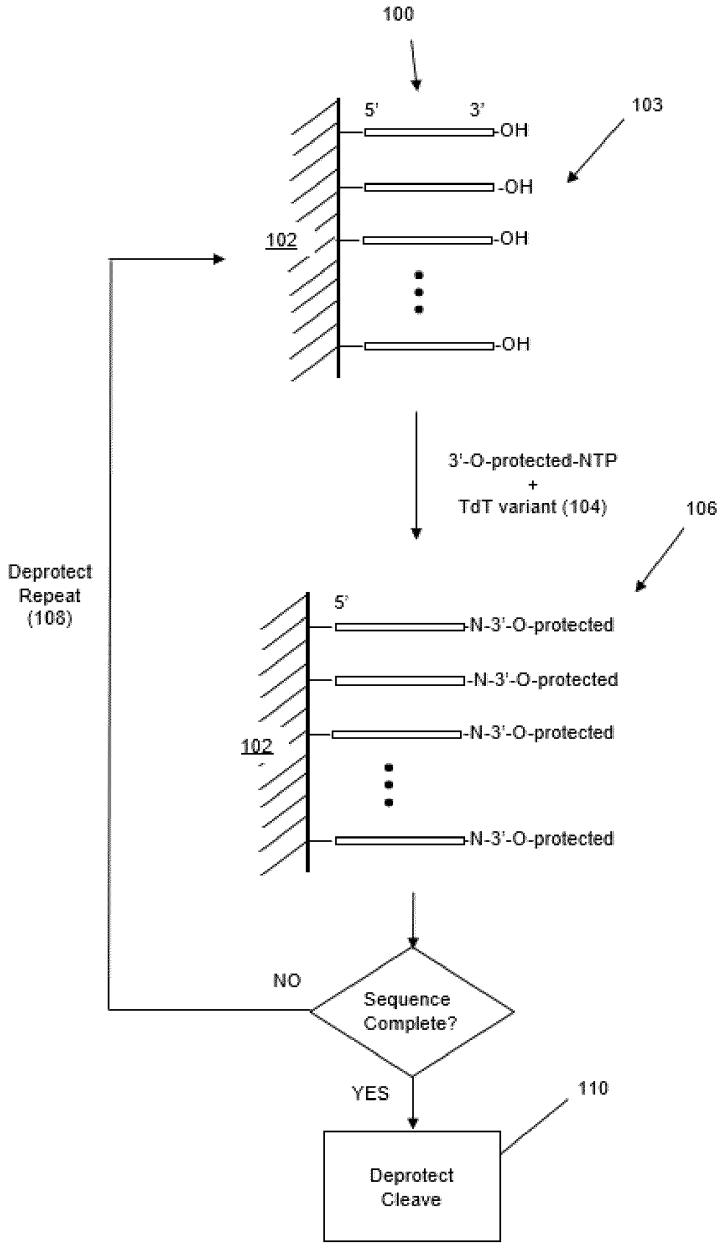

100
5'
3'
103
-OH
-OH
-OH
-OH
102
3'-O-protected-NTP
+
TdT variant (104)
106
Deprotect
Repeat
(108)
5'
-N-3'-O-protected
-N-3'-O-protected
-N-3'-O-protected
-N-3'-O-protected
102
NO
Sequence
Complete?
YES
110
Deprotect
Cleave

Fig. 1

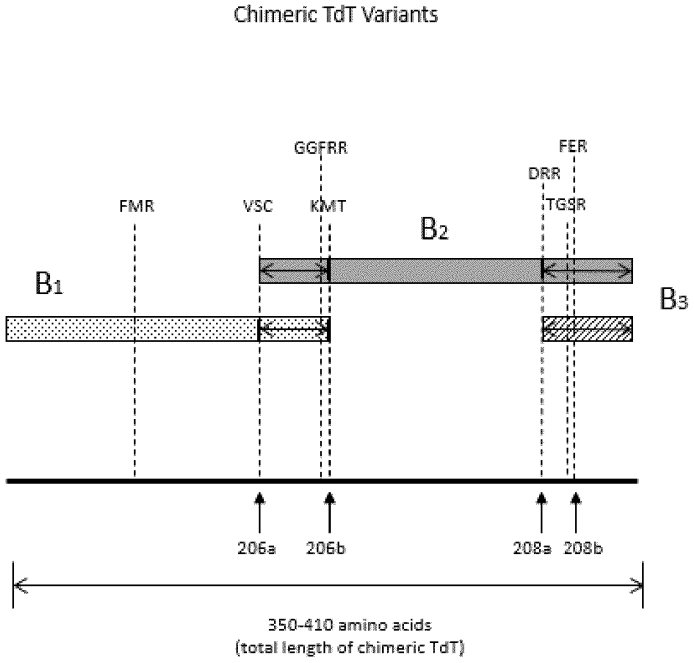

Chimeric TdT Variants
GGFRR
FER
DRR
FMR
VSC
KMT
TGSR
B2
B1
B3
206a
206b
208a
208b
350-410 amino acids
(total length of chimeric TdT)

