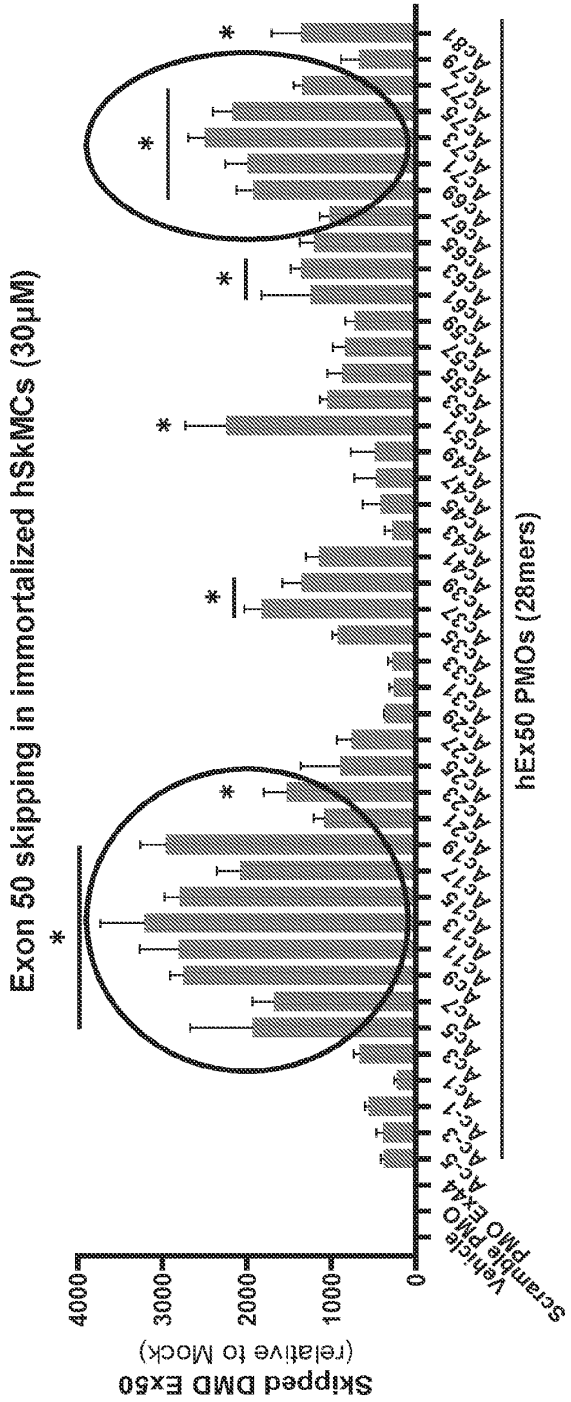
Exon 50 skipping in immortalized hSkMCs (30μM)
Skipped DMD Ex50
(relative to Mock)
4000
3000
2000
1000
0
Vehicle
Scramble PMO
hEx50 PMOs (28mers)
AC5
AC3
AC1
AC4
AC2
AC6
AC7
AC9
AC11
AC13
AC15
AC17
AC19
AC21
AC23
AC25
AC27
AC29
AC31
AC33
AC35
AC37
AC39
AC41
AC43
AC45
AC47
AC49
AC51
AC53
AC55
AC57
AC59
AC61
AC63
AC65
AC67
AC69
AC71
AC73
AC75
AC77
AC79
AC81

