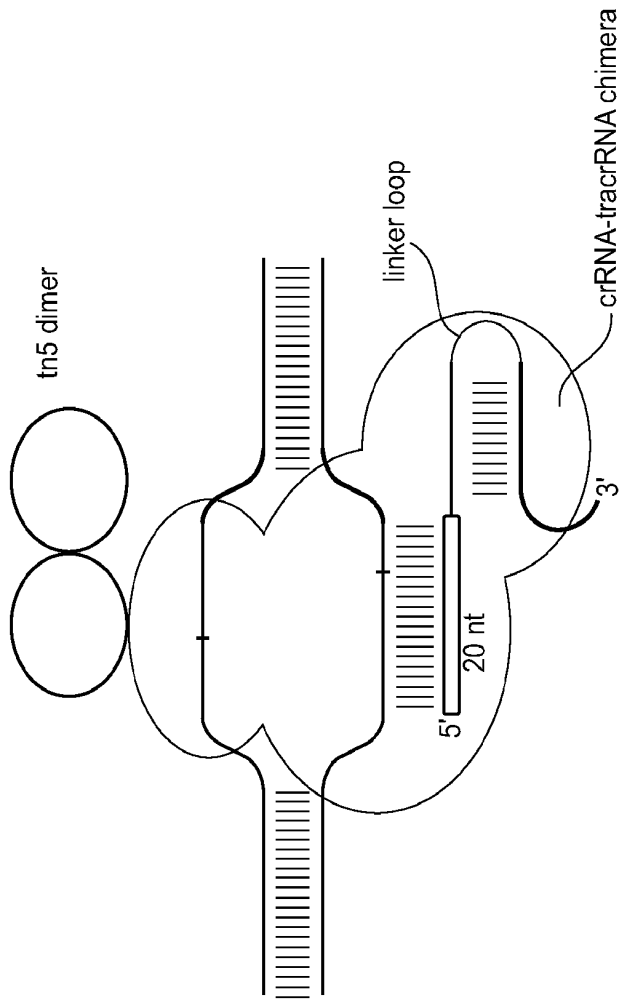
Fig. 4B



Cas9 tn5 aptamer proteins- no ME sequences

- Bind Cas9 tn5 to target sequence
- Wash out unbound Cas9/tn5 or capture Cas9/tn5
- Add Me sequences and tagment Cas9 bound DNA

Fig. 4C



Cas9/tn5 fusion

- Bind Cas9/tn5 fusion protein to target
- Wash out unbound Cas9/tn5
- Add Me sequences and tagment Cas9/tn5 bound DNA

Fig. 4D

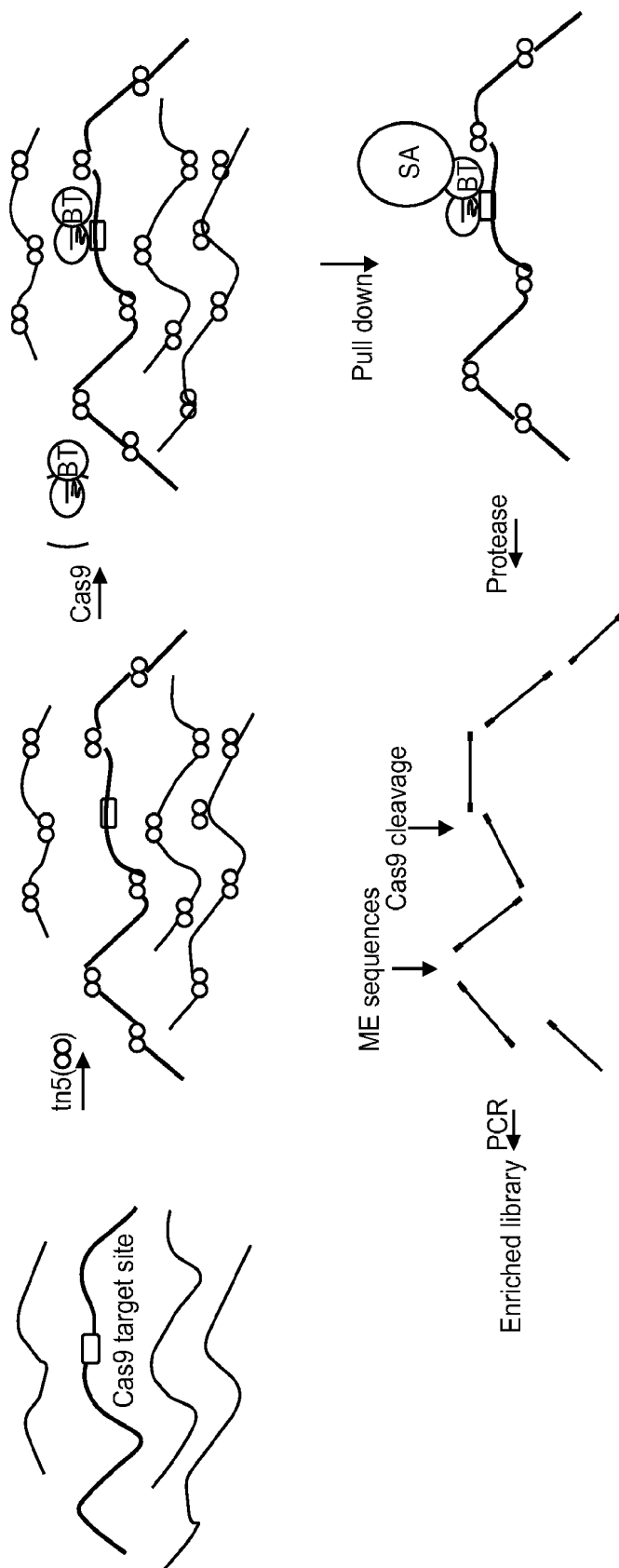


Fig. 4E

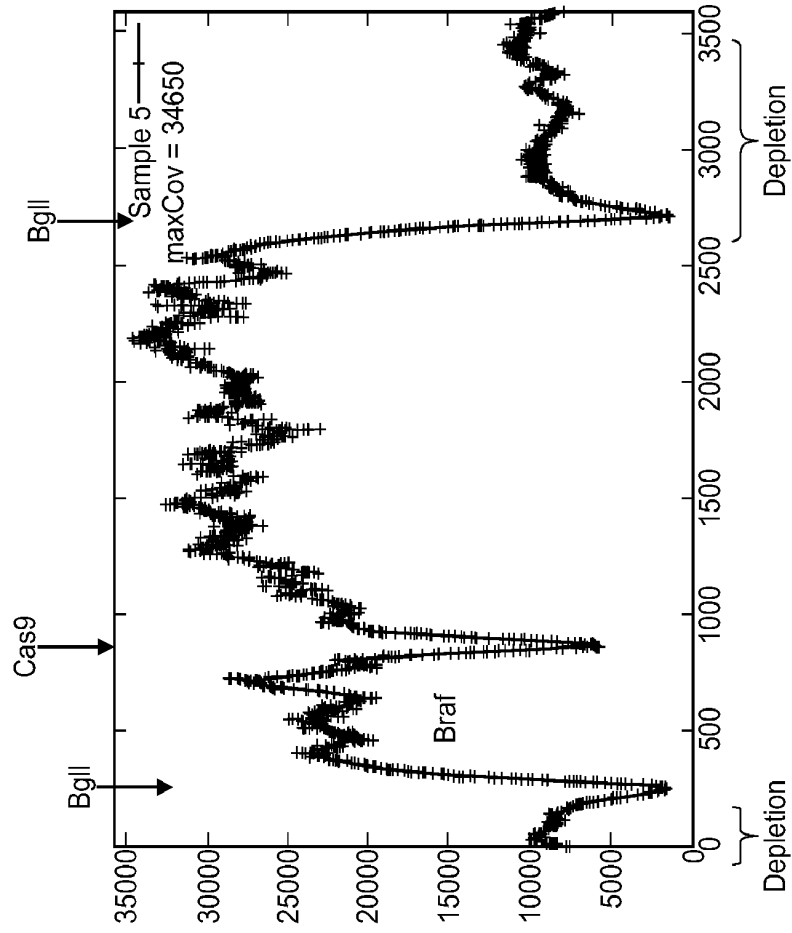
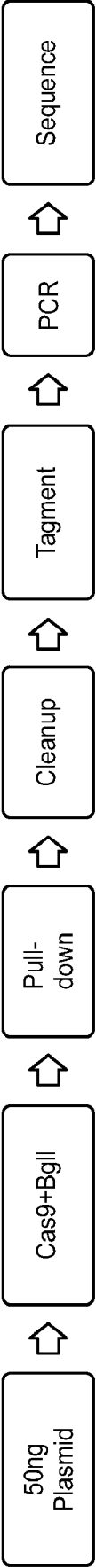


