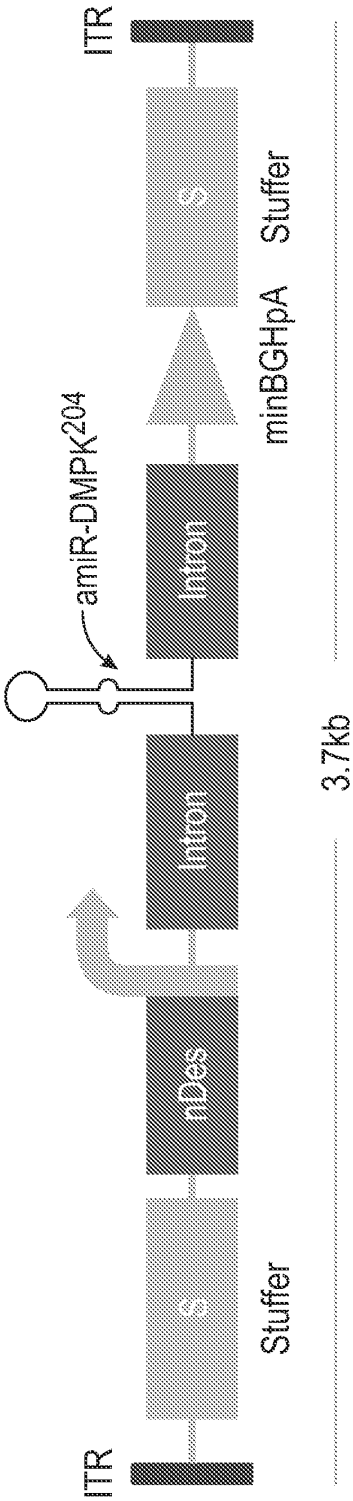

ITR
Stuffer
mBes
Intron
amiR-DMPK204
Intron
minBGHpA
Stuffer
ITR
3.7kb

FIG. 1A

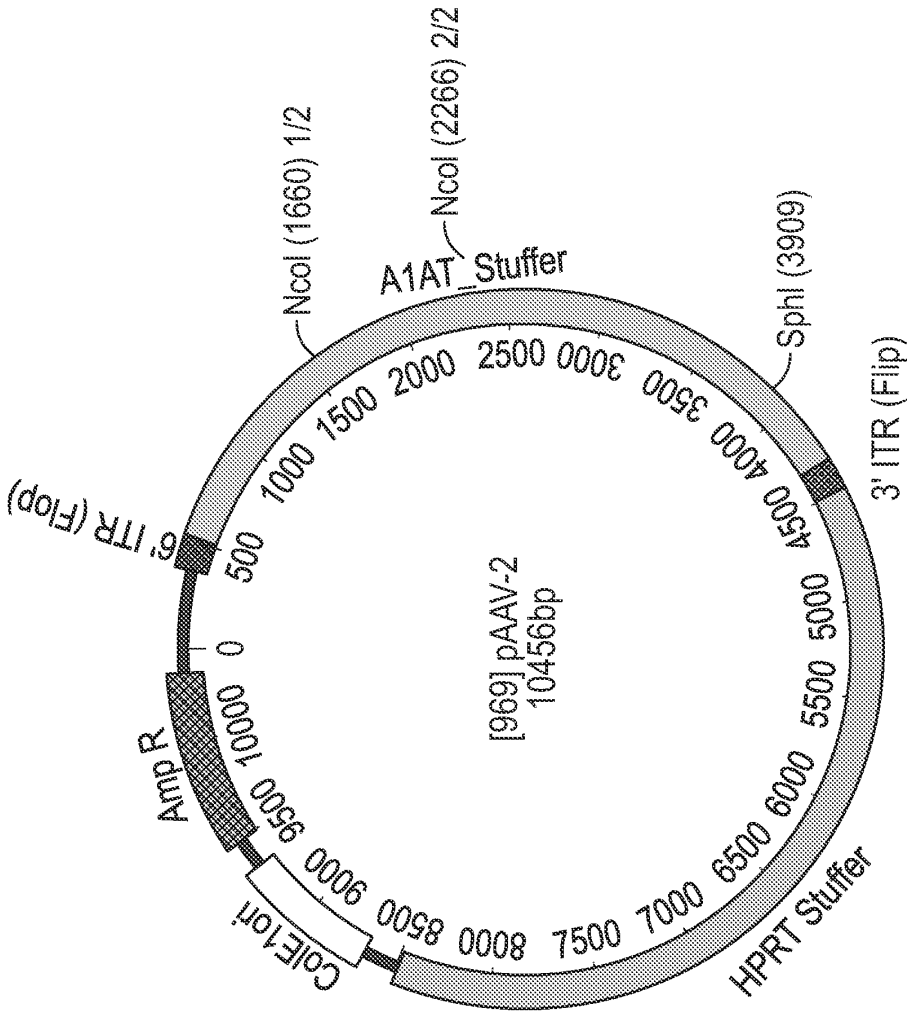

NcoI (1660) 1/2
NcoI (2266) 2/2
A1AT_Stuffer
SphI (3909)
3' ITR (Flip)
5' ITR (Flop)
[969] pAAV-2