FIG. 1

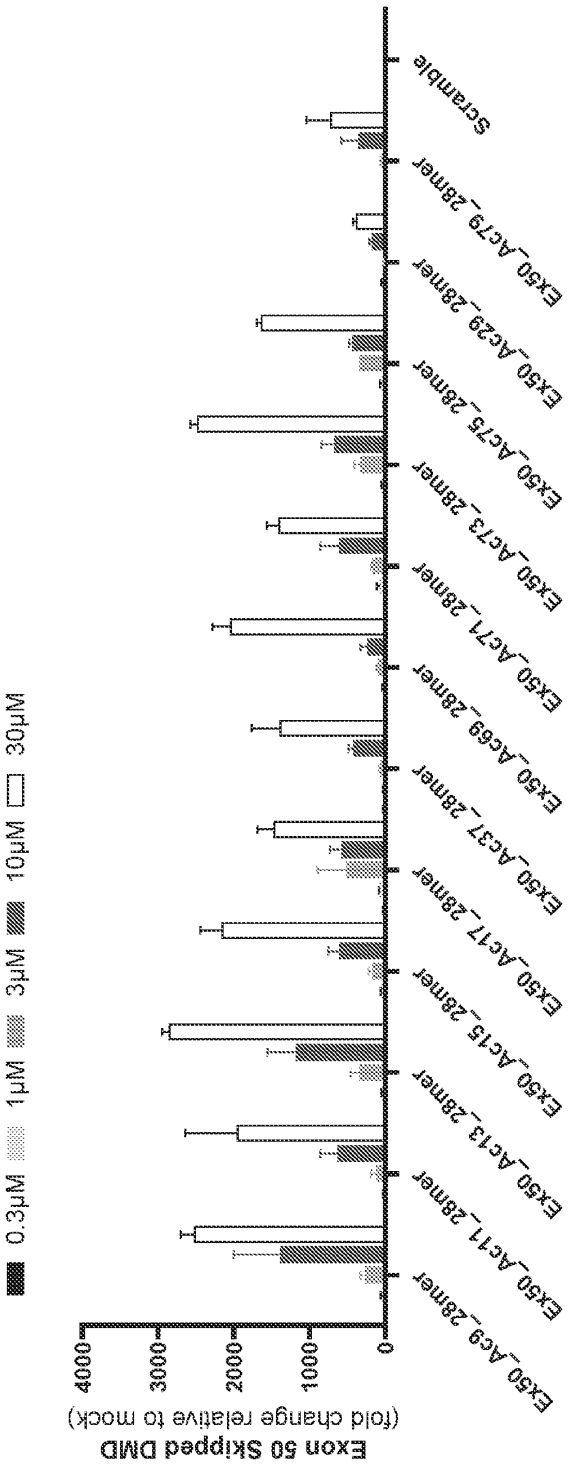
Exon 50 Skipped DMD
(fold change relative to mock)
4000
3000
2000
1000
0
0.3μM
1μM
3μM
10μM
30μM
Ex50_AC9_28mer
Ex50_AC11_28mer
Ex50_AC13_28mer
Ex50_AC15_28mer
Ex50_AC17_28mer
Ex50_AC37_28mer
Ex50_AC69_28mer
Ex50_AC71_28mer
Ex50_AC73_28mer
Ex50_AC75_28mer
Ex50_AC29_28mer
Ex50_AC79_28mer
Scramble