Fig. 4F

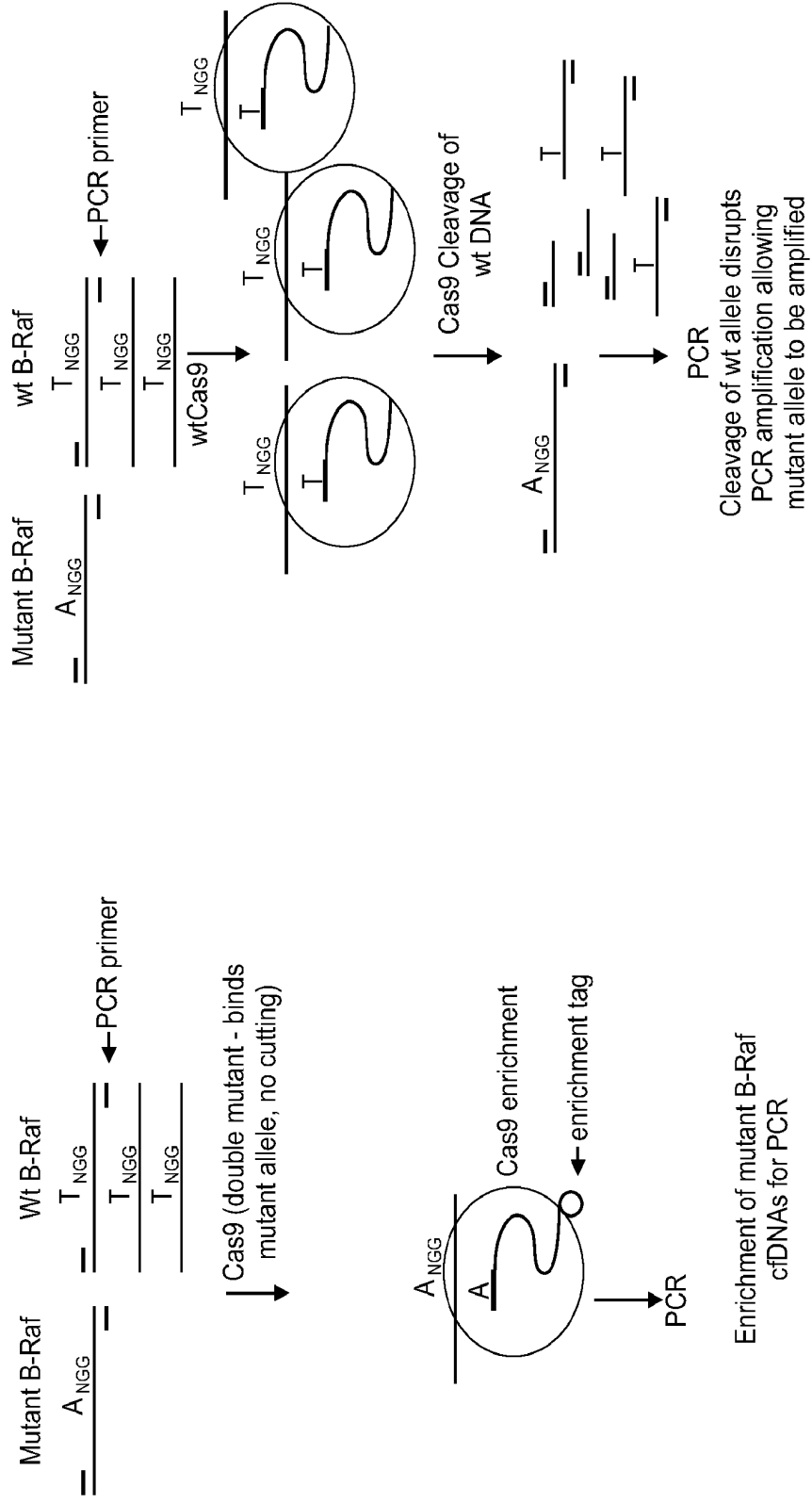


Fig. 5

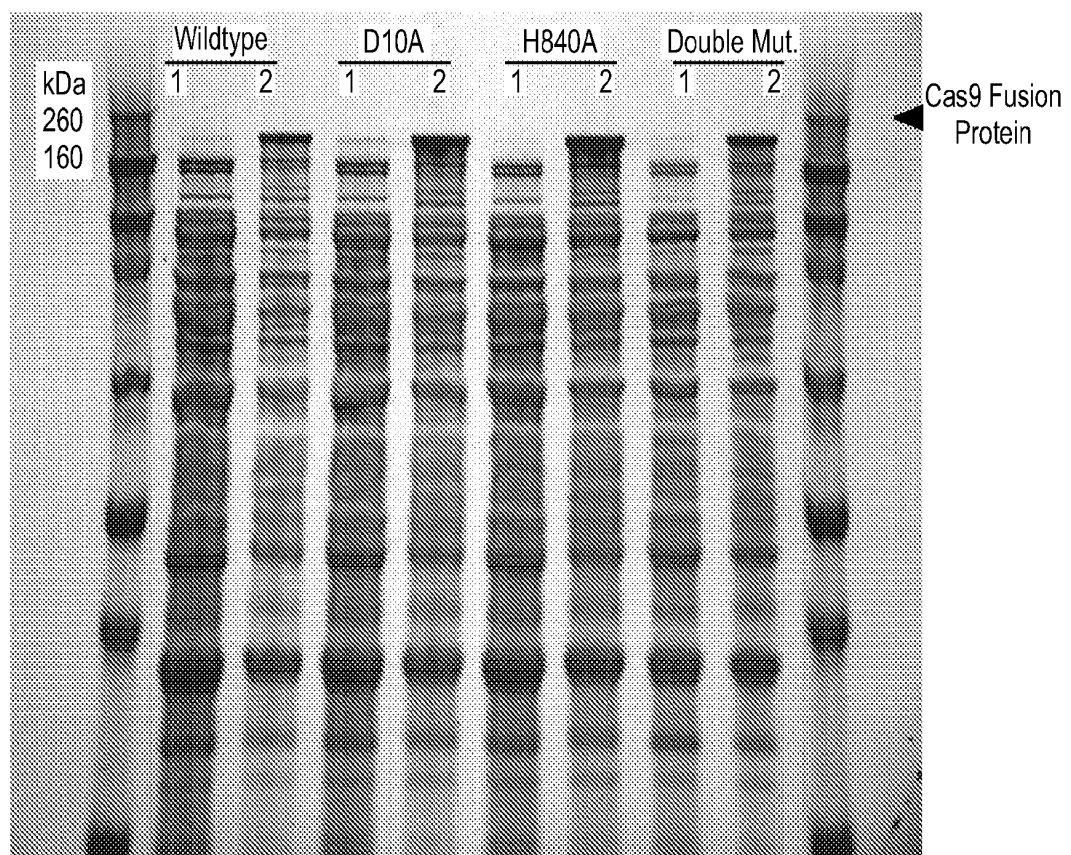
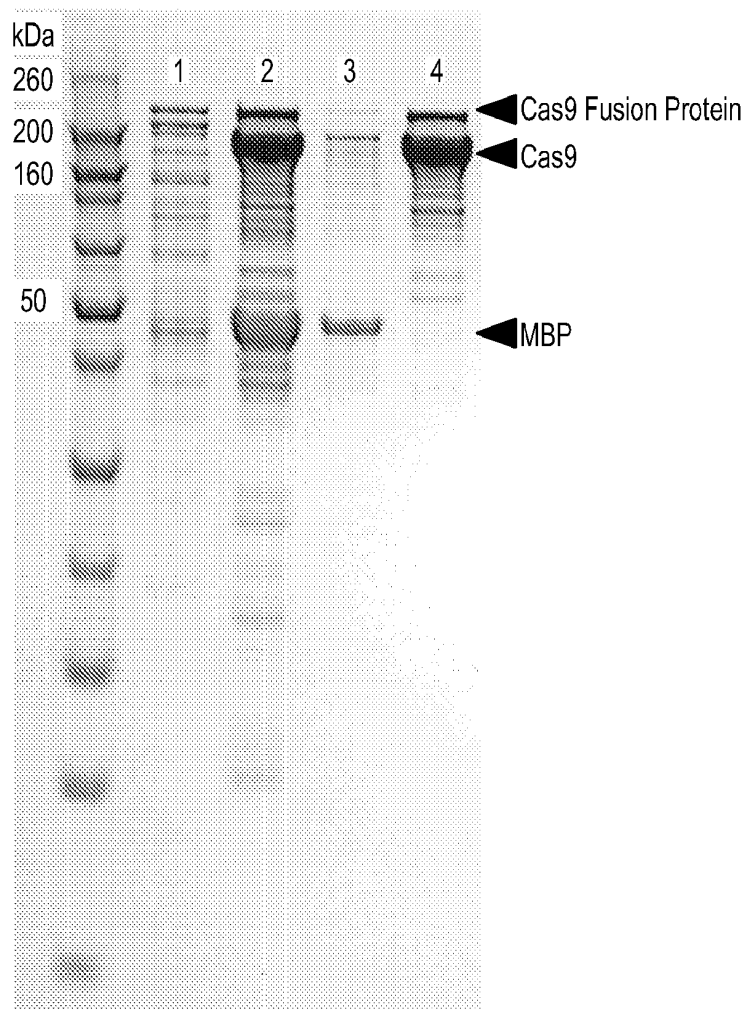


Fig. 6A



Lane	Description
1	Induced Cell Lysate
2	Cell Extract after His-Tag Purification & TEV Digestion
3	Ion Exchange Flow-Through
4	Ion Exchange Eluate

Fig. 6B

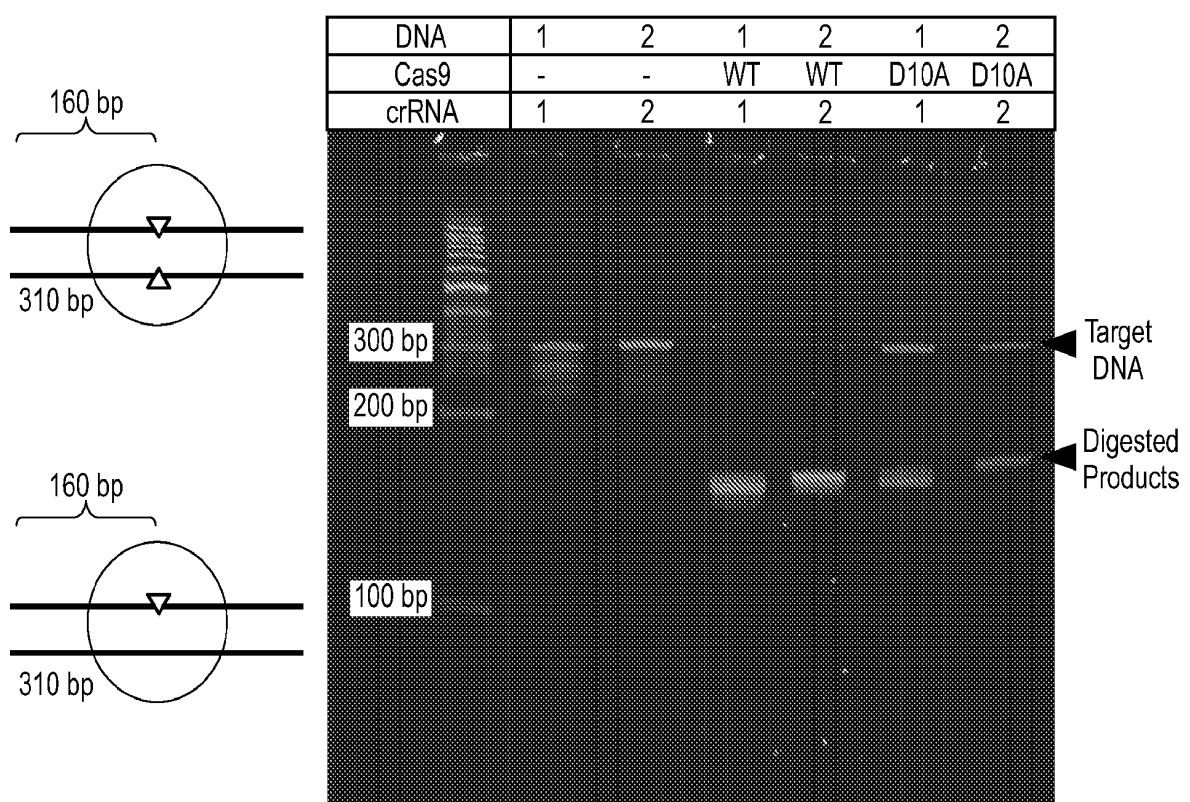


Fig. 6C

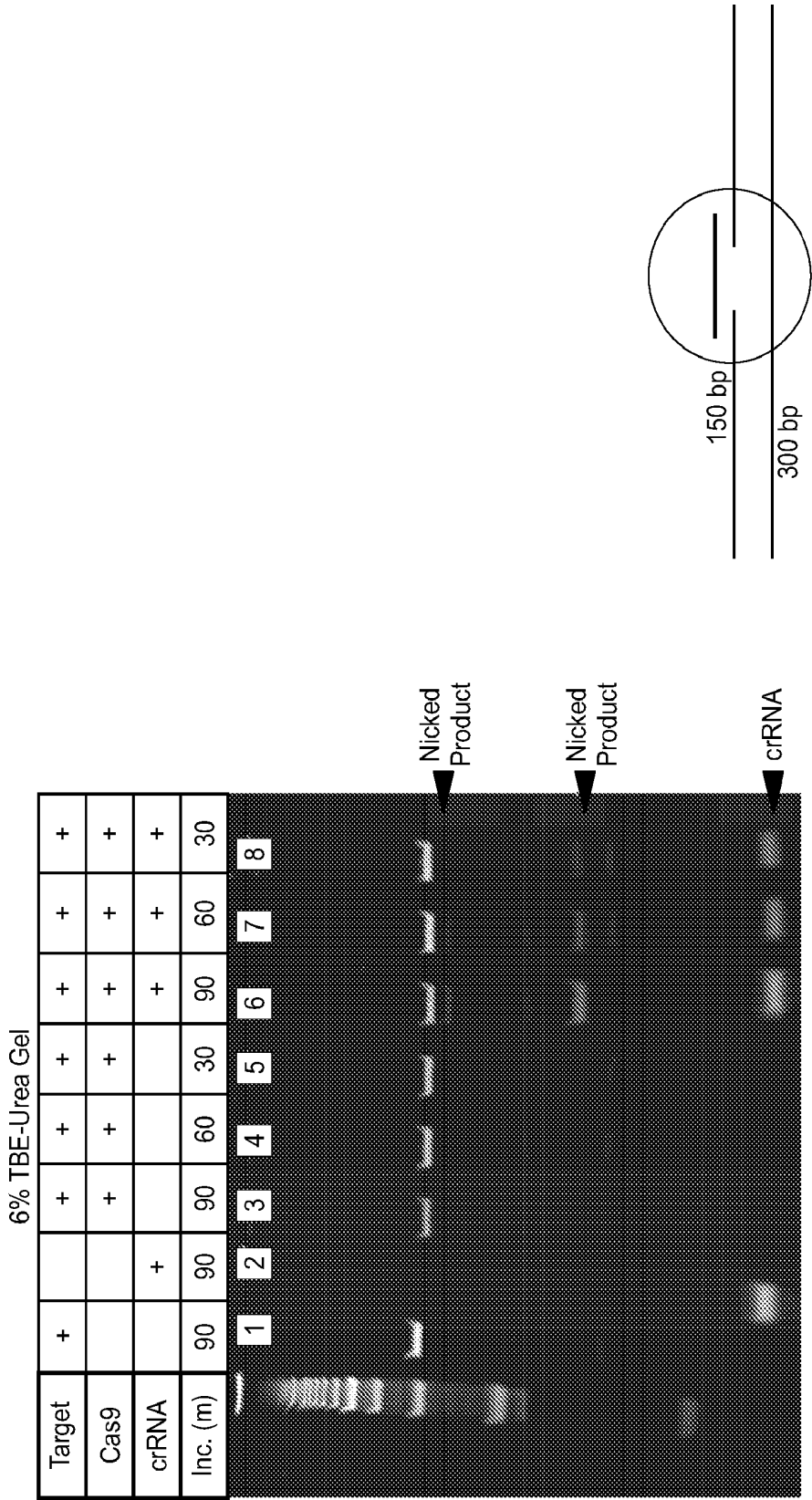


Fig. 6D

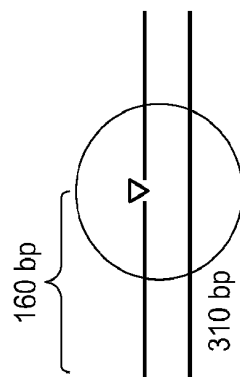
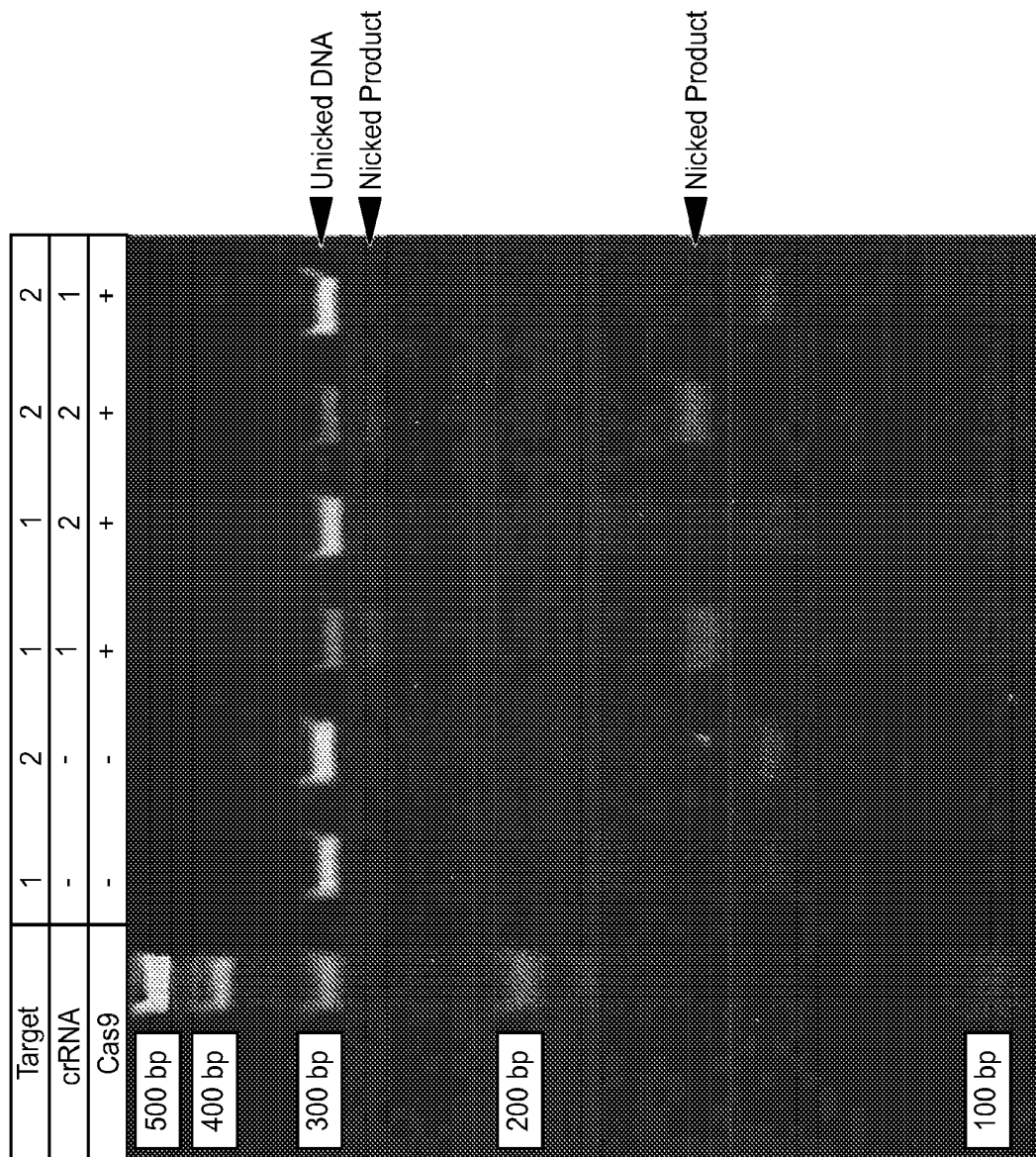


