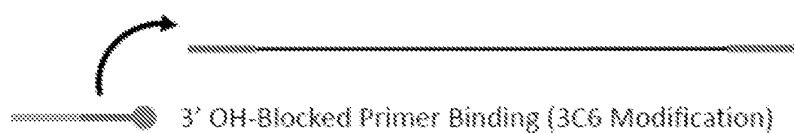


Step 1: ssDNA conversion to dsDNA with nickase site



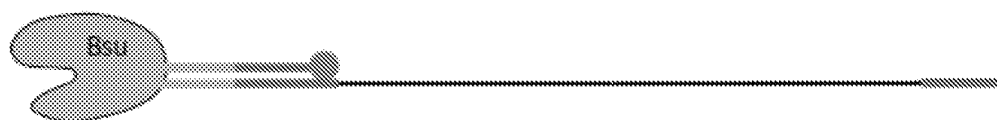
Note: Non-extendable 3' primer prevents primer dimer formation at low temperatures, 16C-25C amplification possible



FIG. 1A



Unidirectional extension



Unidirectional extension

FIG. 1B



Single-Strand Nicking

FIG. 1C

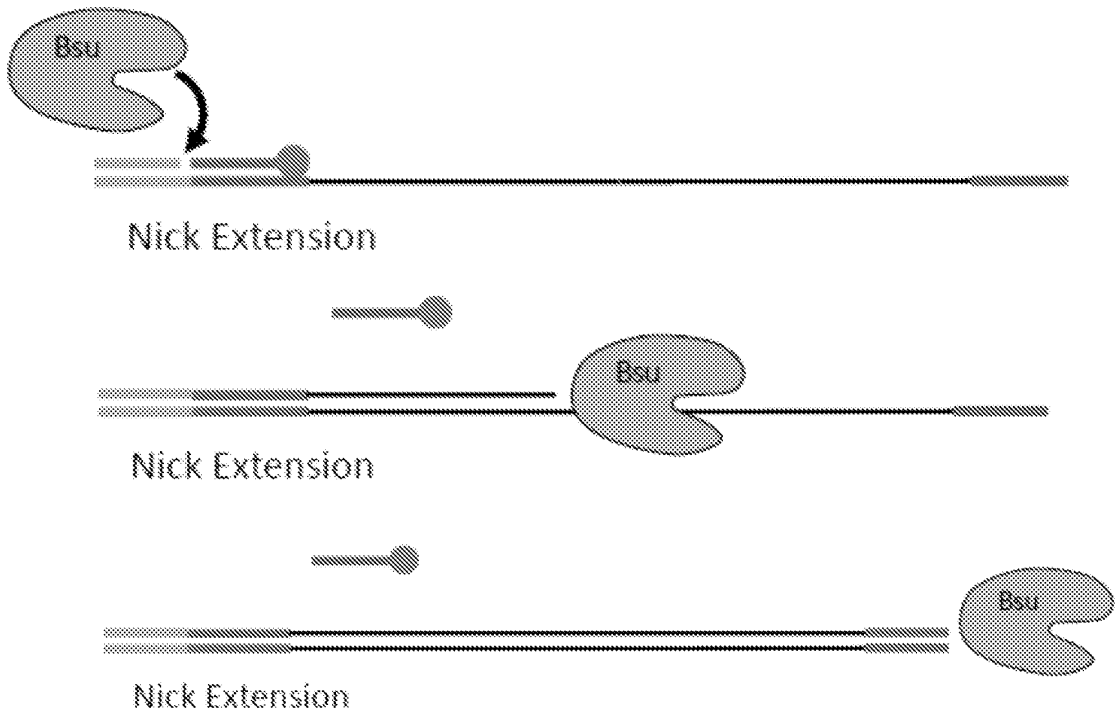


FIG. 1D



FIG. 1E



Nick Extension

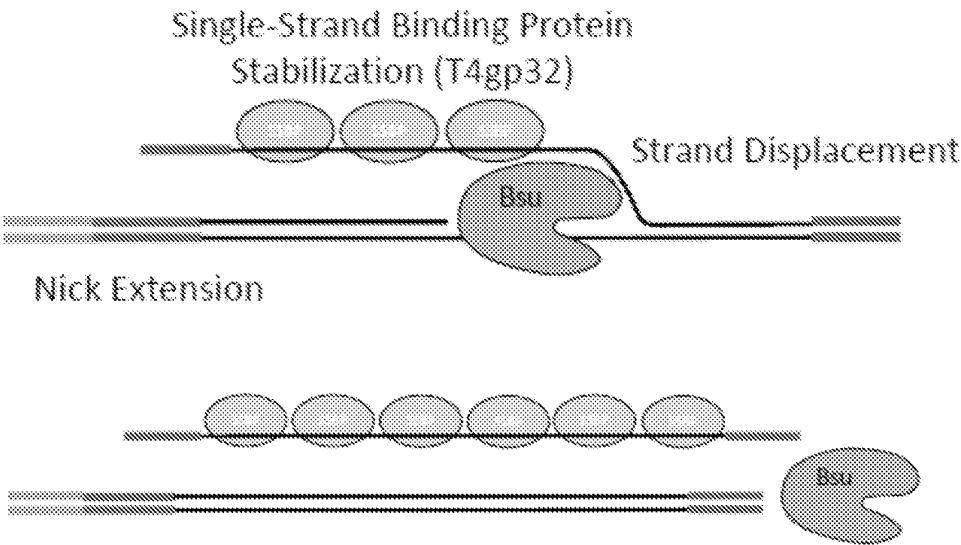
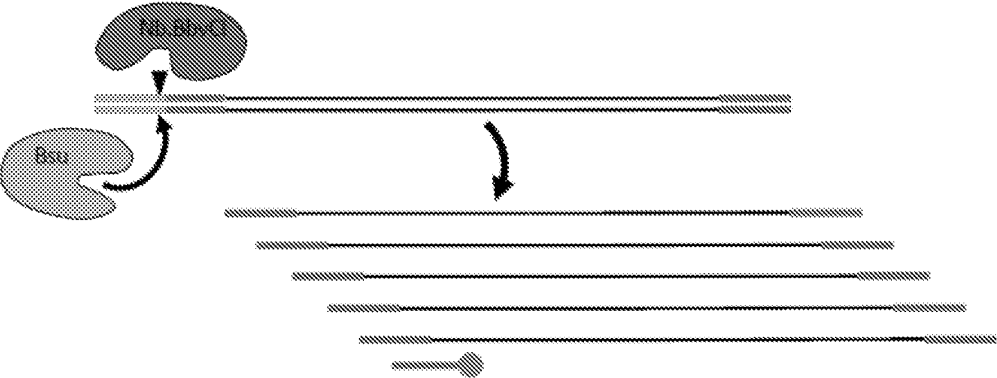