FIG. 2

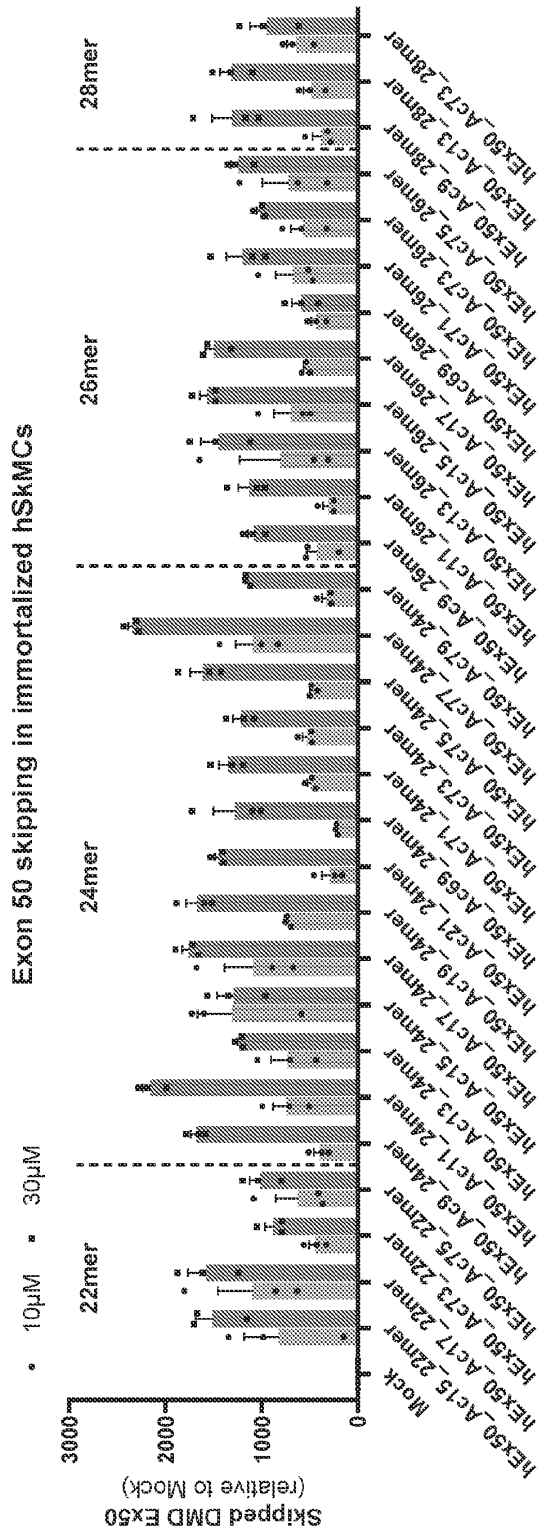
Exon 50 skipping in immortalized hSkMCs
10μM
30μM
22mer
24mer
26mer
28mer
Skipped DMD Ex50
(relative to Mock)
3000
2000
1000
0
Mock
hEx50_AC15_22mer
hEx50_AC17_22mer
hEx50_AC73_22mer
hEx50_AC75_22mer
hEx50_AC9_22mer
hEx50_AC11_24mer
hEx50_AC13_24mer
hEx50_AC15_24mer
hEx50_AC17_24mer
hEx50_AC19_24mer
hEx50_AC21_24mer
hEx50_AC69_24mer
hEx50_AC71_24mer
hEx50_AC73_24mer
hEx50_AC75_24mer
hEx50_AC77_24mer
hEx50_AC79_24mer
hEx50_AC9_26mer
hEx50_AC11_26mer
hEx50_AC13_26mer
hEx50_AC15_26mer
hEx50_AC17_26mer
hEx50_AC69_26mer
hEx50_AC71_26mer
hEx50_AC73_26mer
hEx50_AC75_26mer
hEx50_AC9_28mer
hEx50_AC13_28mer
hEx50_AC73_28mer

FIG. 3

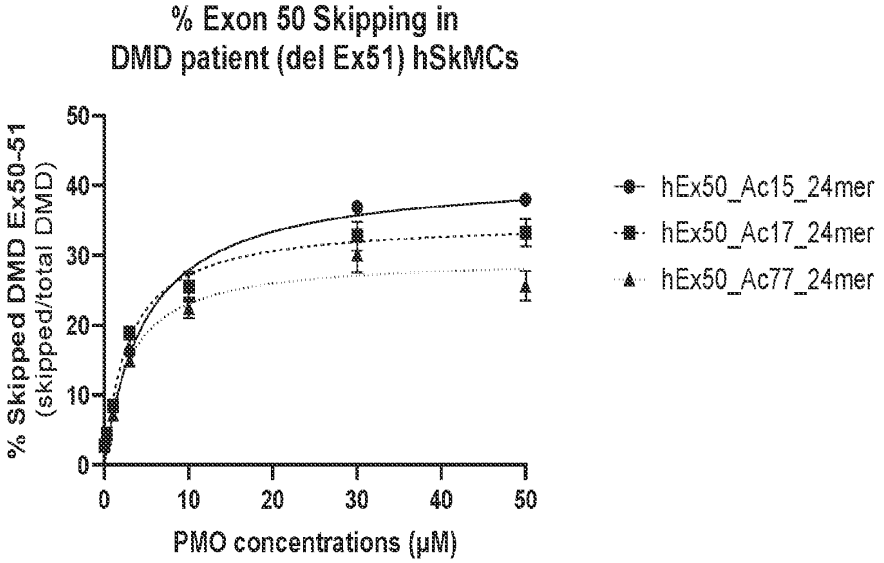
% Exon 50 Skipping in
DMD patient (del Ex51) hSkMCs
% Skipped DMD Ex50-51
(skipped/total DMD)
50
40
30
20
10
0
0
10
20
30
40
50
PMO concentrations (μM)
hEx50_Ac15_24mer
hEx50_Ac17_24mer
hEx50_Ac77_24mer