Fig. 2

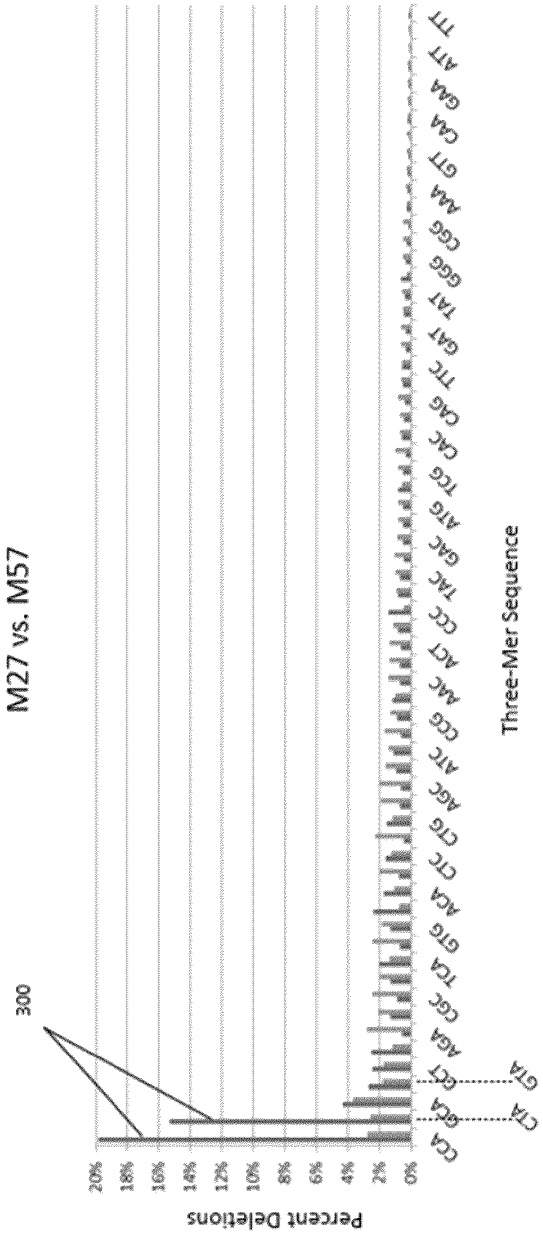

M27 vs. M57
300
Percent Deletions
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Three-Mer Sequence
CCA
GCA
CTA
GTA
CCT
AGA
CGC
TCA
GTG
ACA
CTC
CTG
AGC
ATC
CCG
AAC
ACT
CCC
TAC
GAC
ATG
TCG
CAC
CAG
TTC
GAT
TAT
GGG
CGG
AAA
GTT
CAA
GAA
ATT
TTT

Fig. 3A

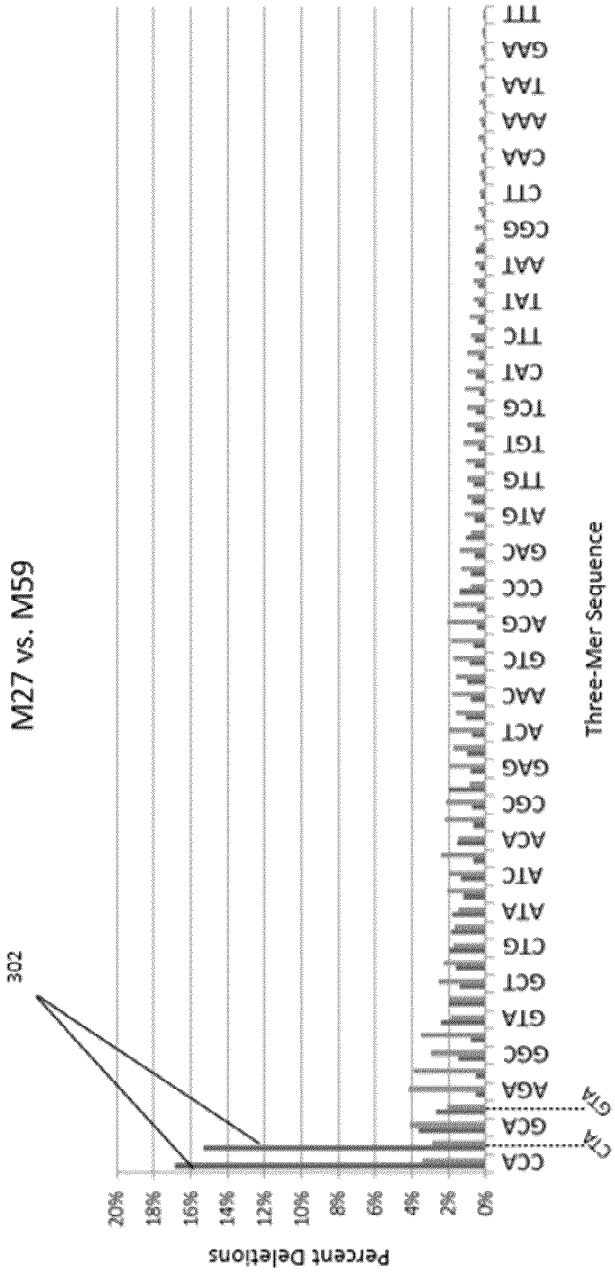

M27 vs. M59
302
CTA
GTA
CCA
GCA
AGA
GGC
GTA
GCT
CTG
ATA
ATC
ACA
CGC
GAG
ACT
AAC
GTC
ACG
CCC
GAC
ATG
TTG
TGT
TCG
CAT
TTC
TAT
AAT
CGG
CTT
CAA
AAA
TAA
GAA
TTT
Three-Mer Sequence
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Percent Deletions

Fig. 3B