FIG. 1F



Repeated nick extensions, with first extension removing 3' block on primer

FIG. 1G

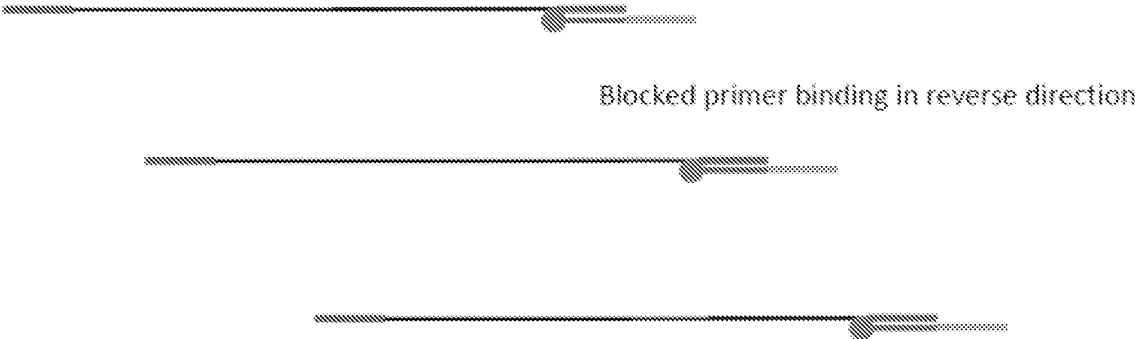


FIG. 1H