10456bp
Amp R
ColE1ori
HPRT Stuffer
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
9500
10000

FIG. 1B

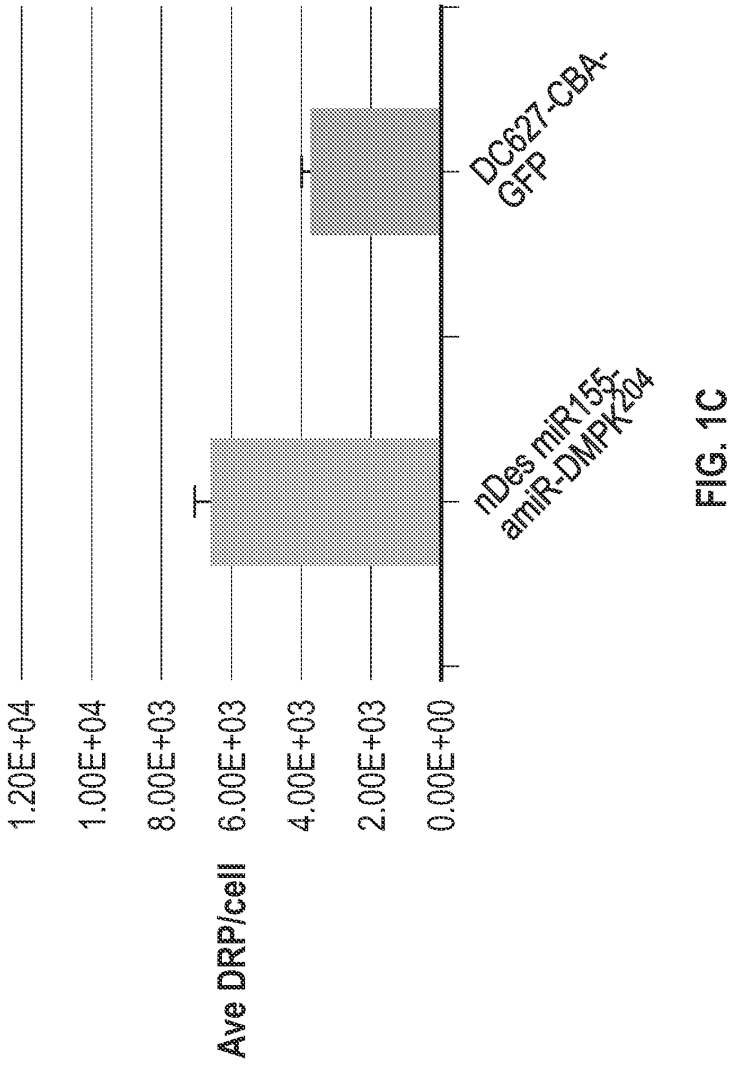

1.20E+04
1.00E+04
8.00E+03
6.00E+03
4.00E+03
2.00E+03
0.00E+00
Ave DRP/cell
DC627-CBA-GFP
nDes miR155-amiR-DMPK204