FIG. 4A

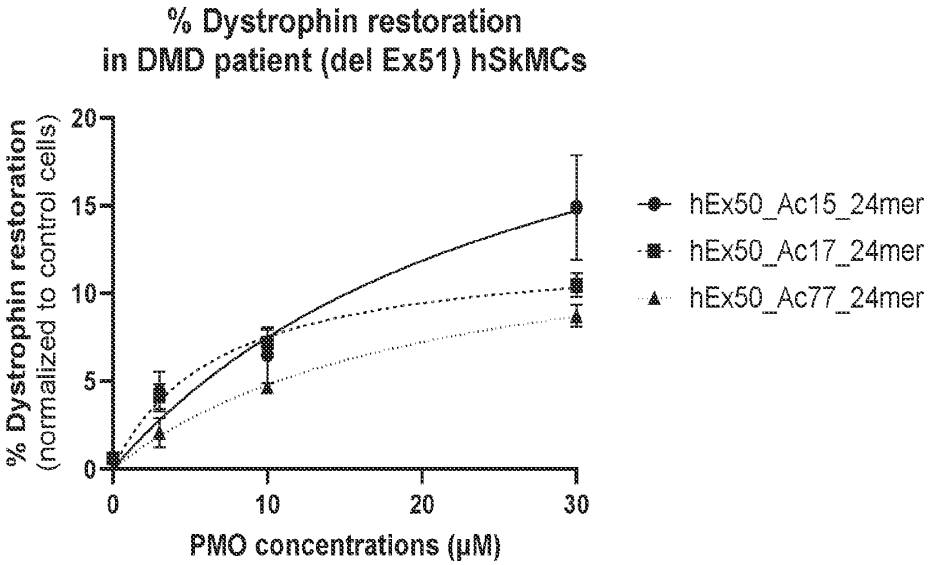
% Dystrophin restoration
in DMD patient (del Ex51) hSkMCs
% Dystrophin restoration
(normalized to control cells)
20
15
10
5
0
0
10
20
30
PMO concentrations (μM)
hEx50_Ac15_24mer
hEx50_Ac17_24mer
hEx50_Ac77_24mer

FIG. 4B

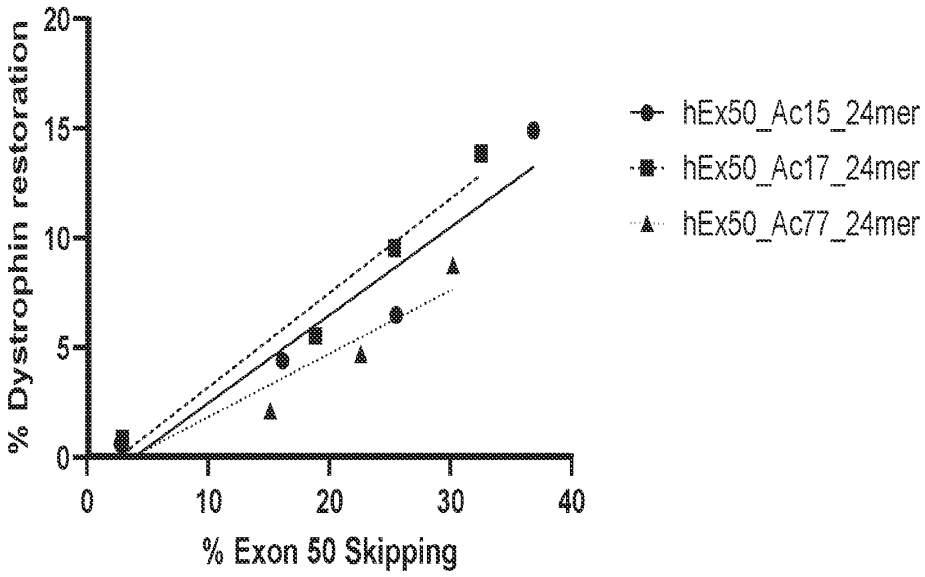
% Dystrophin restoration
20
15
10
5
0
0
10
20
30
40
% Exon 50 Skipping
hEx50_Ac15_24mer
hEx50_Ac17_24mer
hEx50_Ac77_24mer