Fig. 6E

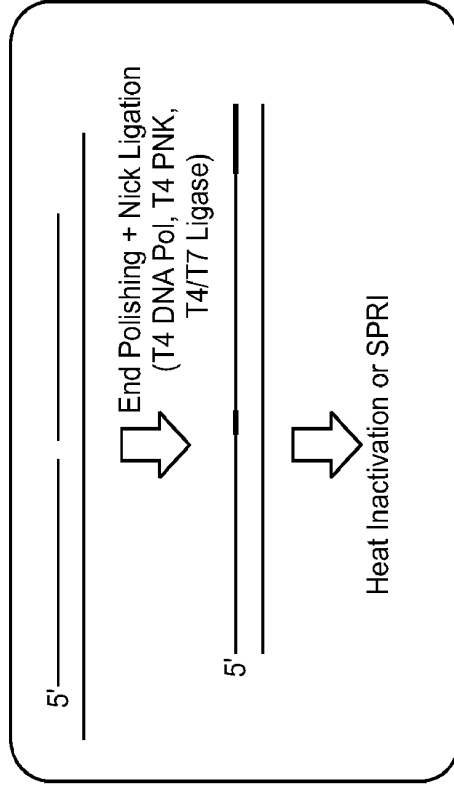
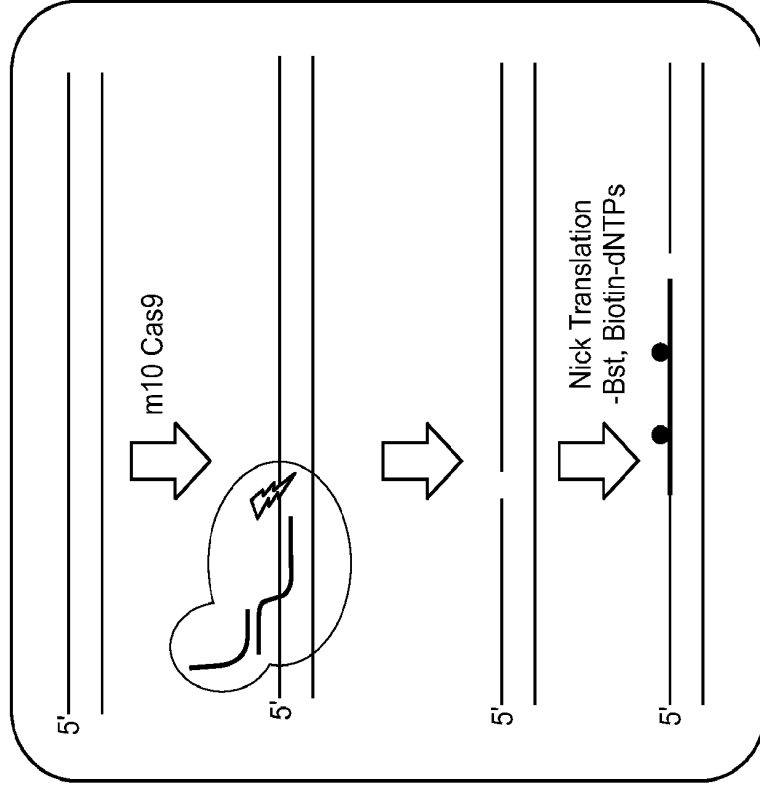
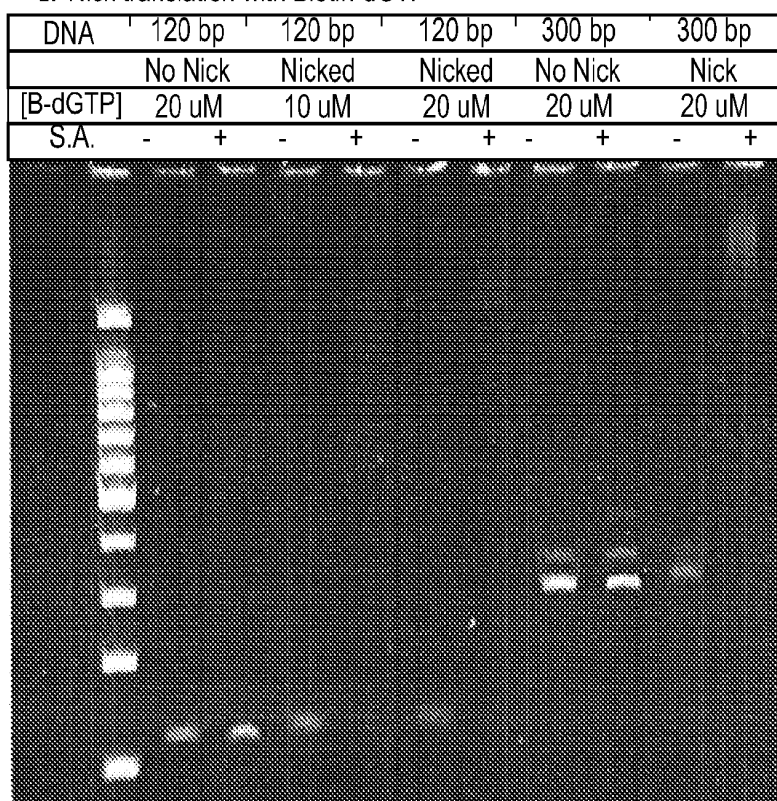


Fig. 7A

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I. Nick translation with Biotin-dGTP



II. Nick translation with Biotin-dUTP

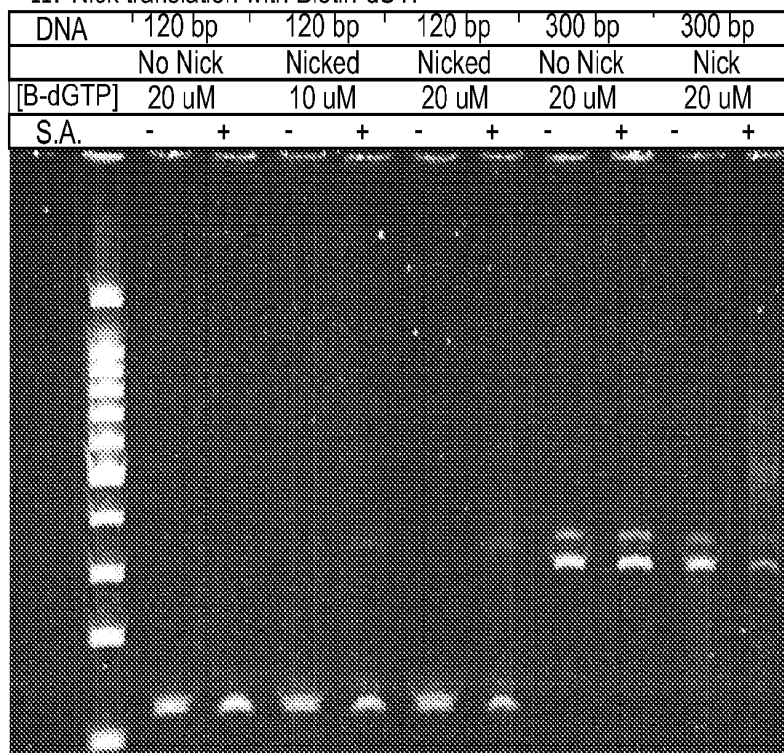


Fig. 7B

Nick Translation Enrichment qPCR Results

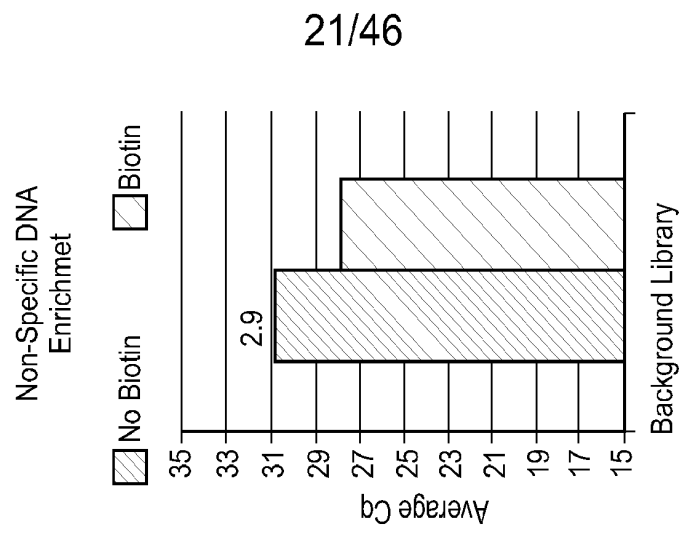
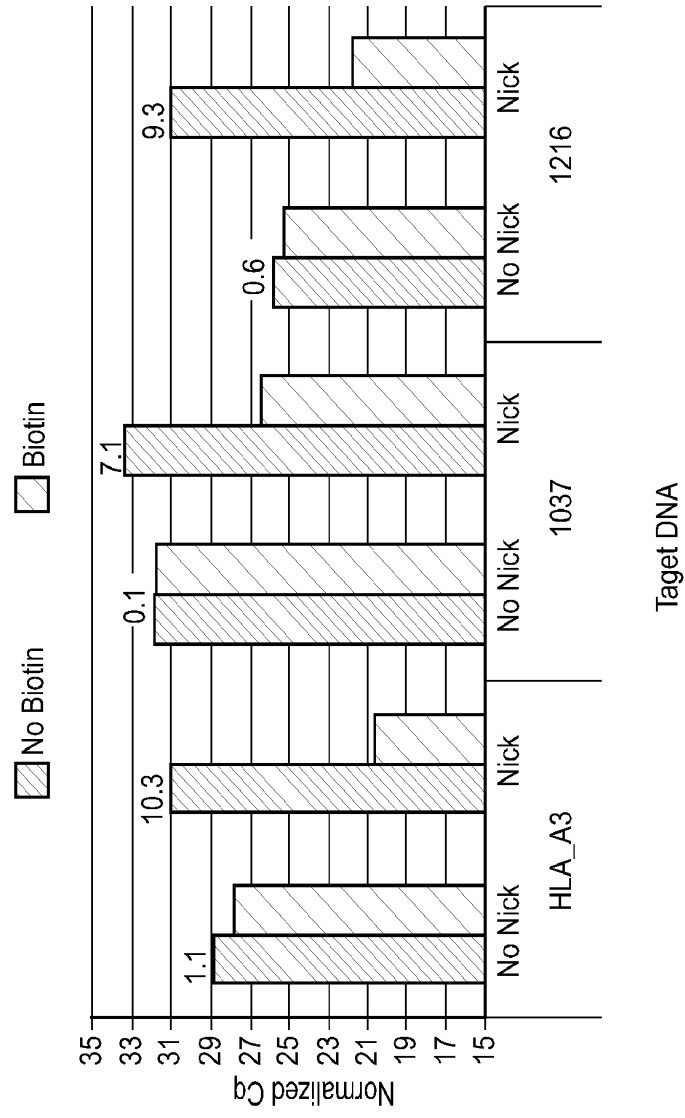