FIG. 1C

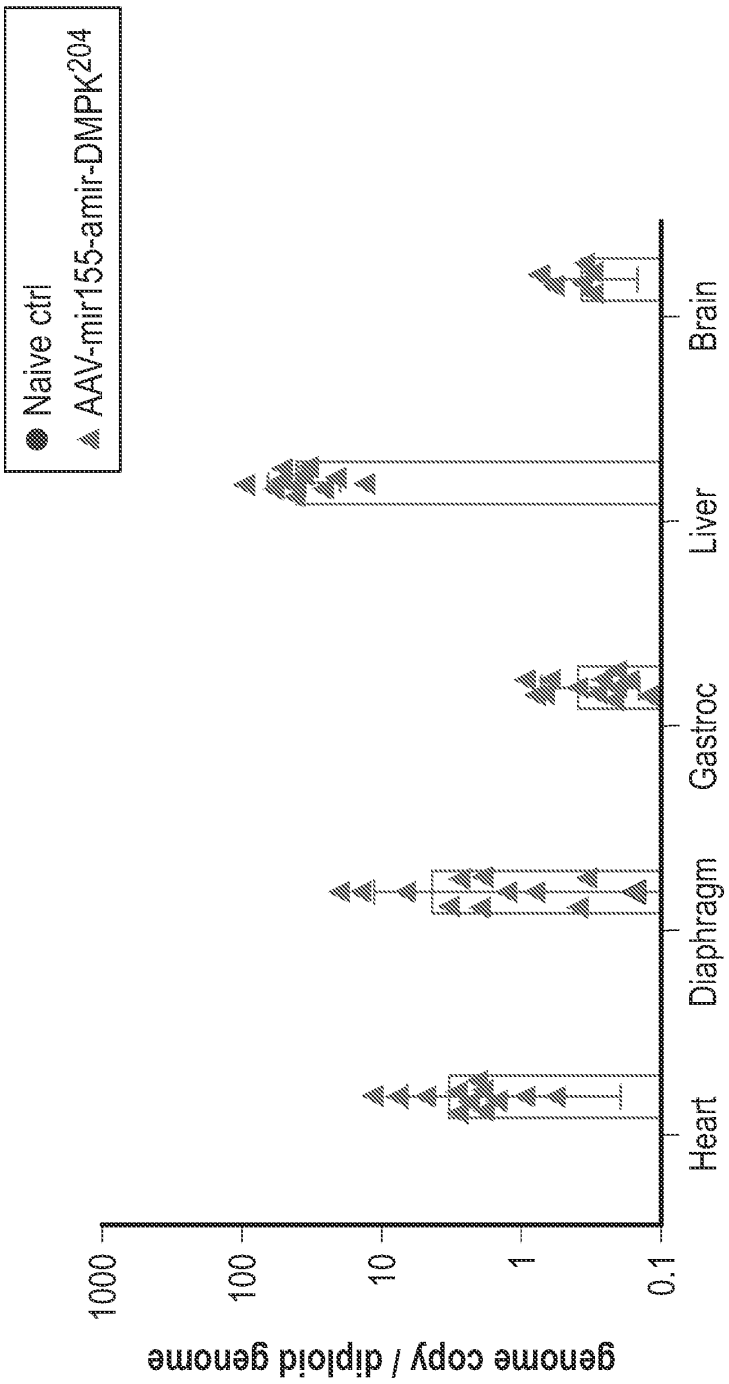

Naive ctrl
AAV-mir155-amir-DMPK204
genome copy / diploid genome
1000
100
10
1
0.1
Heart
Diaphragm
Gastroc
Liver
Brain