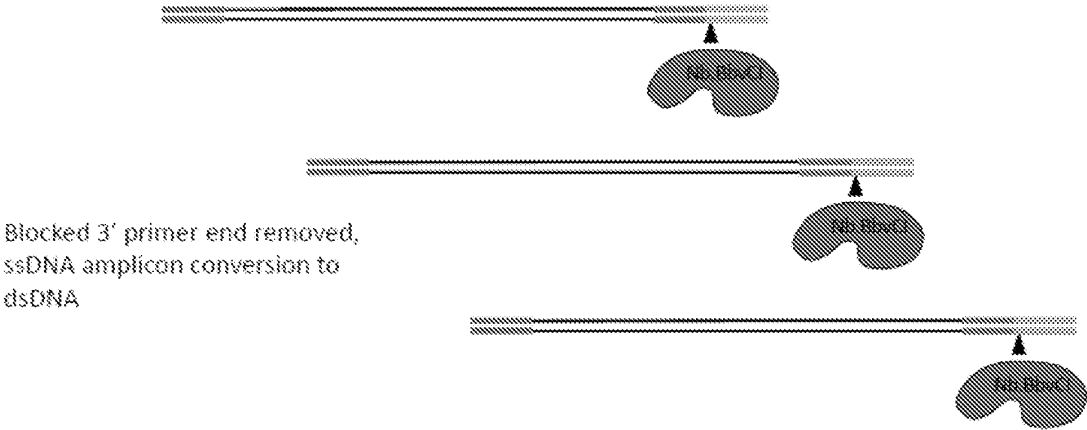


FIG. 1I

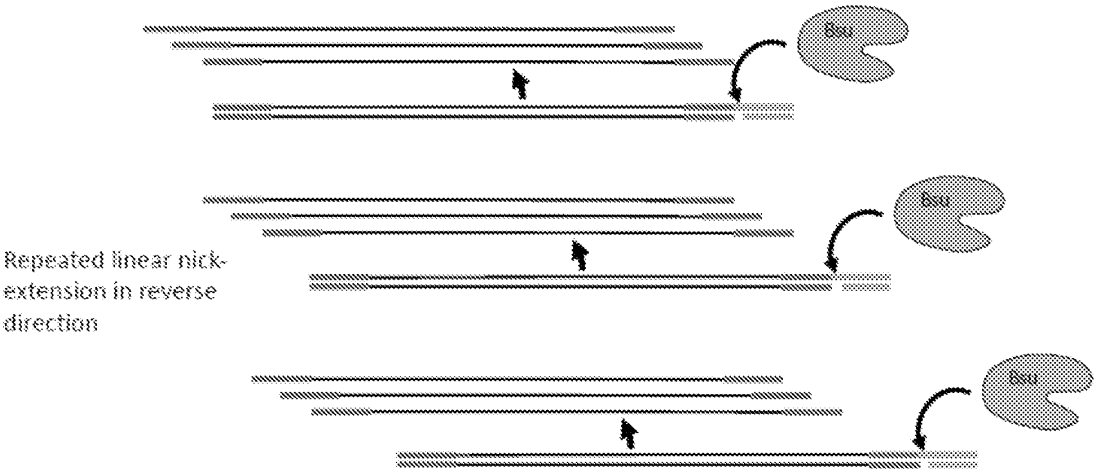


FIG. 1J

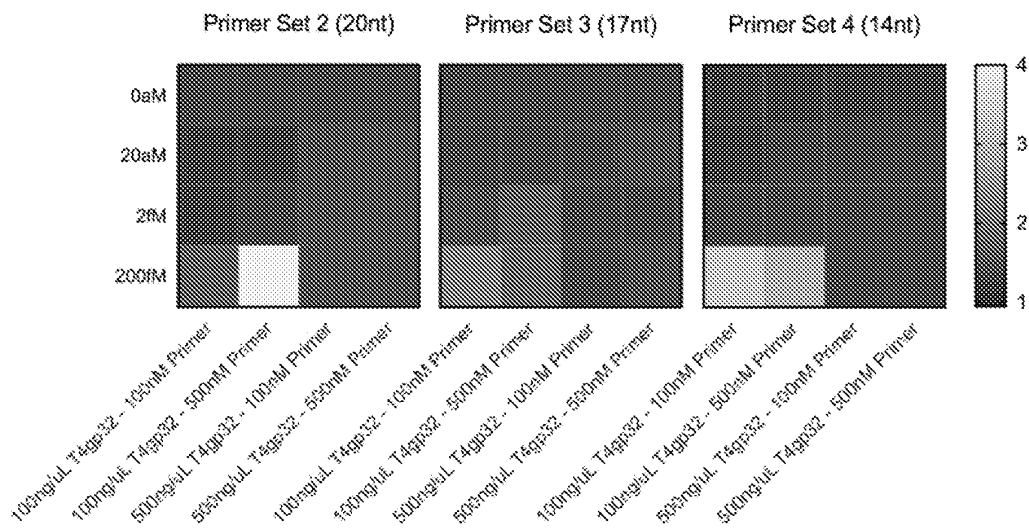