FIG. 4C

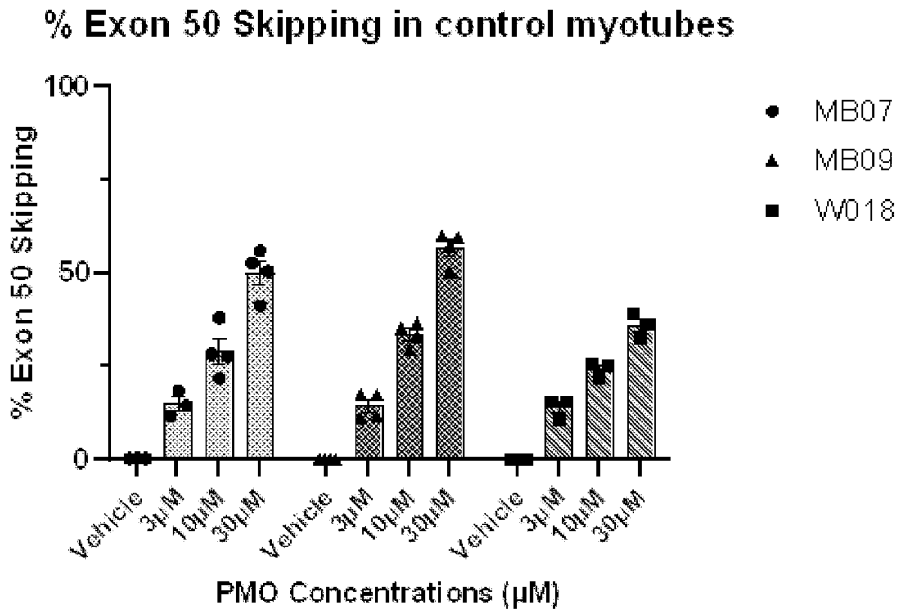
% Exon 50 Skipping in control myotubes
100
50
0
% Exon 50 Skipping
MB07
MB09
W018
Vehicle
3μM
10μM
30μM
PMO Concentrations (μM)

FIG. 5A

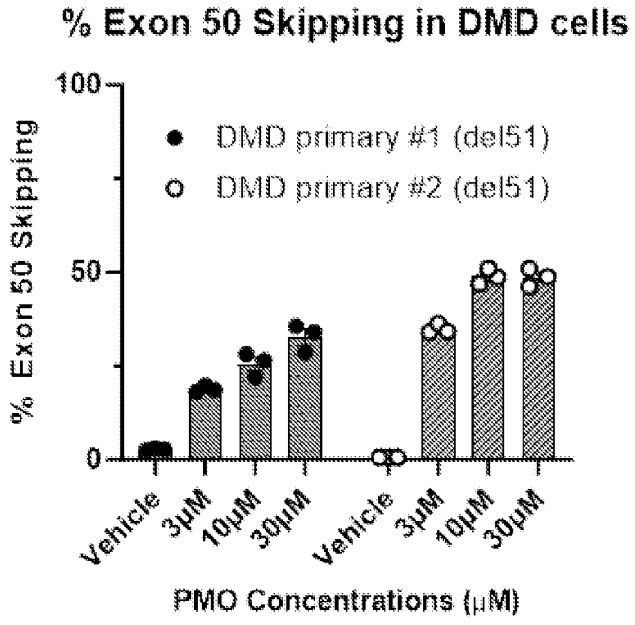
% Exon 50 Skipping in DMD cells
100
50
0
% Exon 50 Skipping
DMD primary #1 (del51)
DMD primary #2 (del51)
Vehicle
3μM
10μM
30μM
PMO Concentrations (μM)