Fig. 7C

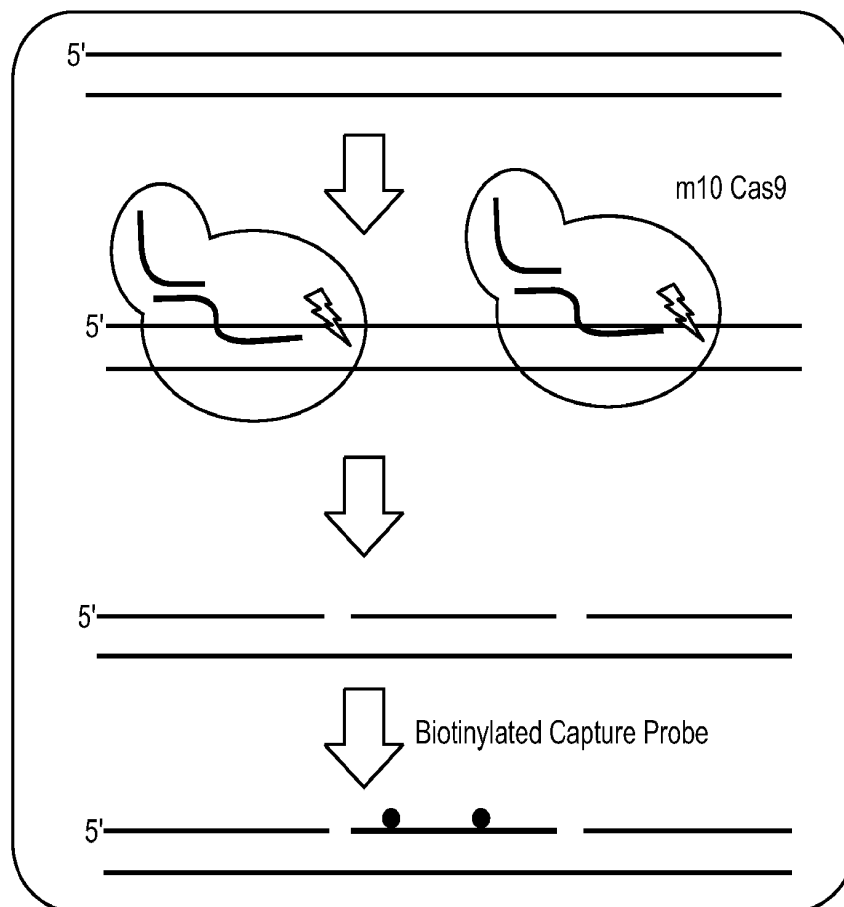


Fig. 8A

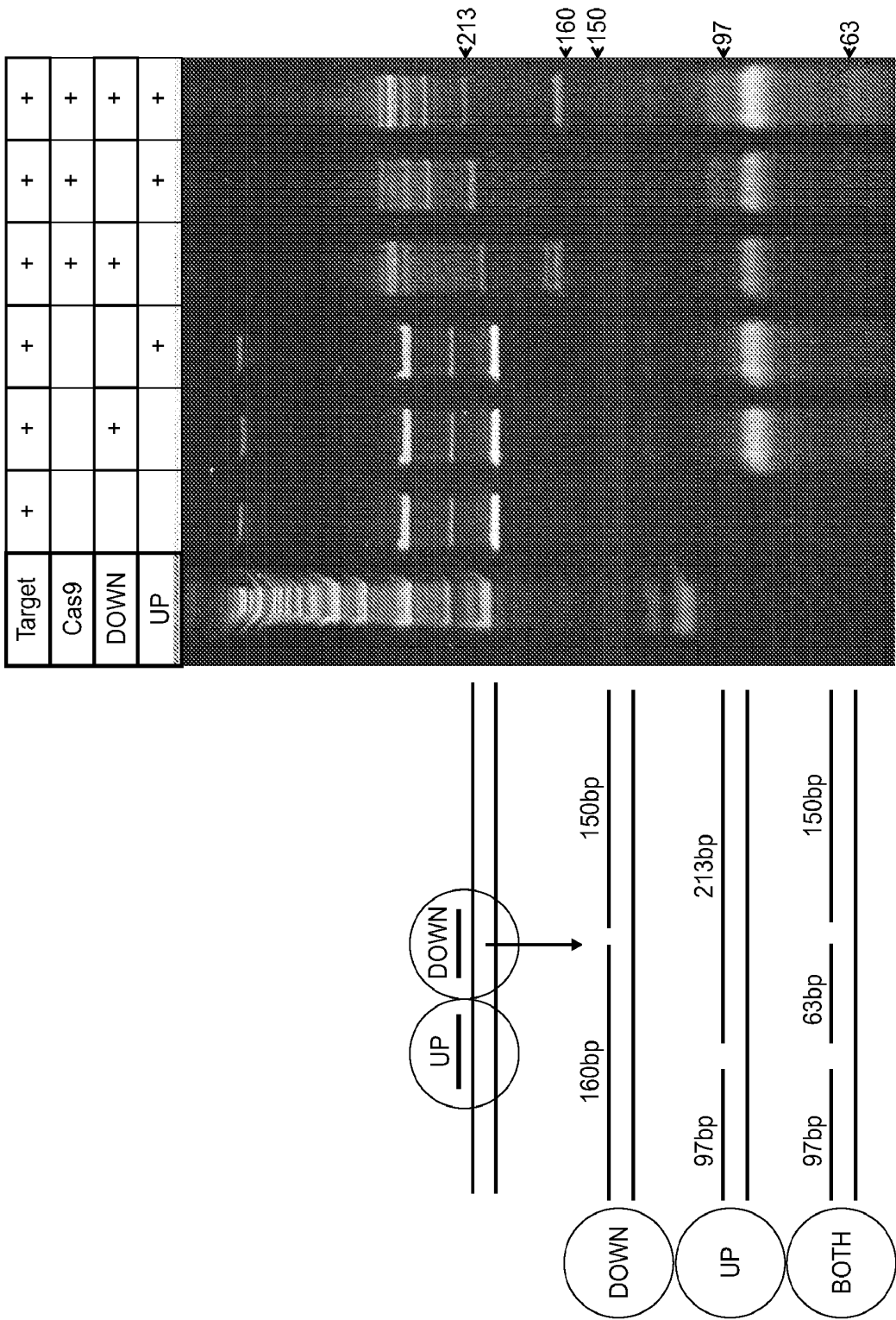
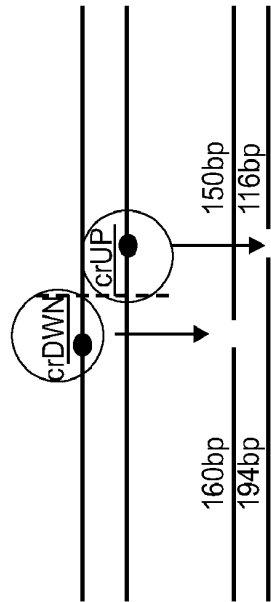


Fig. 8B



Cas9		0.1uM	0.1uM	0.1uM	0.1uM	0.1uM	0.1uM	0.1uM	0.1uM	0.1uM	0.5uM	0.5uM	0.5uM
crUP			+					+	+	+			+
crDWN						+		+	+	+		+	+
Add								Tween	NP40	BSA			

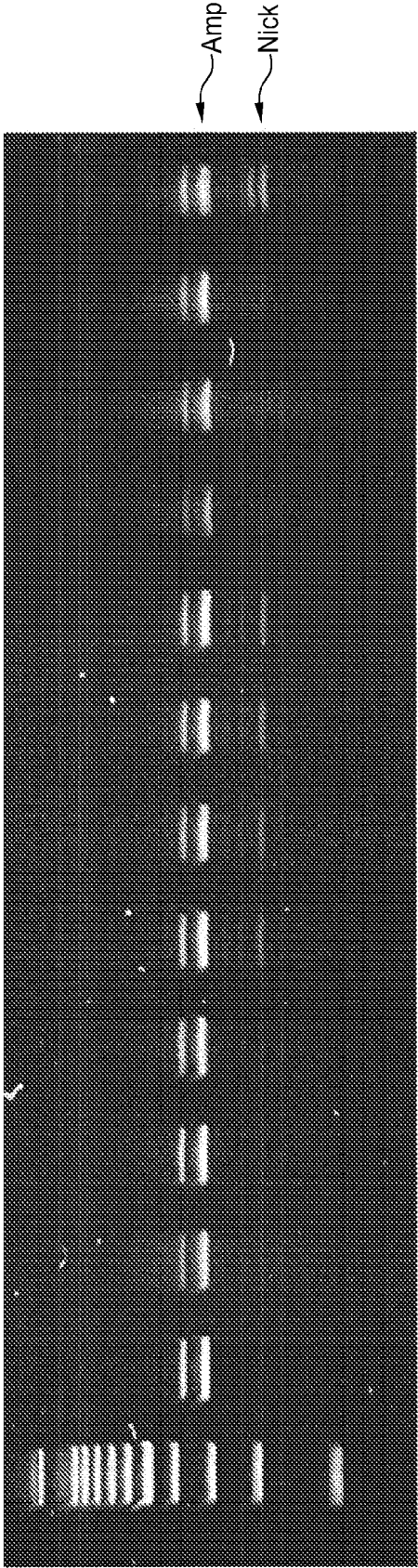


Fig. 8C

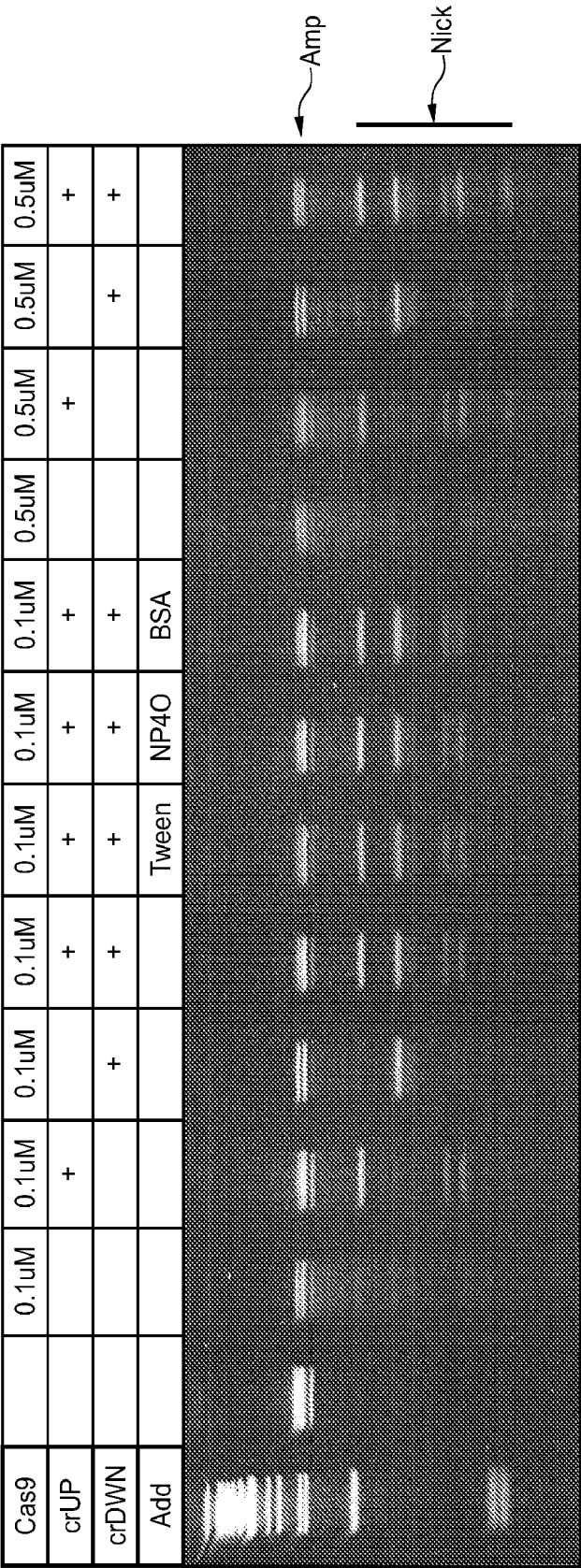
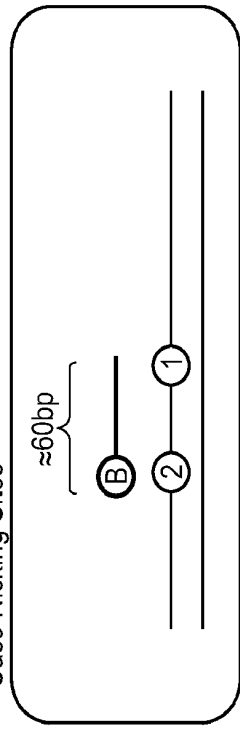