FIG. 2

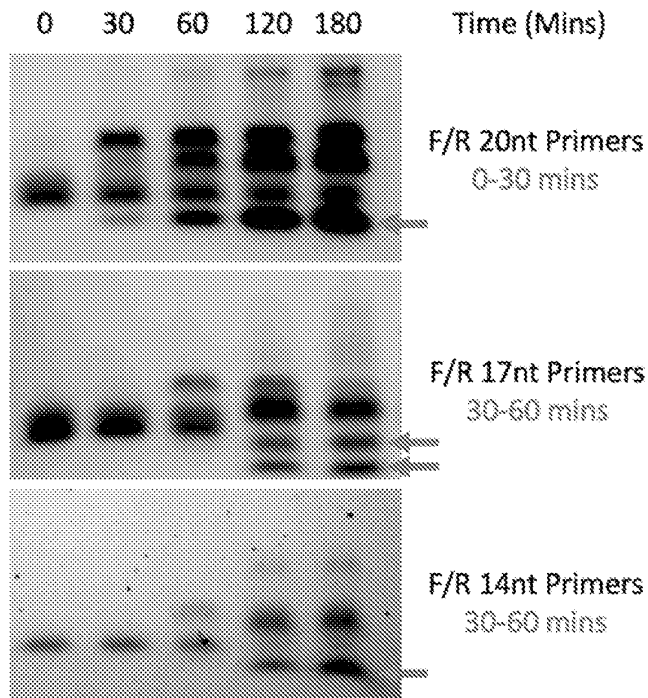


FIG. 3

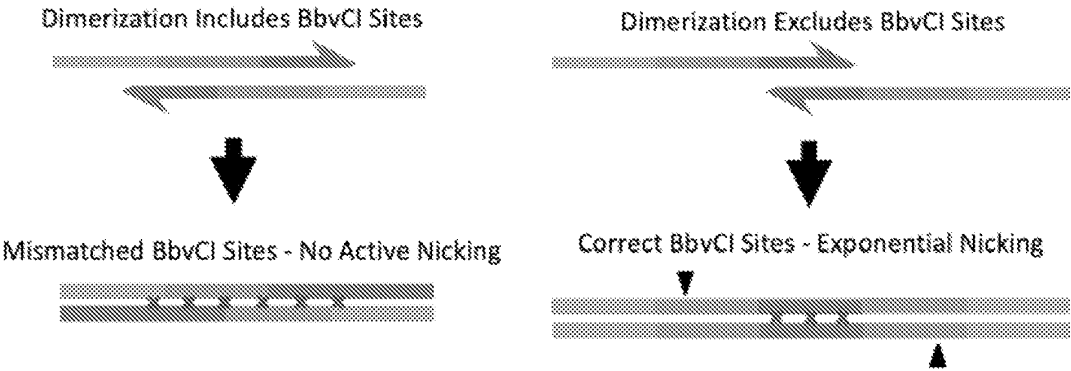


FIG. 4A

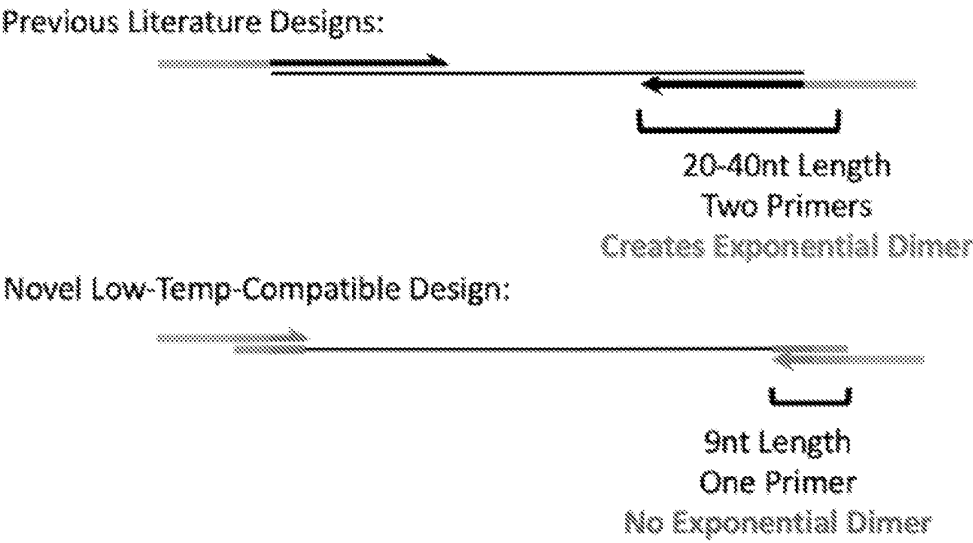