FIG. 5B

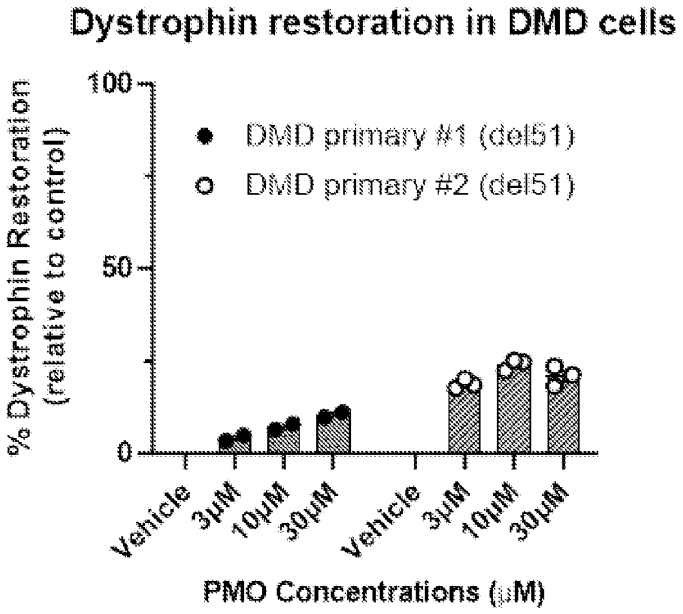
Dystrophin restoration in DMD cells
% Dystrophin Restoration (relative to control)
100
50
0
DMD primary #1 (del51)
DMD primary #2 (del51)
Vehicle
3μM
10μM
30μM
Vehicle
3μM
10μM
30μM
PMO Concentrations (μM)

FIG. 5C

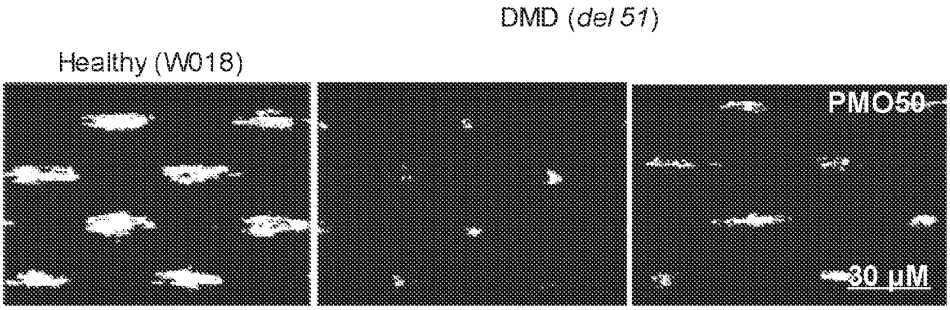
DMD (*del 51*)
Healthy (W018)
PMO50
30 μM

FIG. 6A

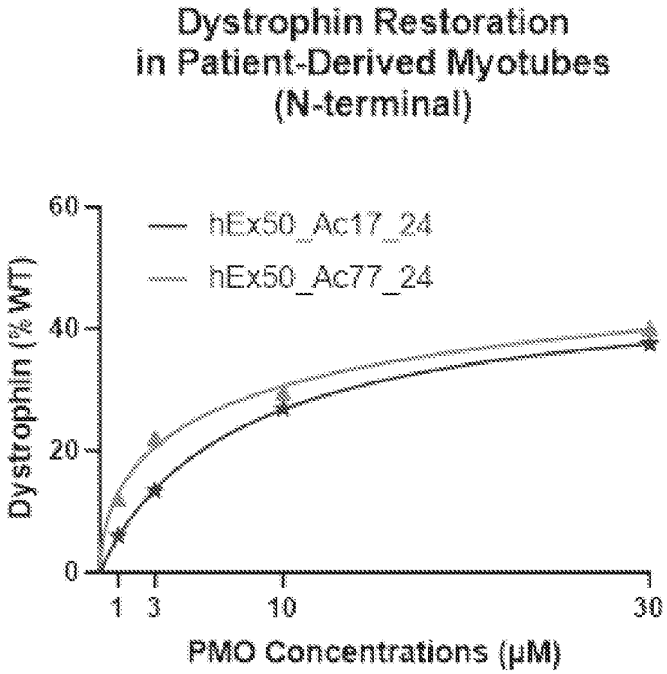
Dystrophin Restoration
in Patient-Derived Myotubes
(N-terminal)
hEx50_Ac17_24
hEx50_Ac77_24
Dystrophin (% WT)
60
40
20
0
1
3
10
30
PMO Concentrations (μM)