FIG. 2A

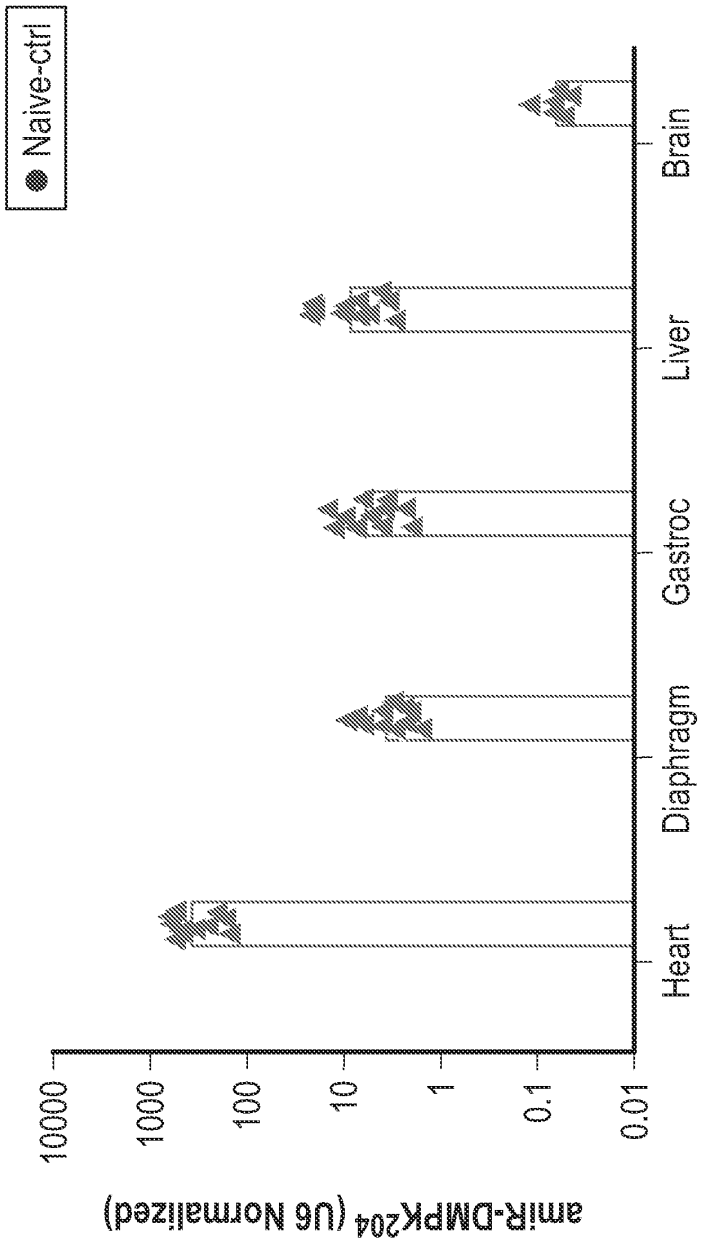

Naive-ctrl
amiR-DMPK204 (U6 Normalized)
10000
1000
100
10
1
0.1
0.01
Heart
Diaphragm
Gastroc
Liver
Brain