FIG. 4B

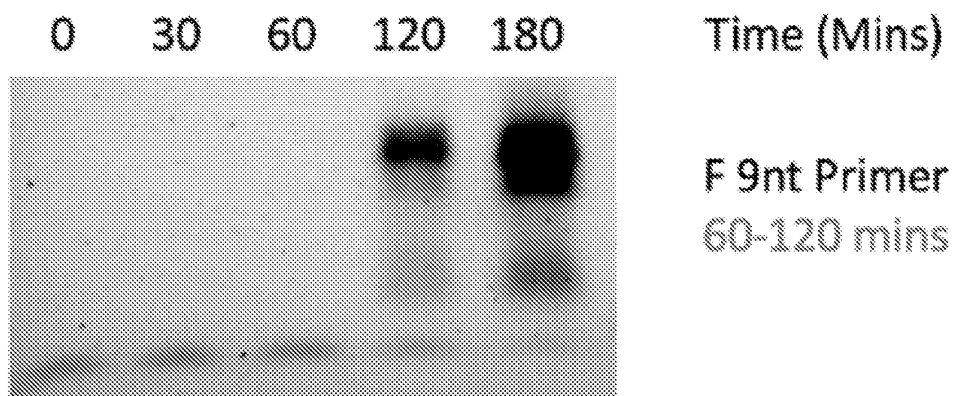


FIG. 5

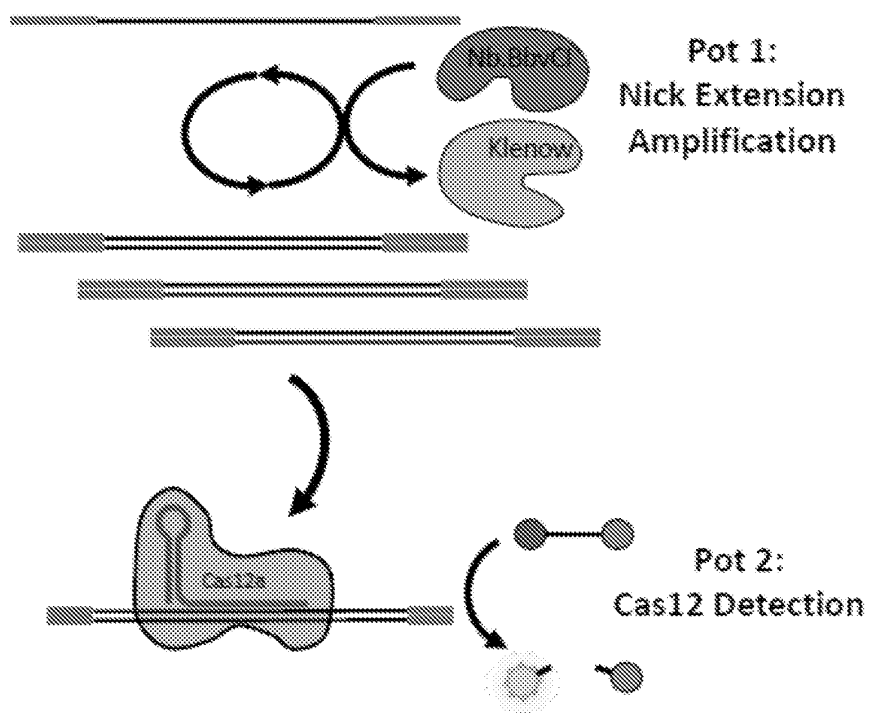


FIG. 6A