Fig. 8D

Cas9 Nicking Sites



Enrichment of Cas9 Nicked DNA

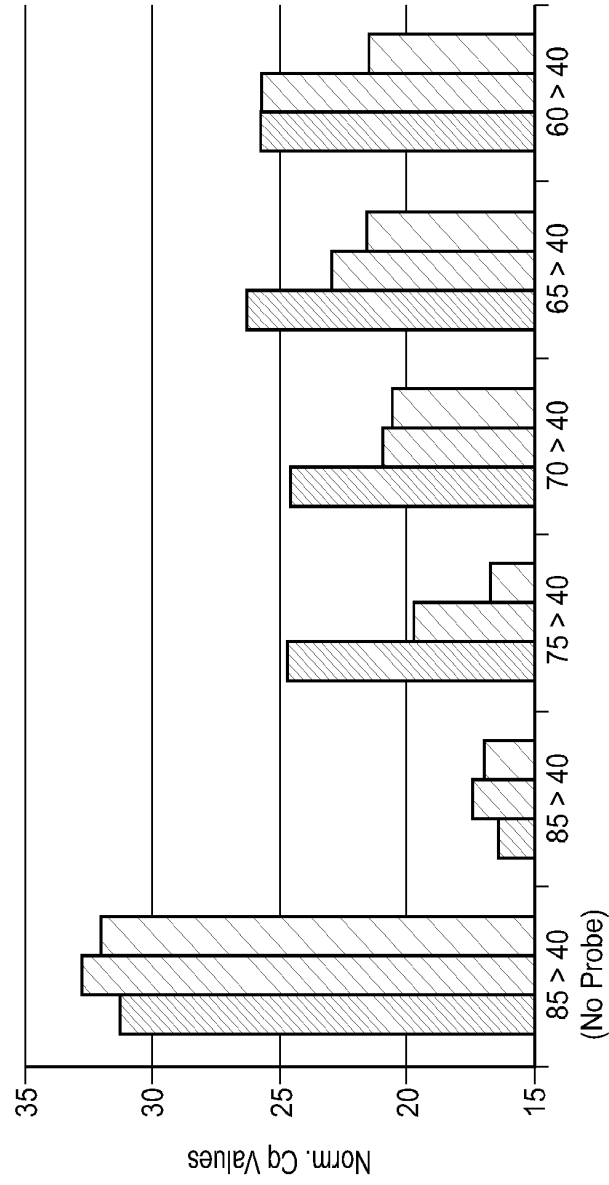


Fig. 8E

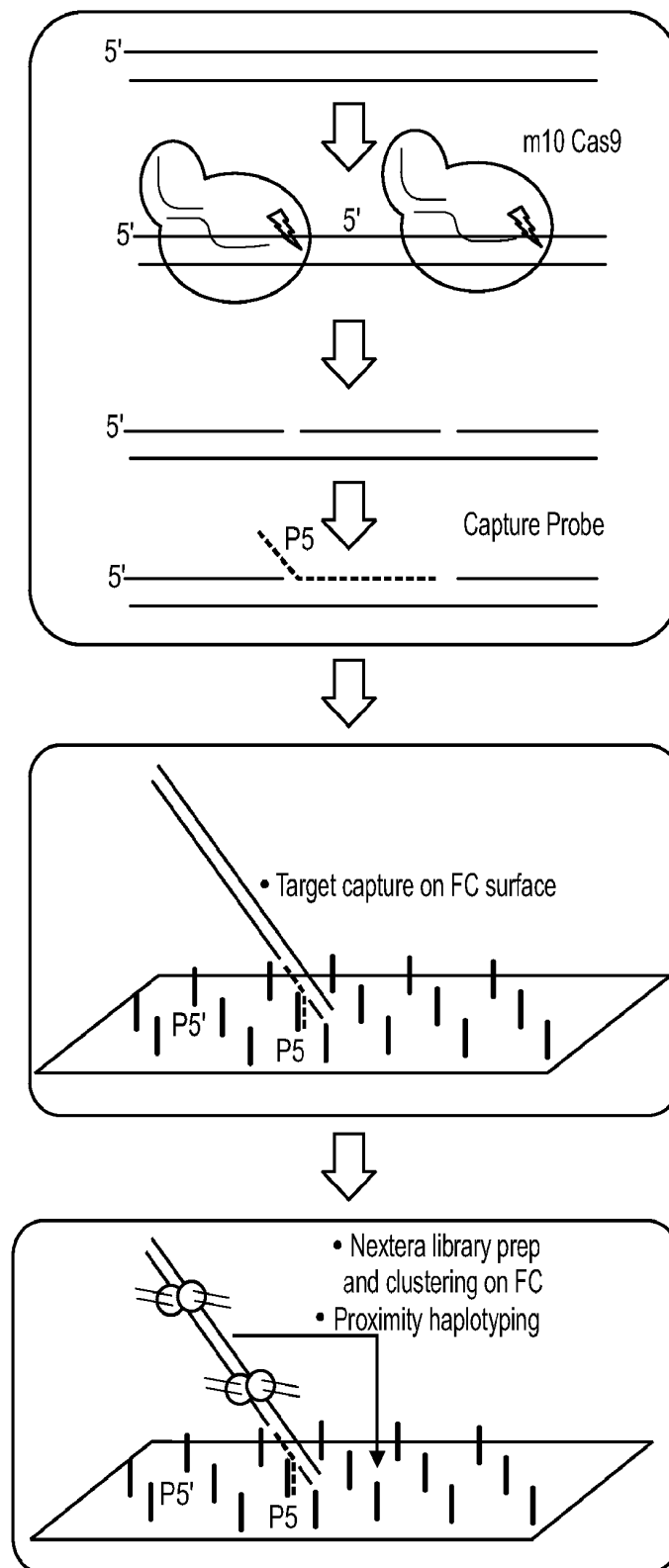


Fig. 9

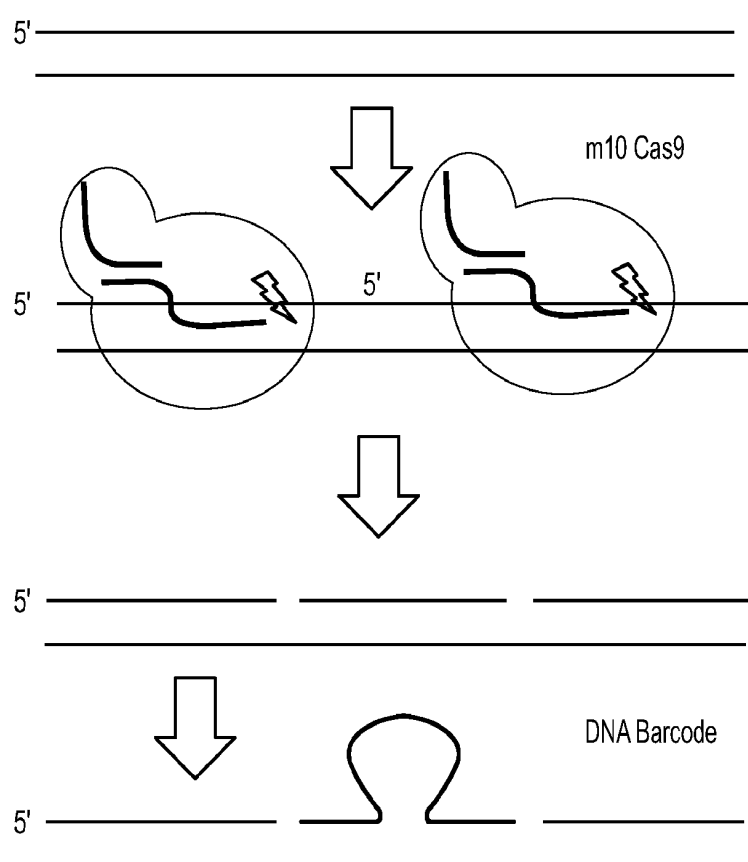


Fig. 10

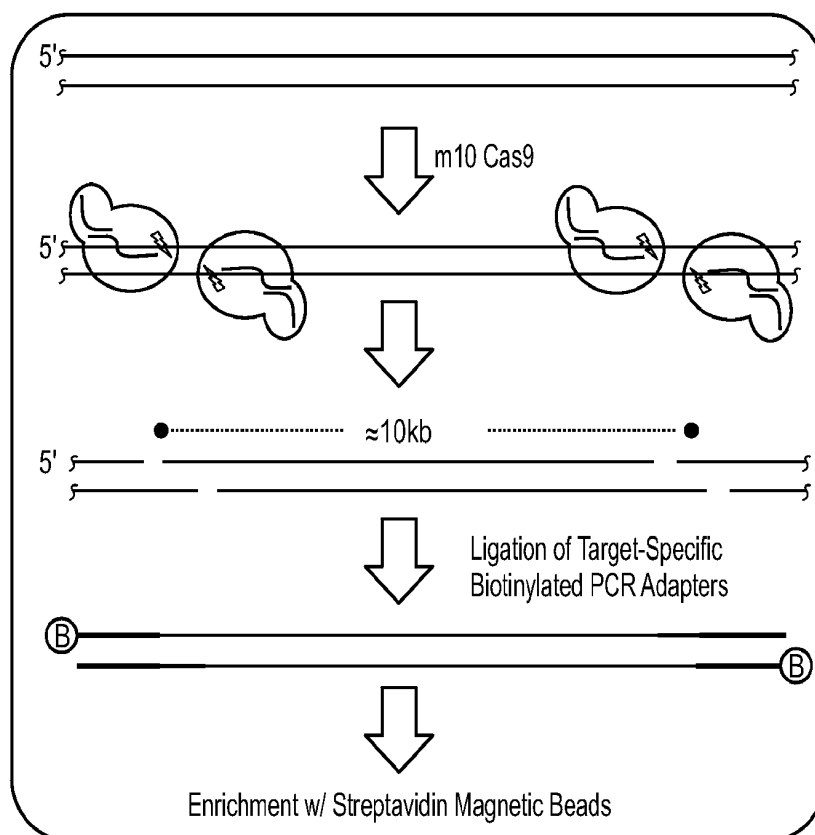


Fig. 11A

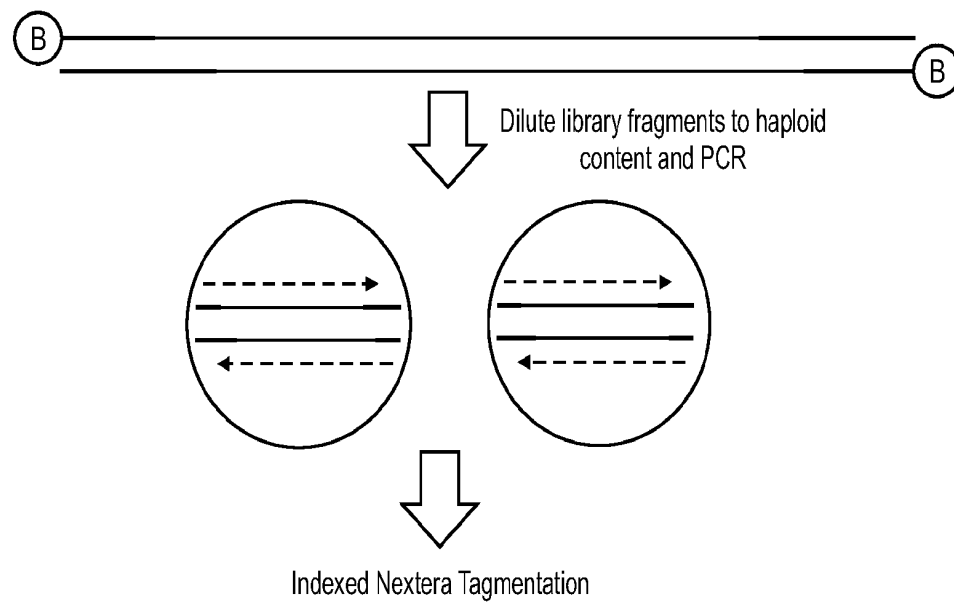