FIG. 6B

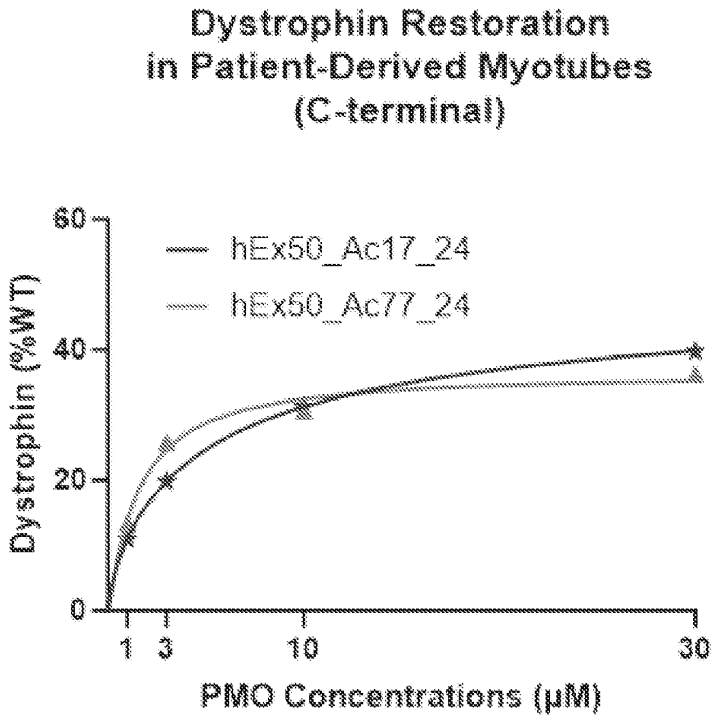
Dystrophin Restoration
in Patient-Derived Myotubes
(C-terminal)
hEx50_Ac17_24
hEx50_Ac77_24
Dystrophin (%WT)
60
40
20
0
1
3
10
30
PMO Concentrations (μM)

FIG. 6C

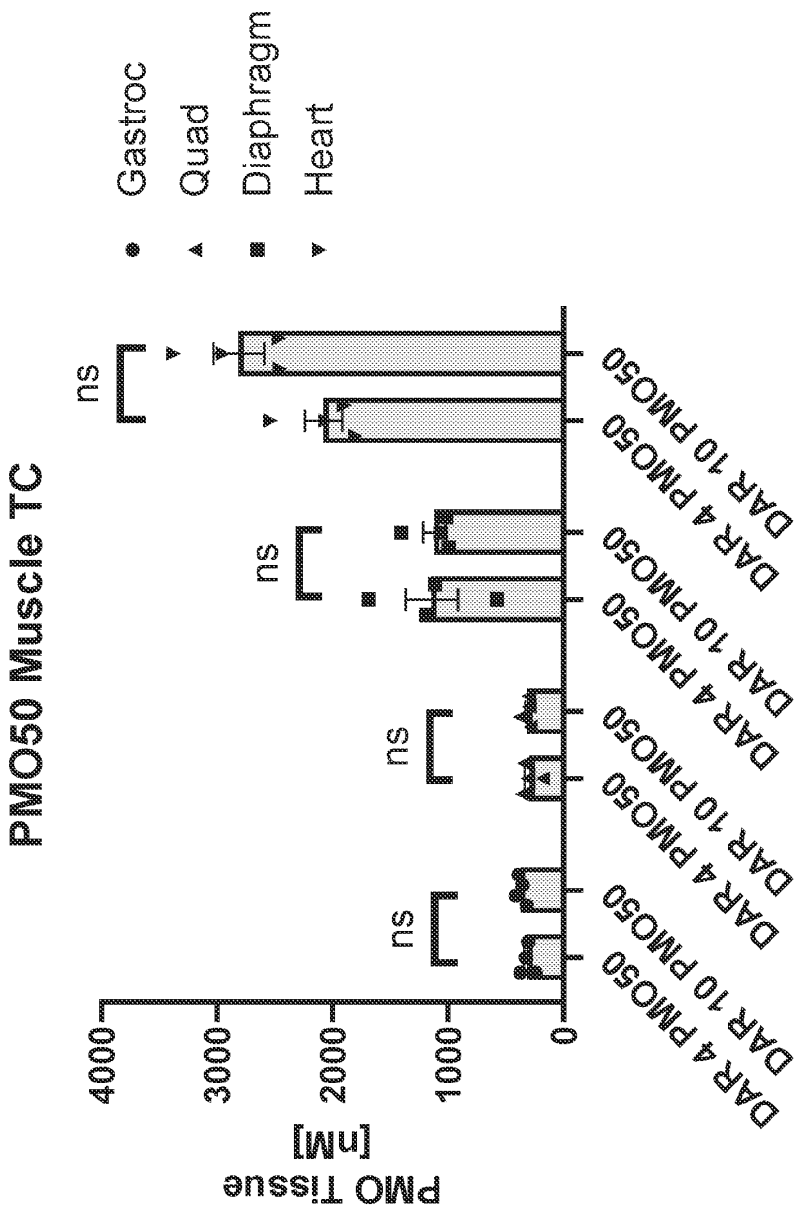
PMO50 Muscle TC
Gastroc
Quad
Diaphragm
Heart
ns
ns
ns
ns
PMO Tissue [nM]
4000
3000
2000
1000
0
DAR 4 PMO50
DAR 10 PMO50
DAR 4 PMO50
DAR 10 PMO50
DAR 4 PMO50
DAR 10 PMO50
DAR 4 PMO50
DAR 10 PMO50