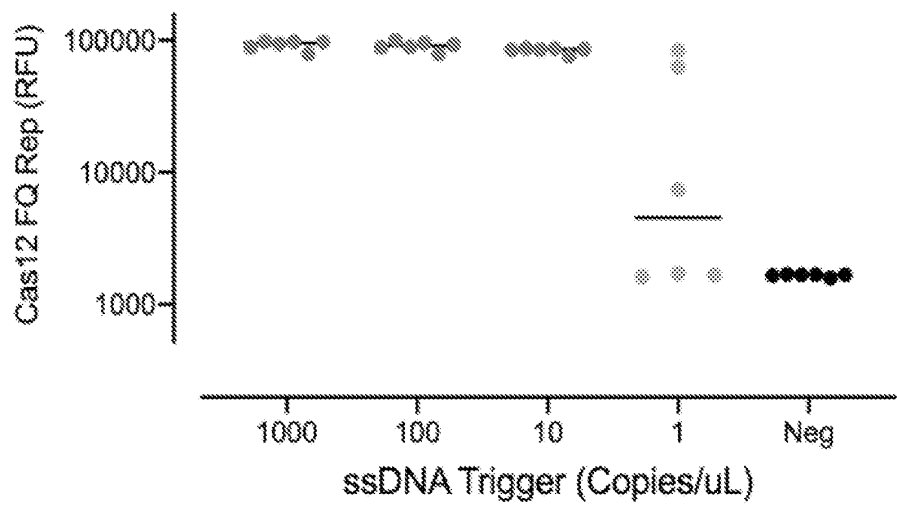


FIG. 6B

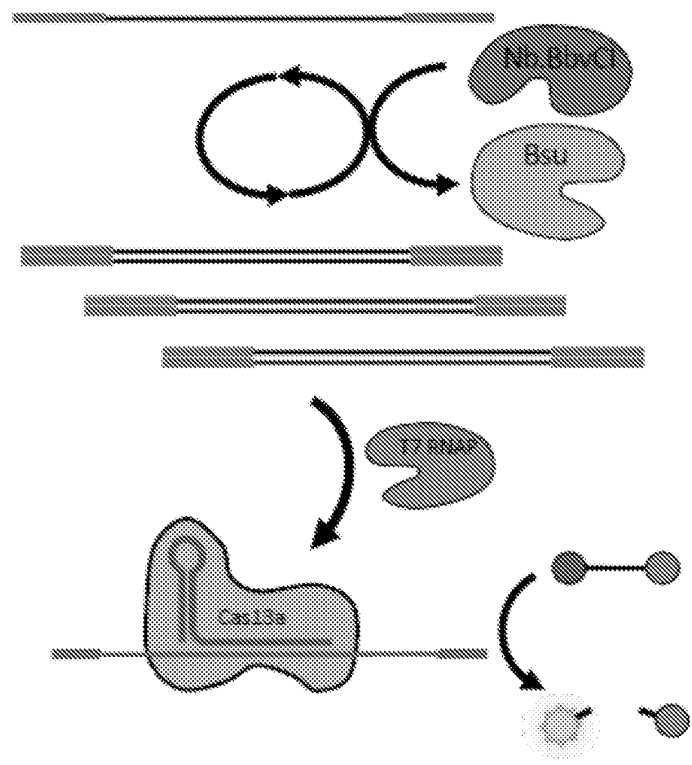


FIG. 7A

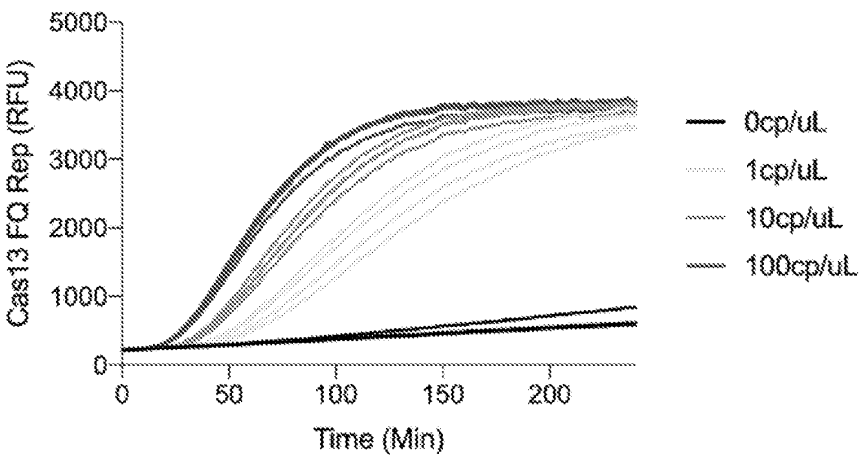


FIG. 7B