FIG. 2B

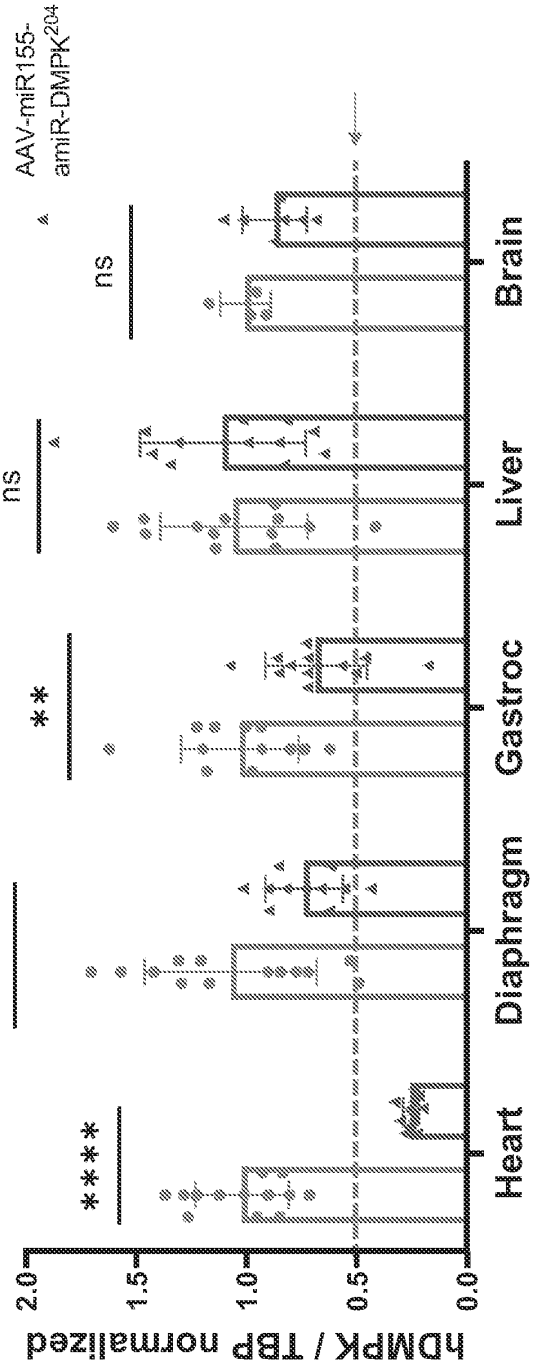

Native-ctrl
AAV-miR155-amiR-DMPK204
hDMPK / TBP normalized
2.0
1.5
1.0
0.5
0.0
****
*
**
ns
ns
Heart
Diaphragm
Gastroc
Liver
Brain

FIG. 2C

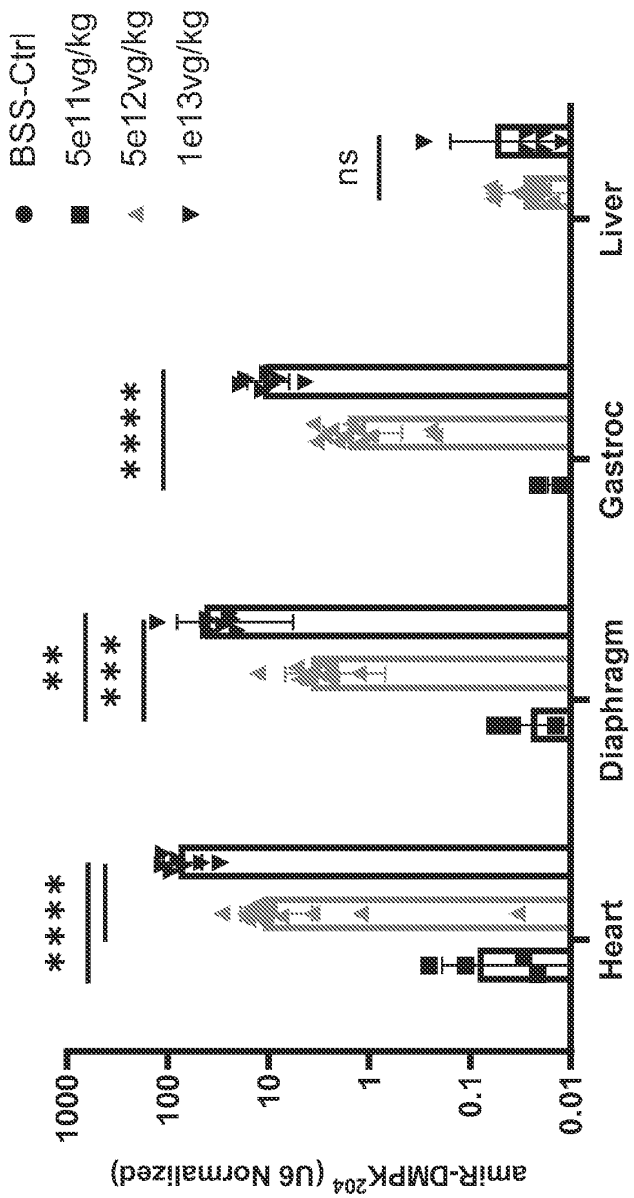

BSS-Ctrl
5e11vg/kg
5e12vg/kg
1e13vg/kg
ns
****
****
***
**
amiR-DMPK204 (U6 Normalized)
1000
100
10
1
0.1
0.01
Heart
Diaphragm
Gastroc
Liver