Fig. 11B

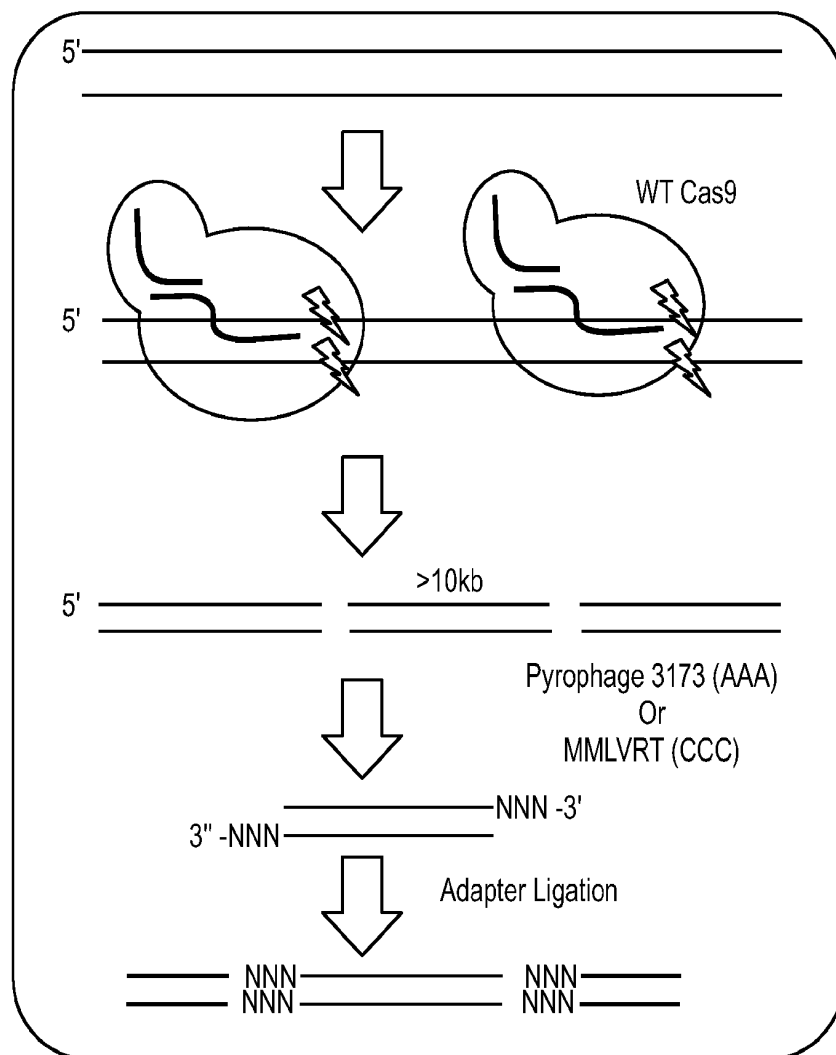


Fig. 12A

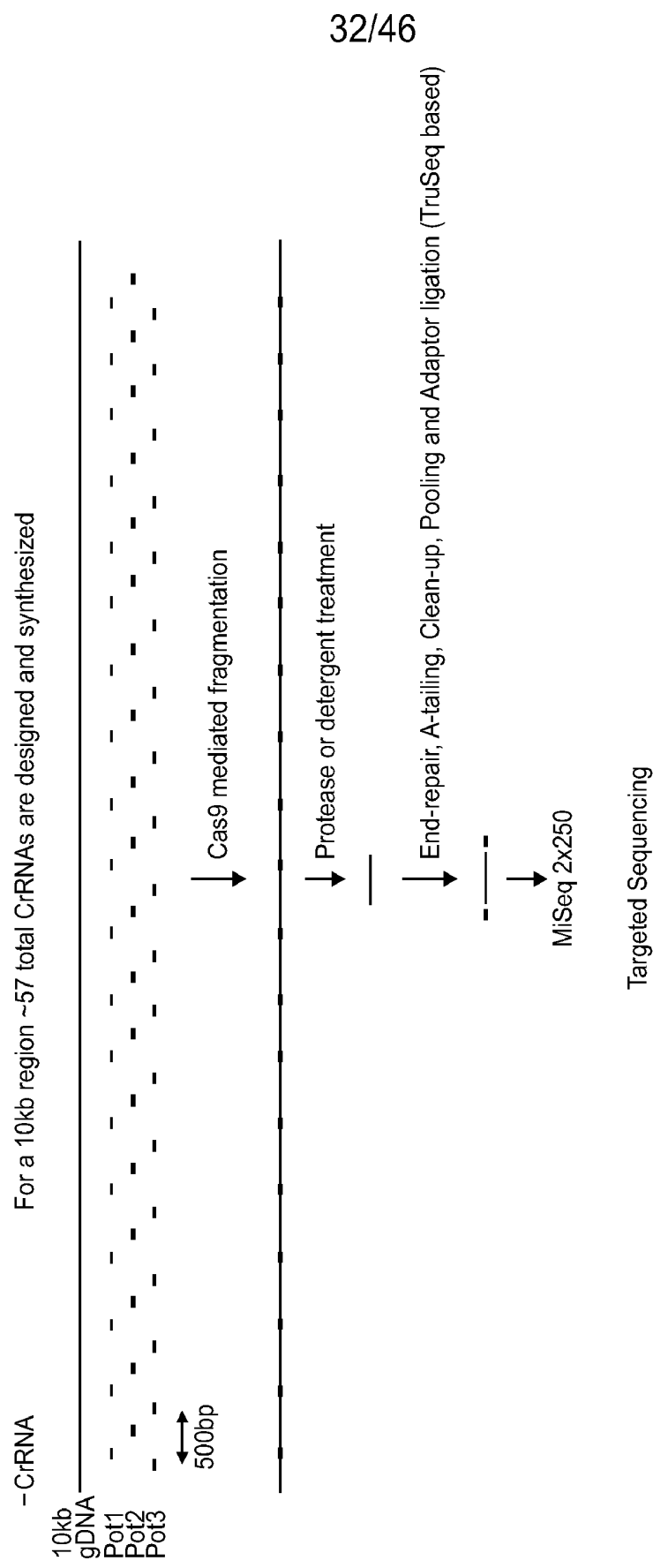


Fig. 12B

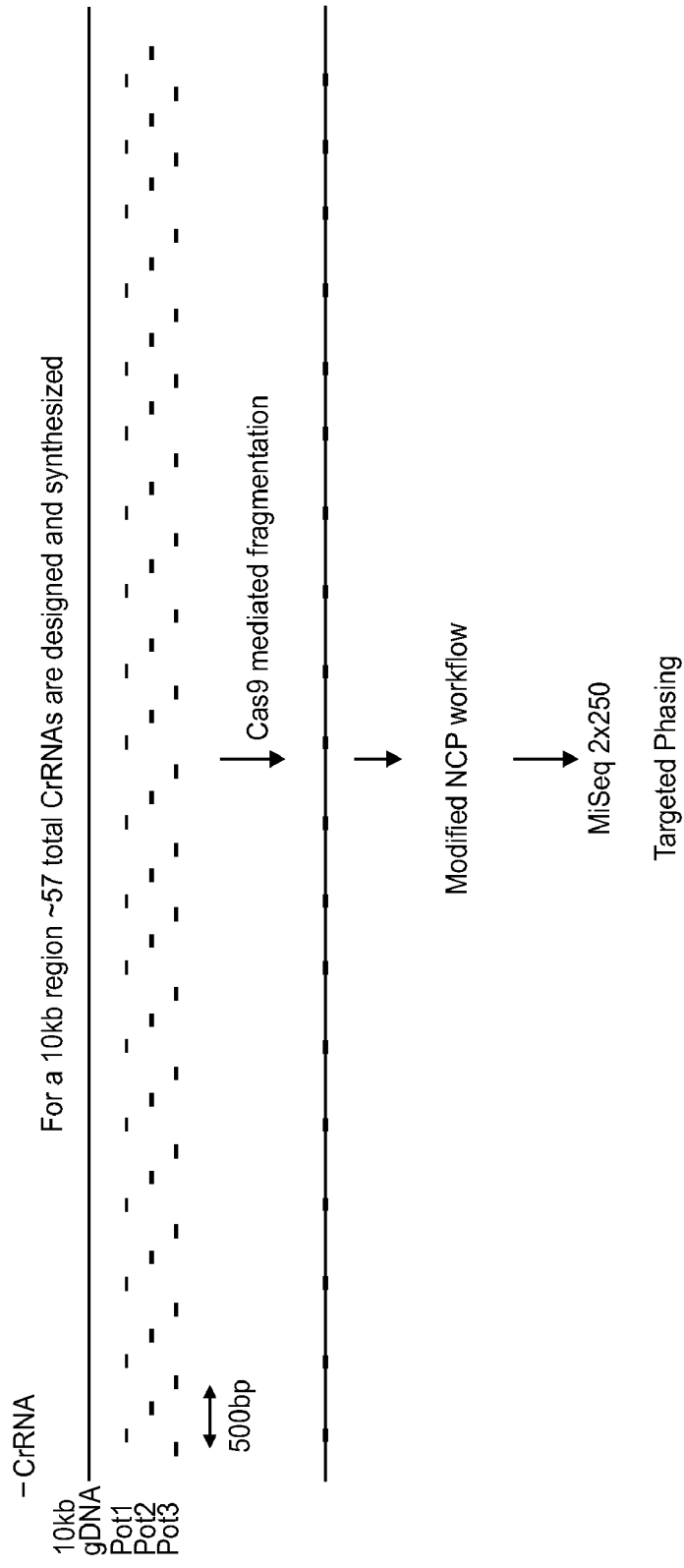


Fig. 12C

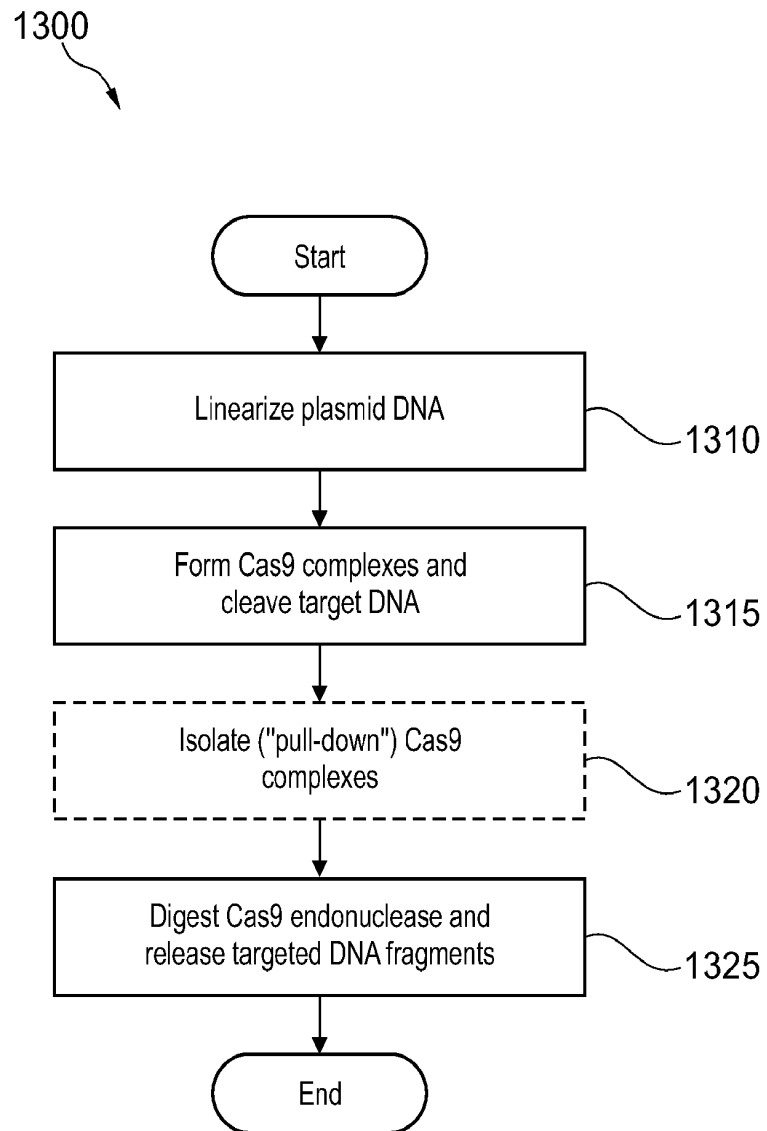


Fig. 13

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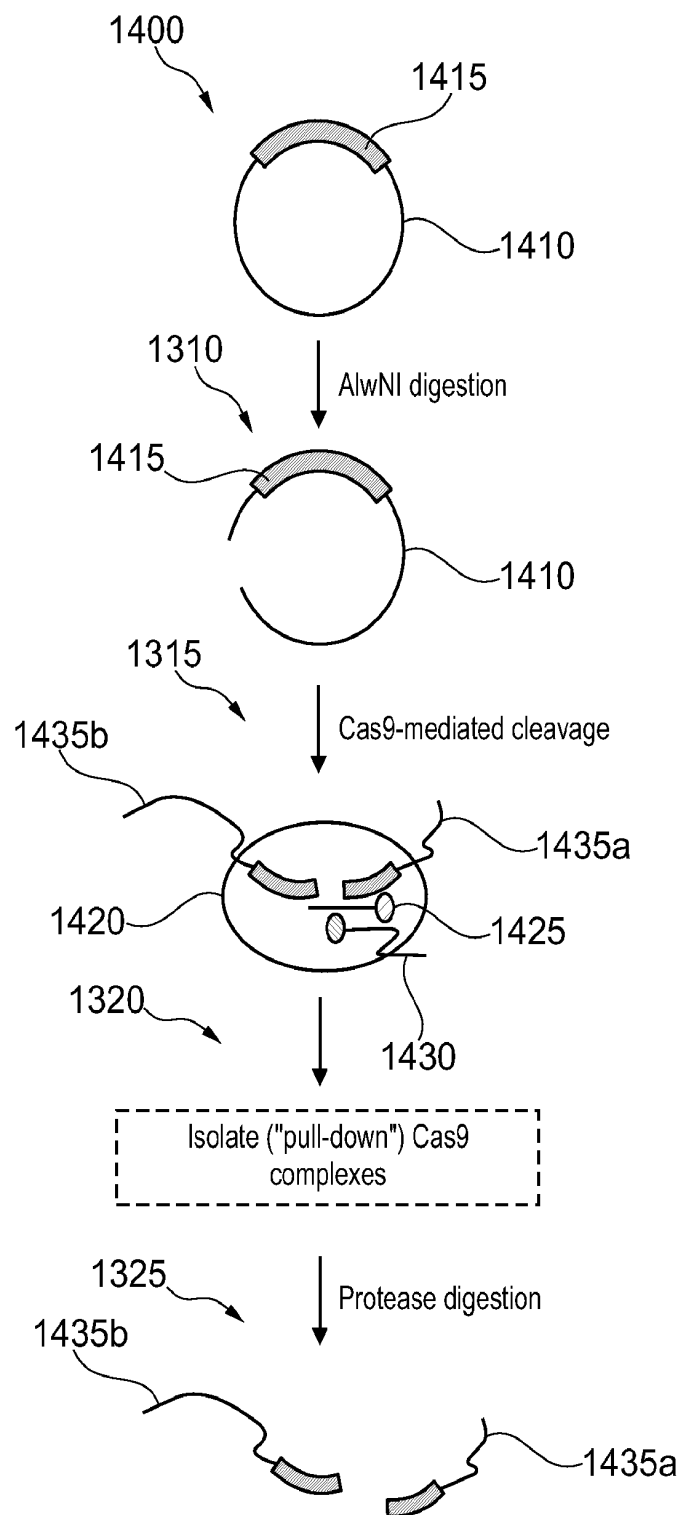