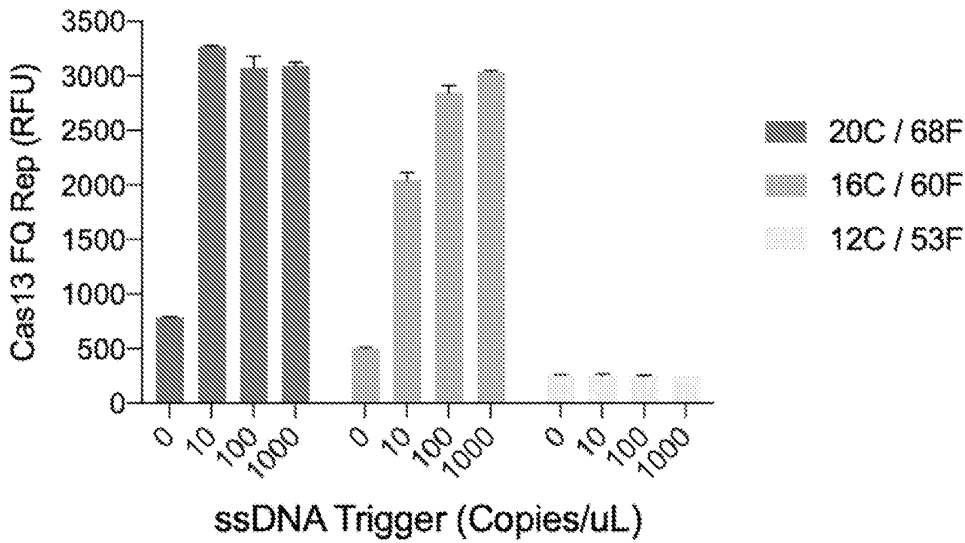


FIG. 7C

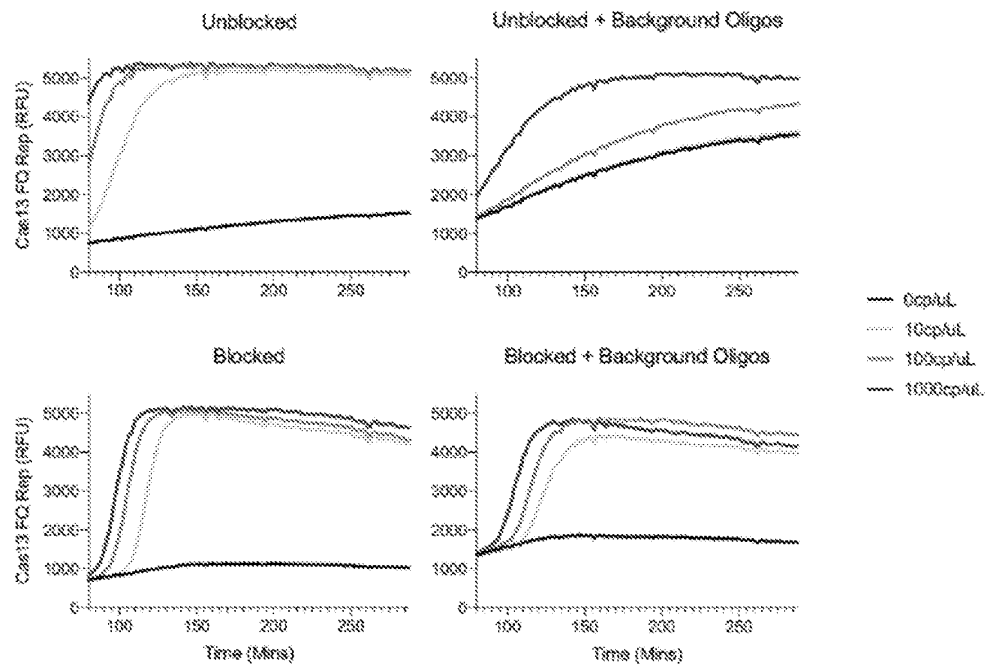


FIG. 8

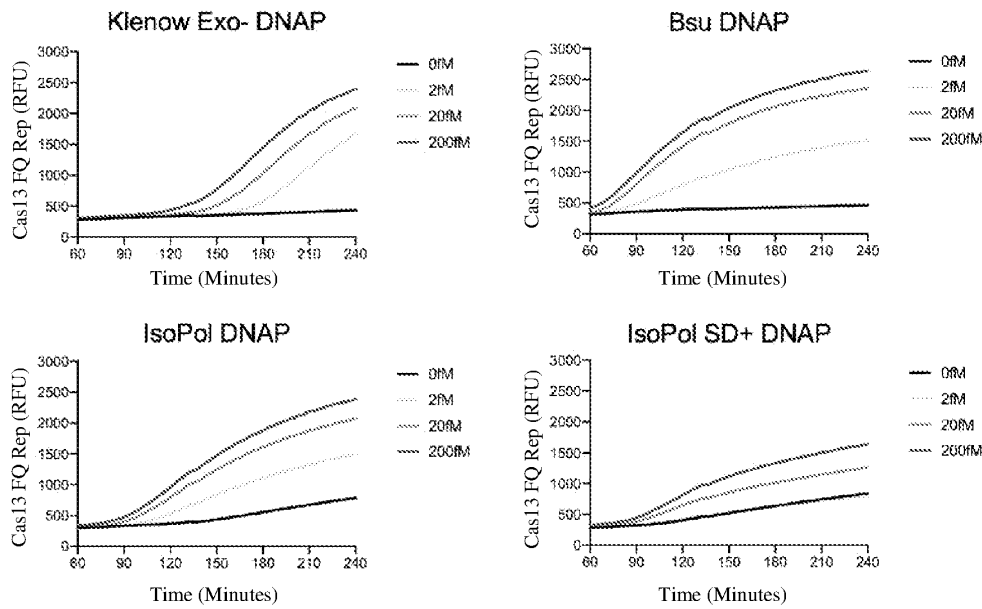


FIG. 9