FIG. 3A

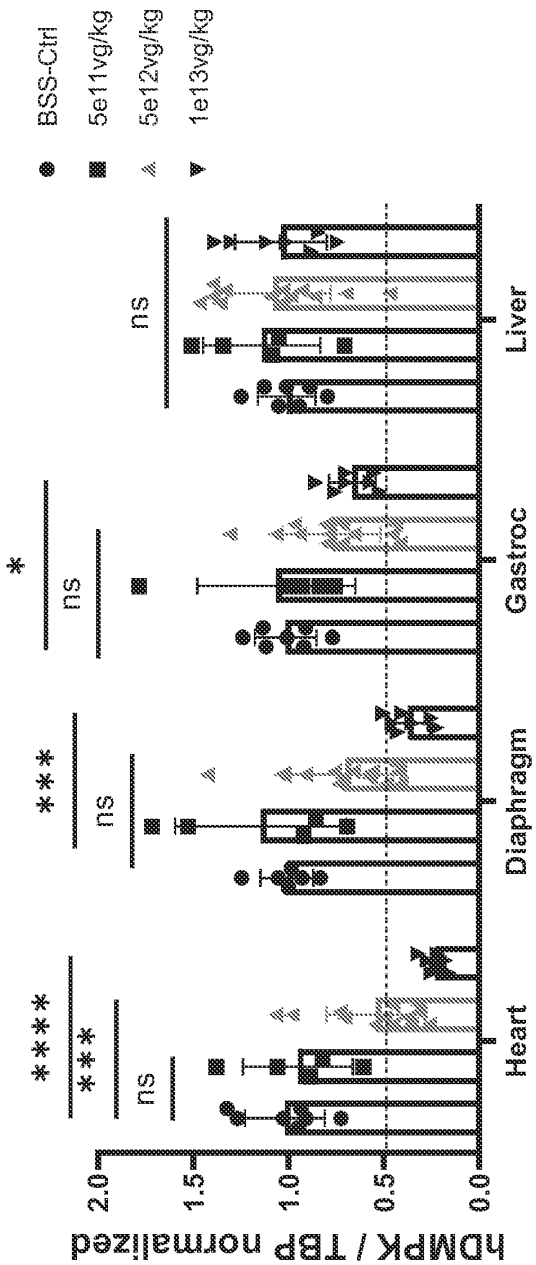

BSS-Ctrl
5e11vg/kg
5e12vg/kg
1e13vg/kg
hDMPK / TBP normalized
2.0
1.5
1.0
0.5
0.0
****
****
ns
***
ns
*
ns
ns
Heart
Diaphragm
Gastroc
Liver