Fig. 14

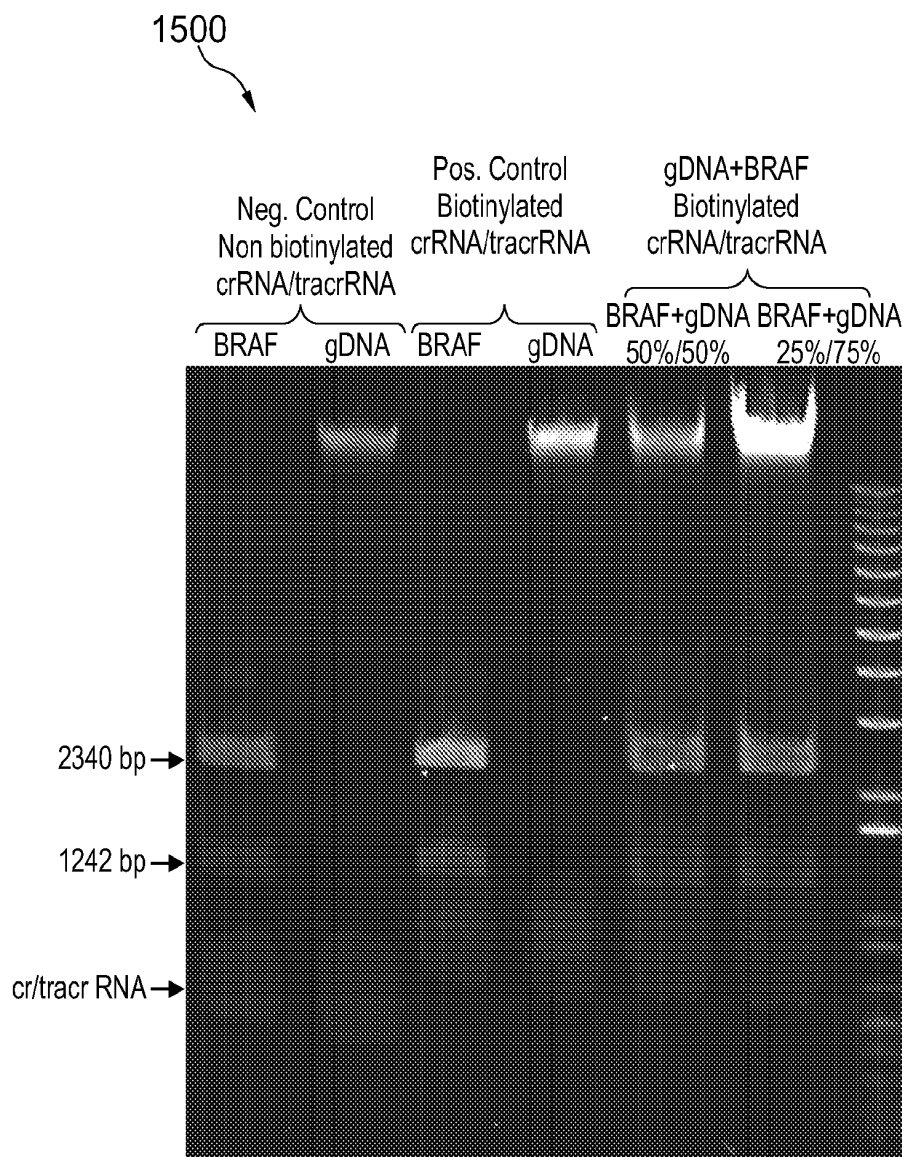


Fig. 15



Fig. 16

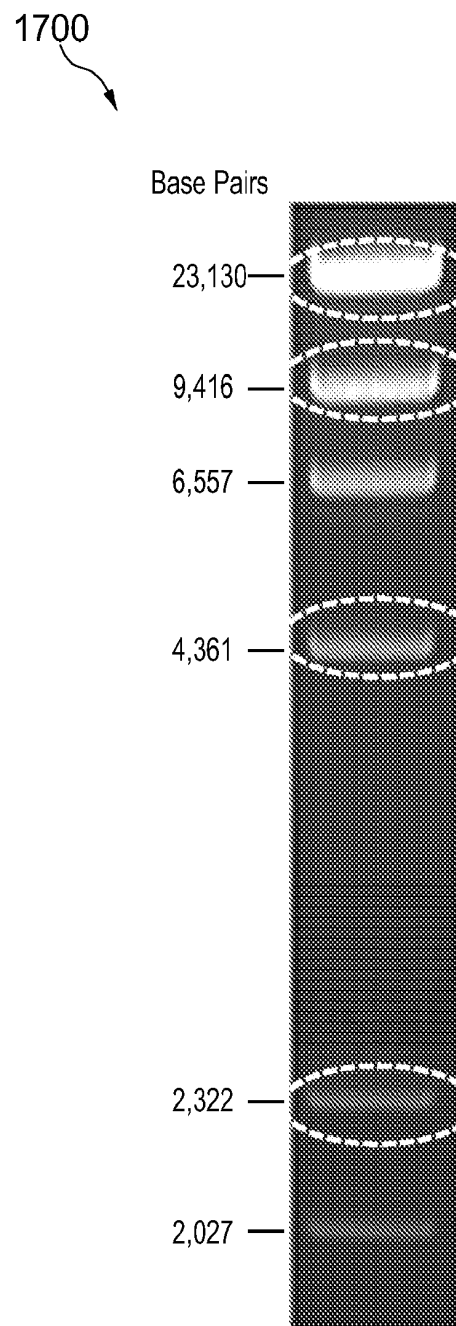


Fig. 17

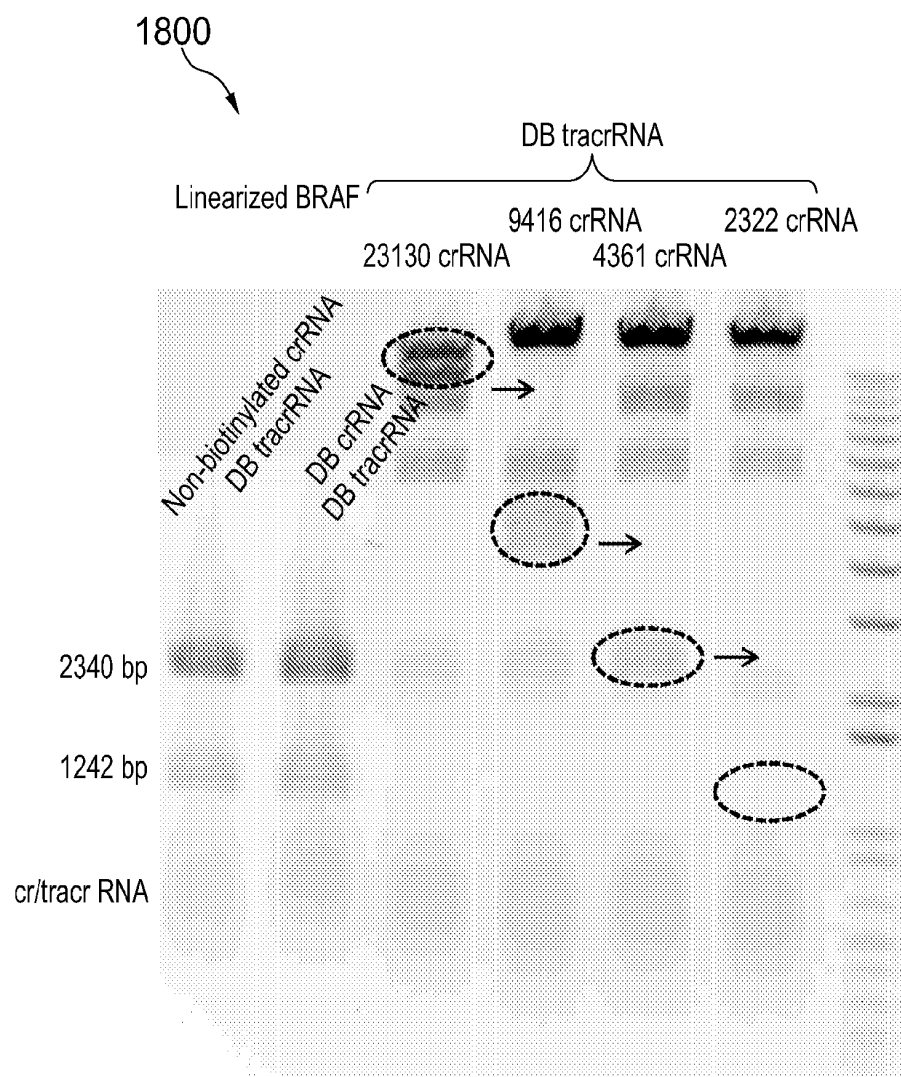


Fig. 18

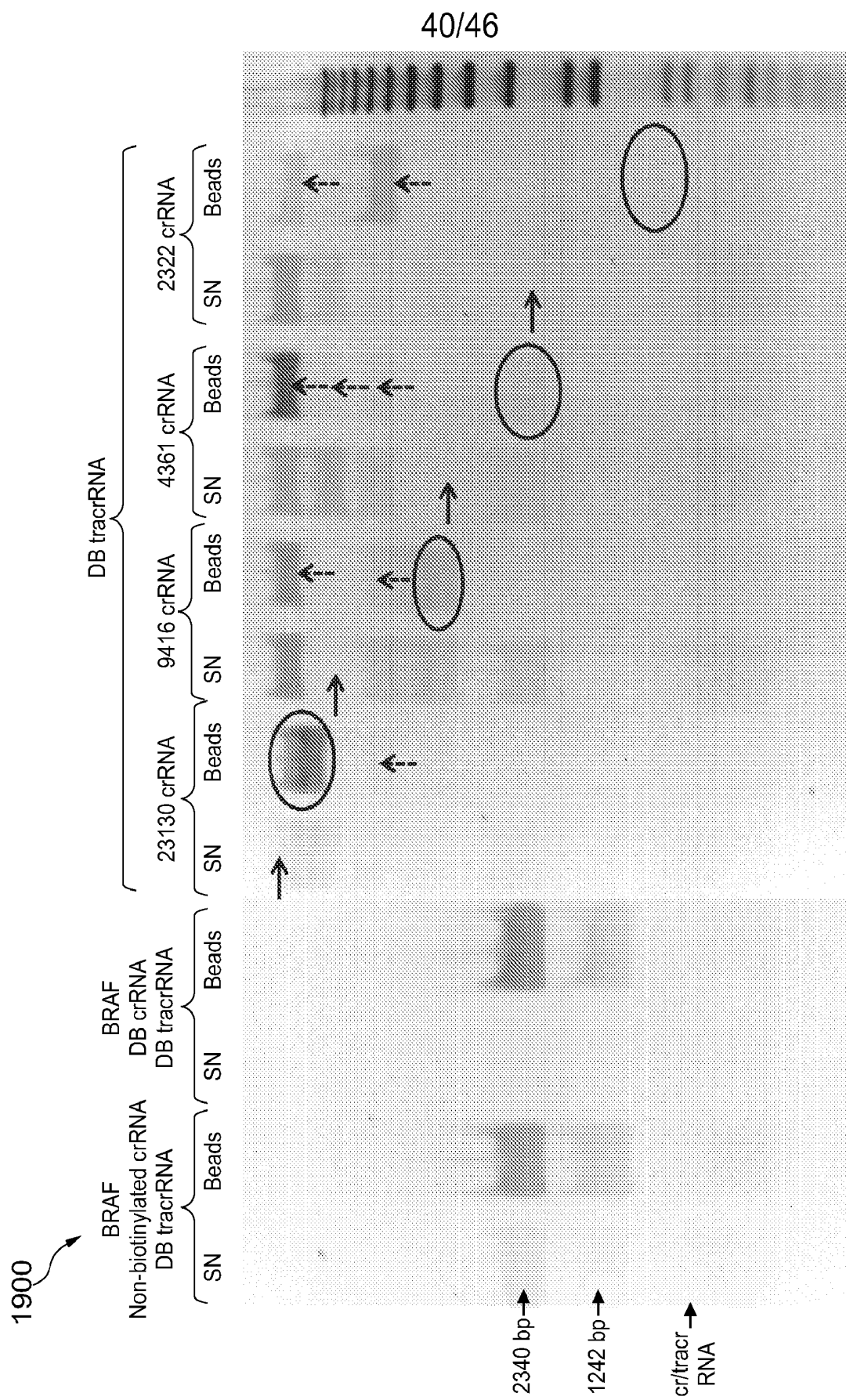


Fig. 19

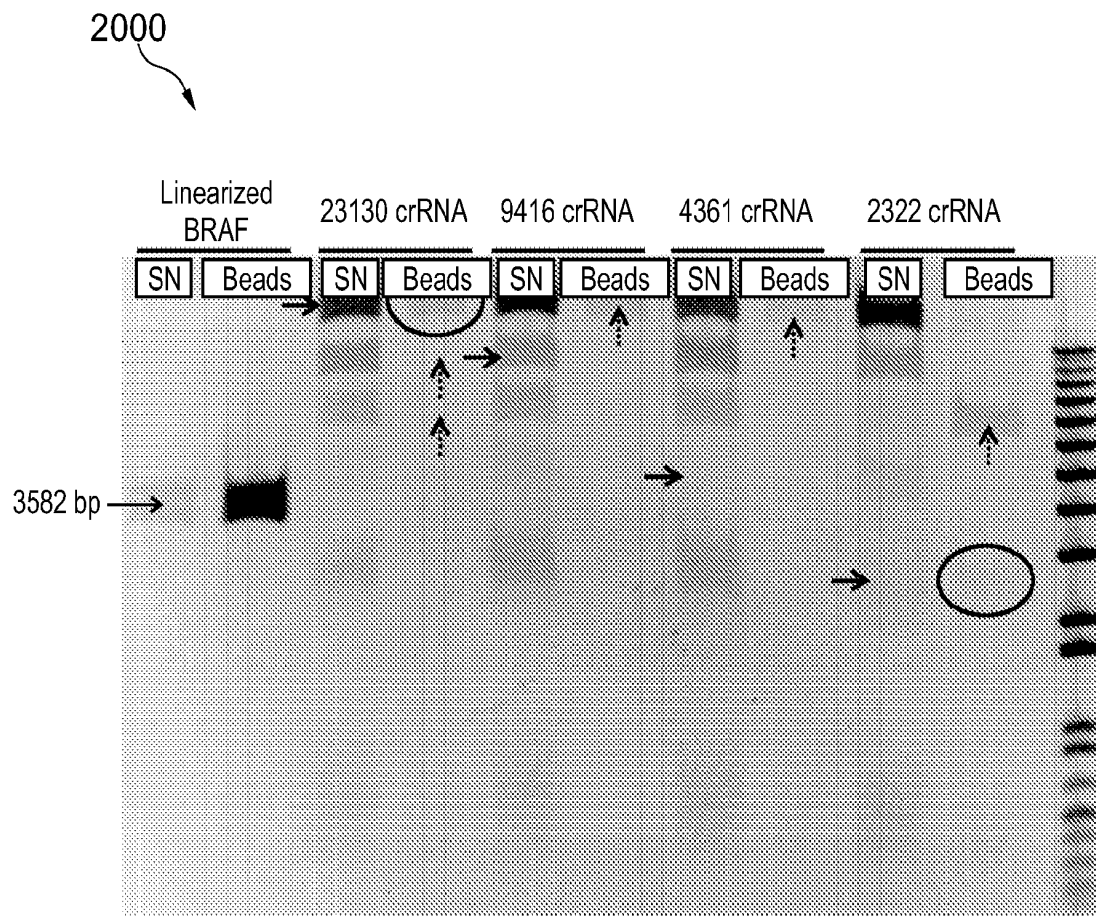


Fig. 20

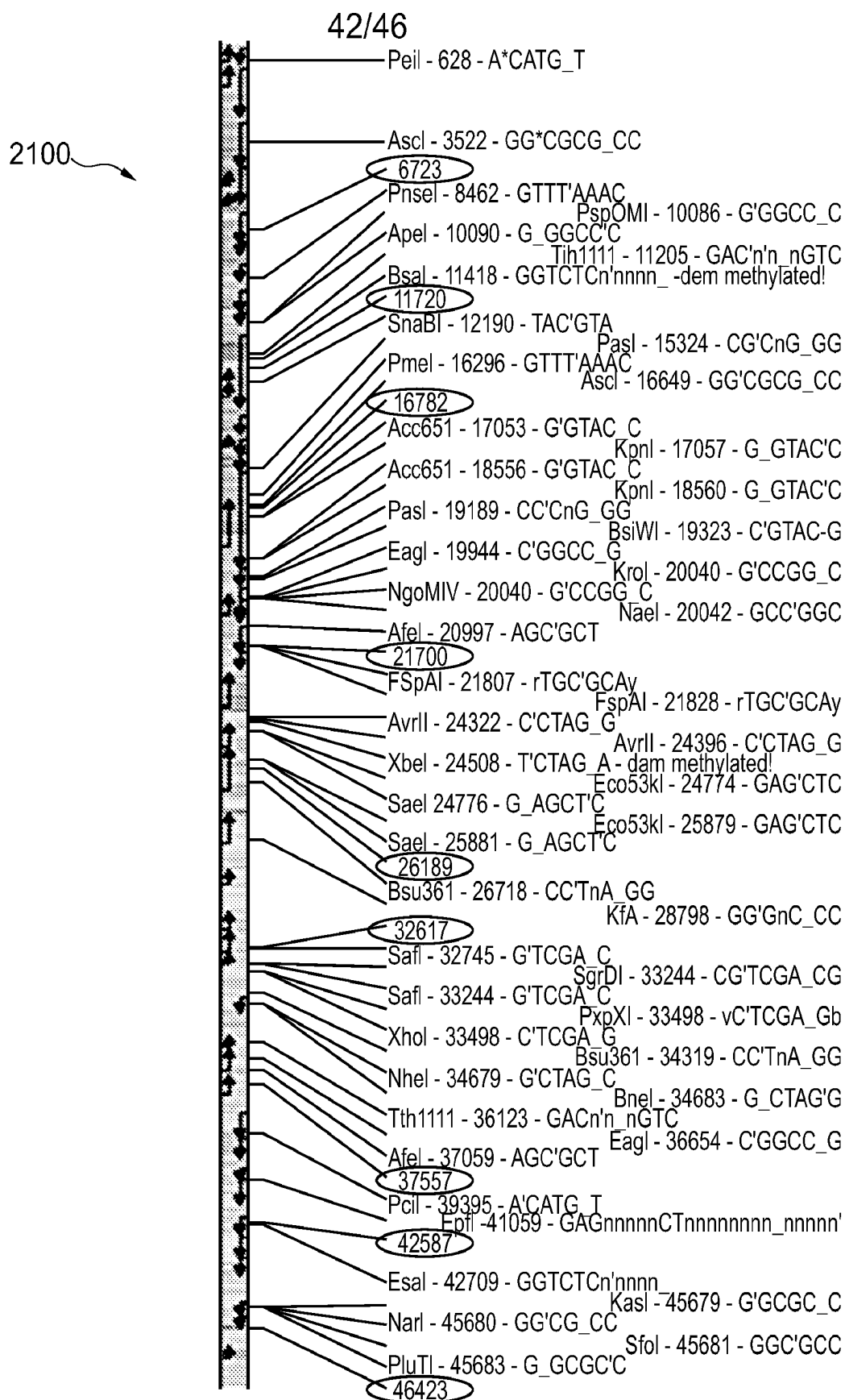


Fig. 21

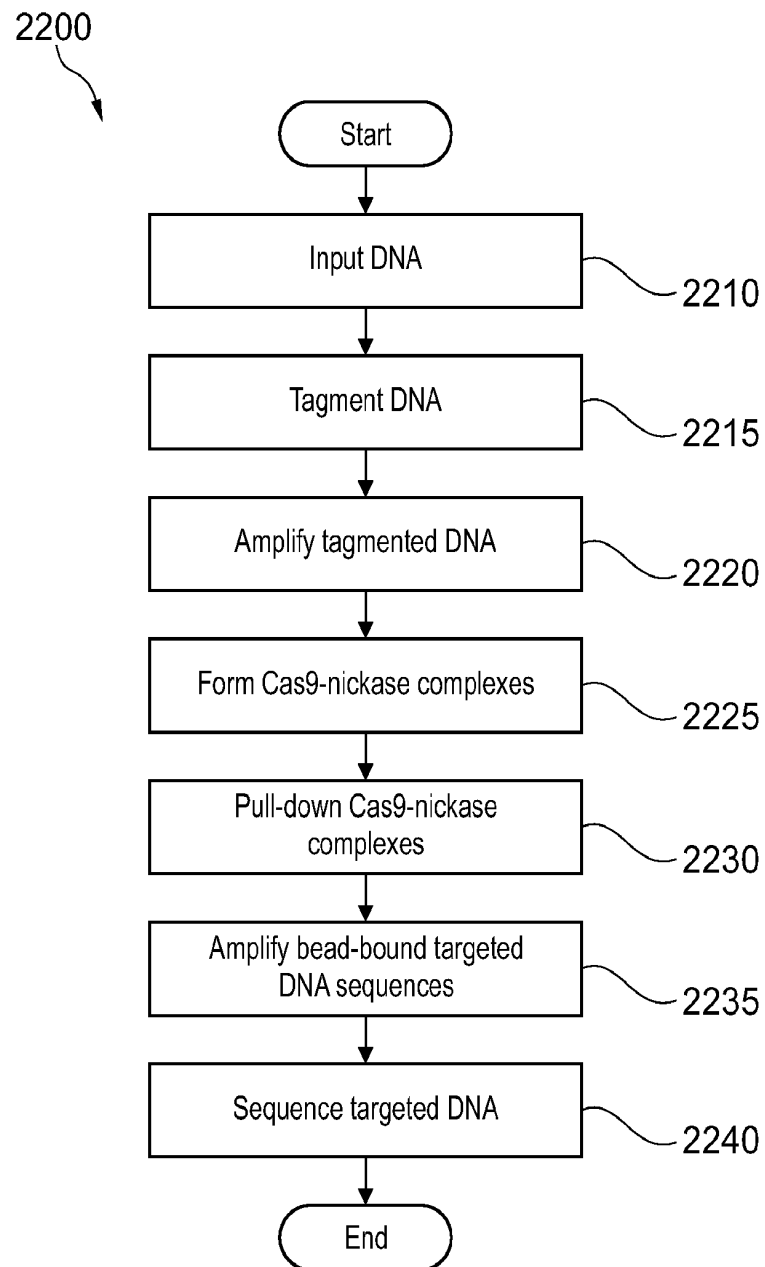


Fig. 22