FIG. 7

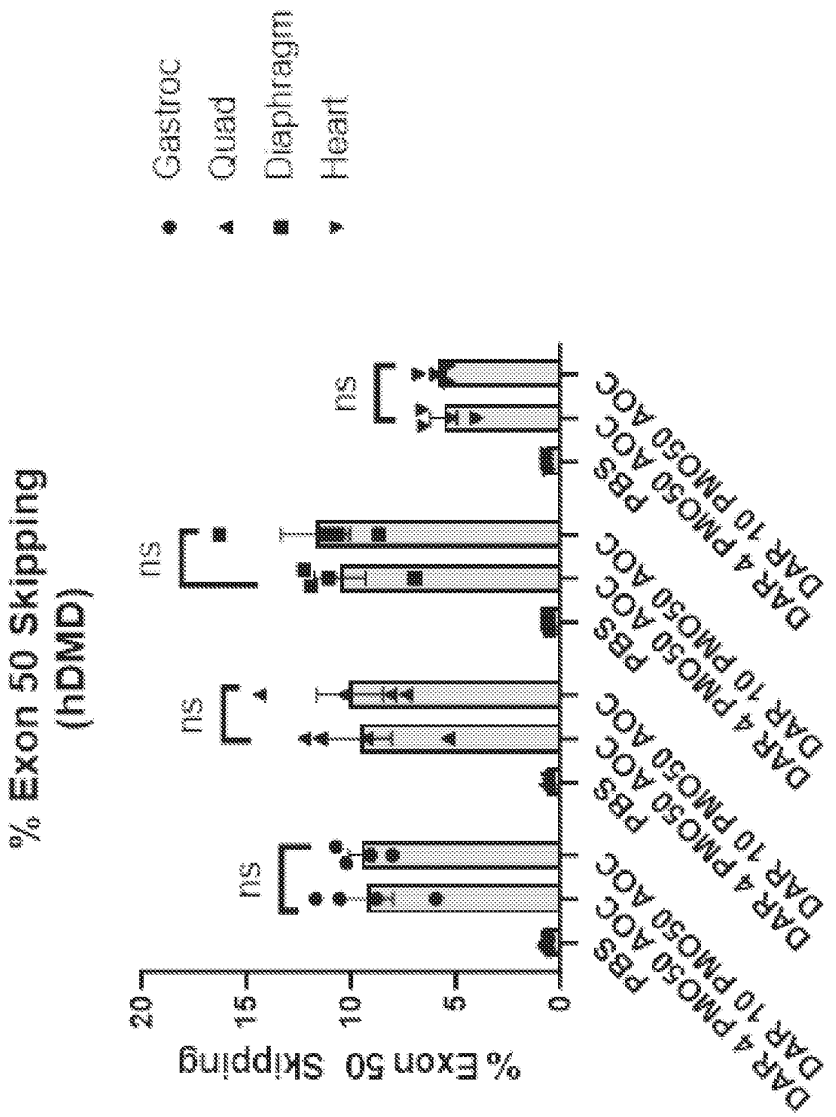
% Exon 50 Skipping (hDMD)
Gastroc
Quad
Diaphragm
Heart
% Exon 50 Skipping
0
5
10
15
20
ns
ns
ns
PBS
DAR 4 PMO50 AOC
DAR 10 PMO50 AOC

FIG. 8