FIG. 3B

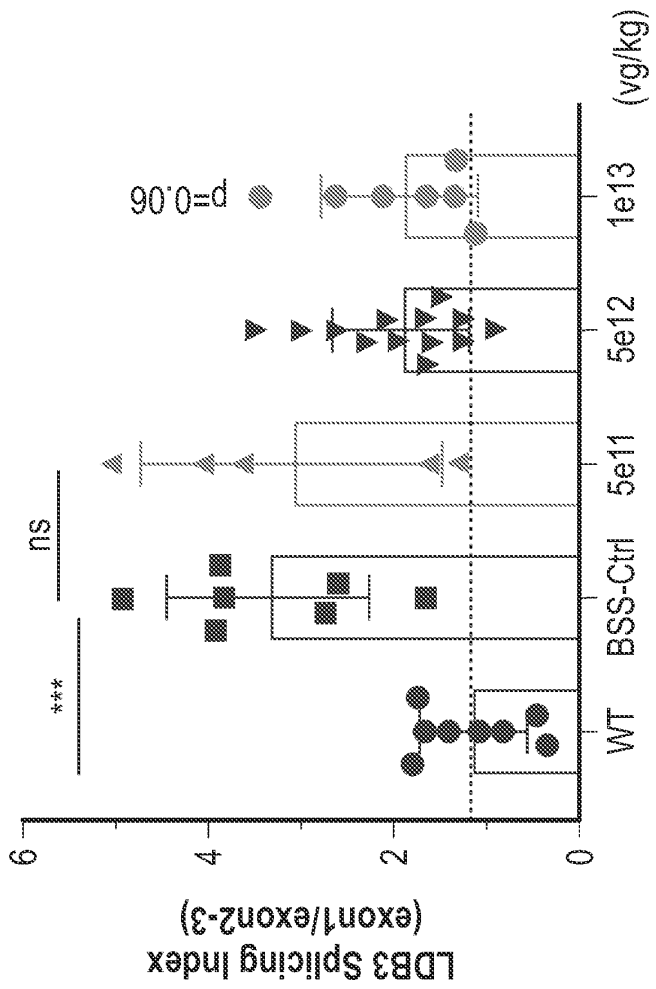

LDB3 Splicing Index
(exon1/exon2-3)
0
2
4
6
***
ns
*
p=0.06
WT
BSS-Ctrl
5e11
5e12
1e13
(vg/kg)
AAV nDes-miR155-amiR-DMPK204
DMSXL