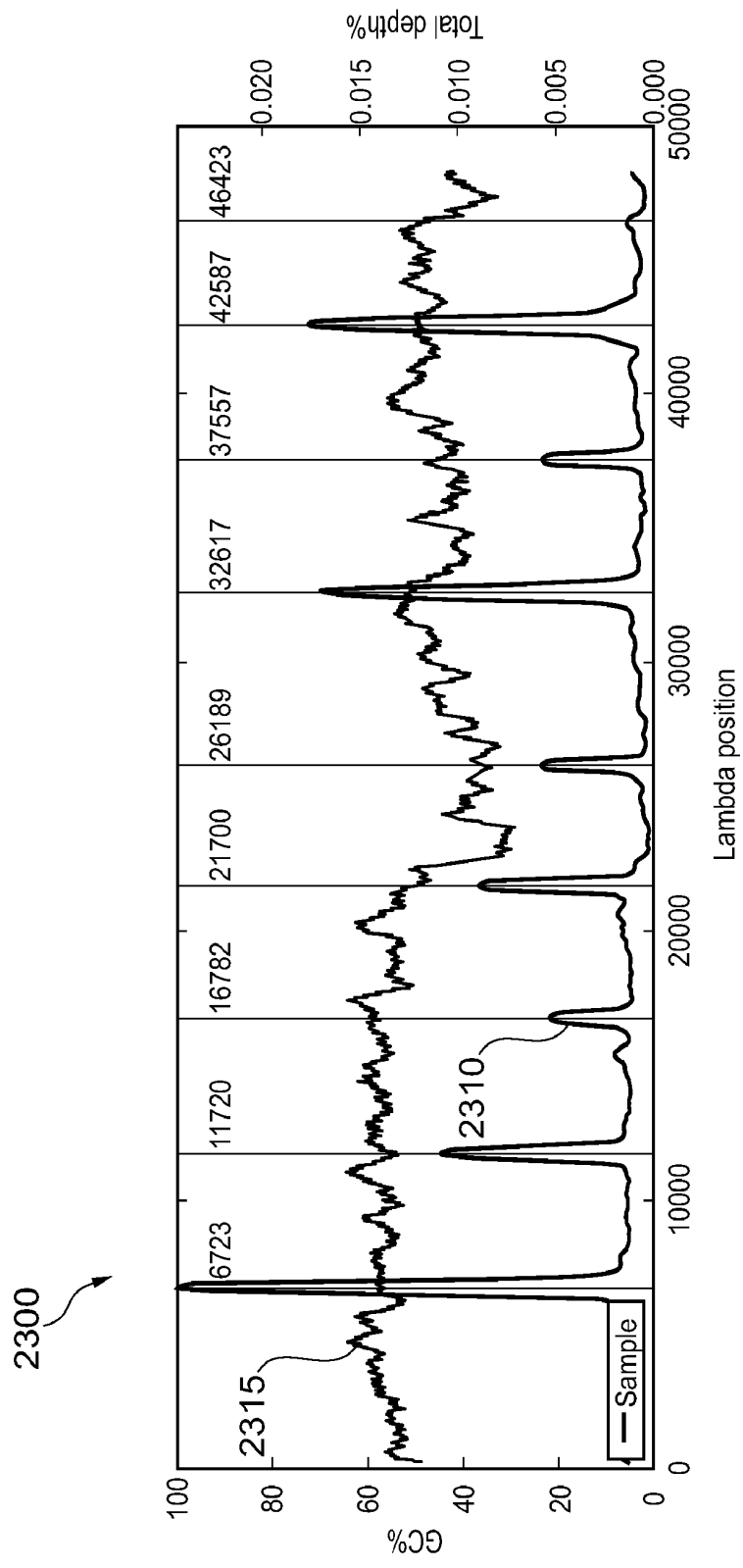


Fig. 23

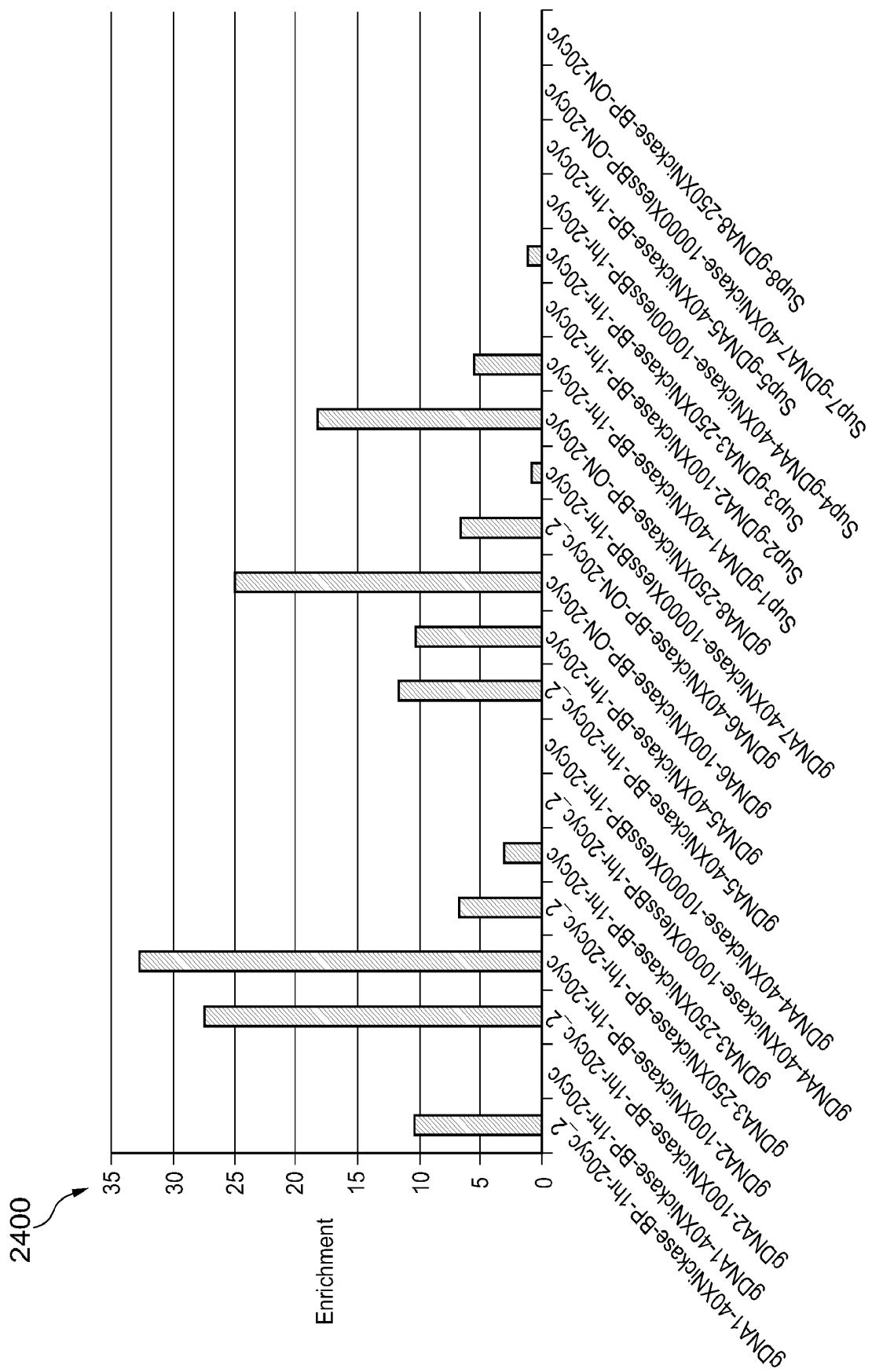


Fig. 24

2500 

Guide Sequence

crRNA

23130 Lambda crRNA template F

23130 Lambda crRNA template R

ACGGCTGAAATATATACCGAAGAGG

ACGGCUGAAAUUACCGAAGGUUUUAGAGCUAUGCUGUUUUG

CAAAACAGCATAGCTCTAAAACCTTCGGTATATTTICAGCCG|**CTATAGTGTCTGTTAATTTC**

GAAATT**TAATACGACTCACTATAG**ACGGCTGAAATATACCGAAGGTTTAGAGCTATGCTGTTTG

Fig. 25