FIG. 4

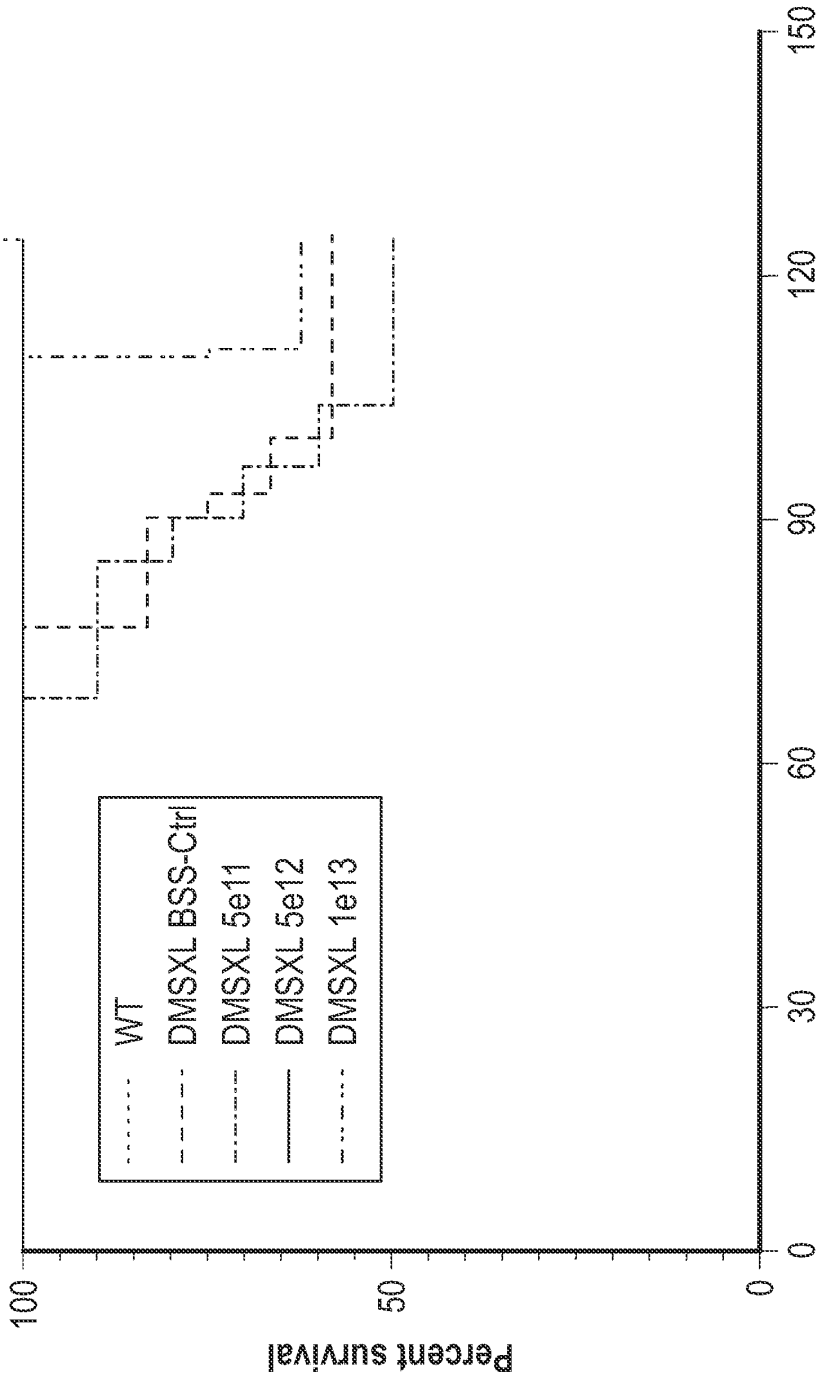

Percent survival
100
50
0
0
30
60
90
120
150
No of Days
WT
DMSXL BSS-Ctrl
DMSXL 5e11
DMSXL 5e12
DMSXL 1e13

FIG. 5A

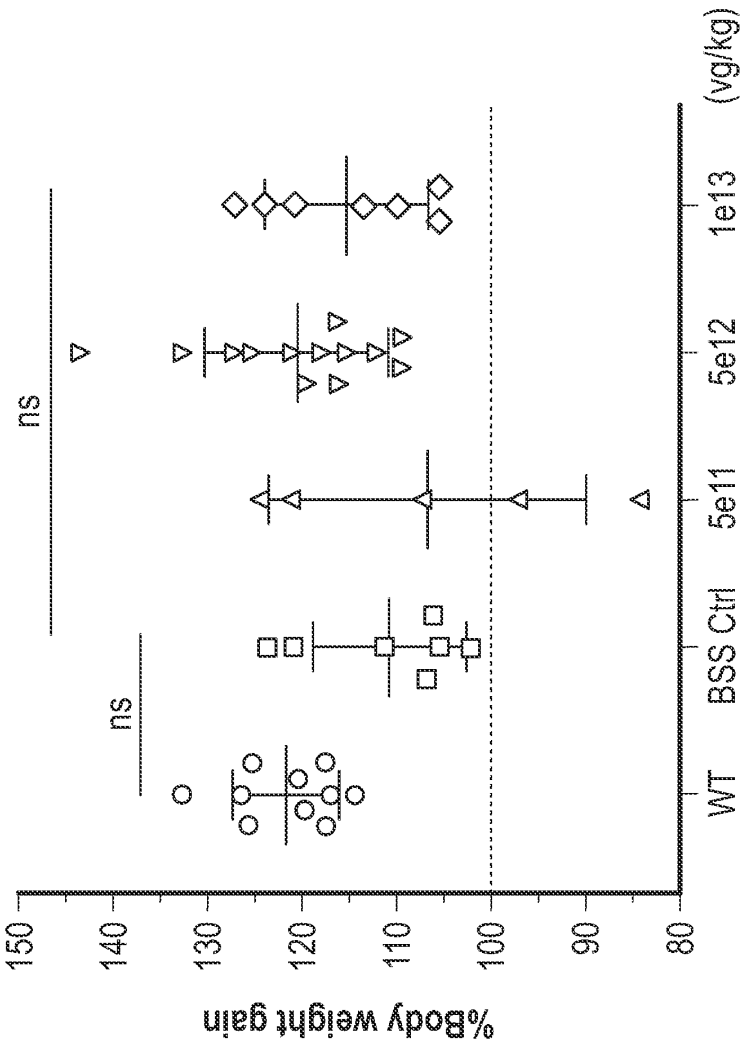

%Body weight gain
150
140
130
120
110
100
90
80
ns
ns
WT
BSS Ctrl
5e11
5e12
1e13
(vg/kg)
AAV nDes-miR155-amiR-DMPK204

FIG. 5B

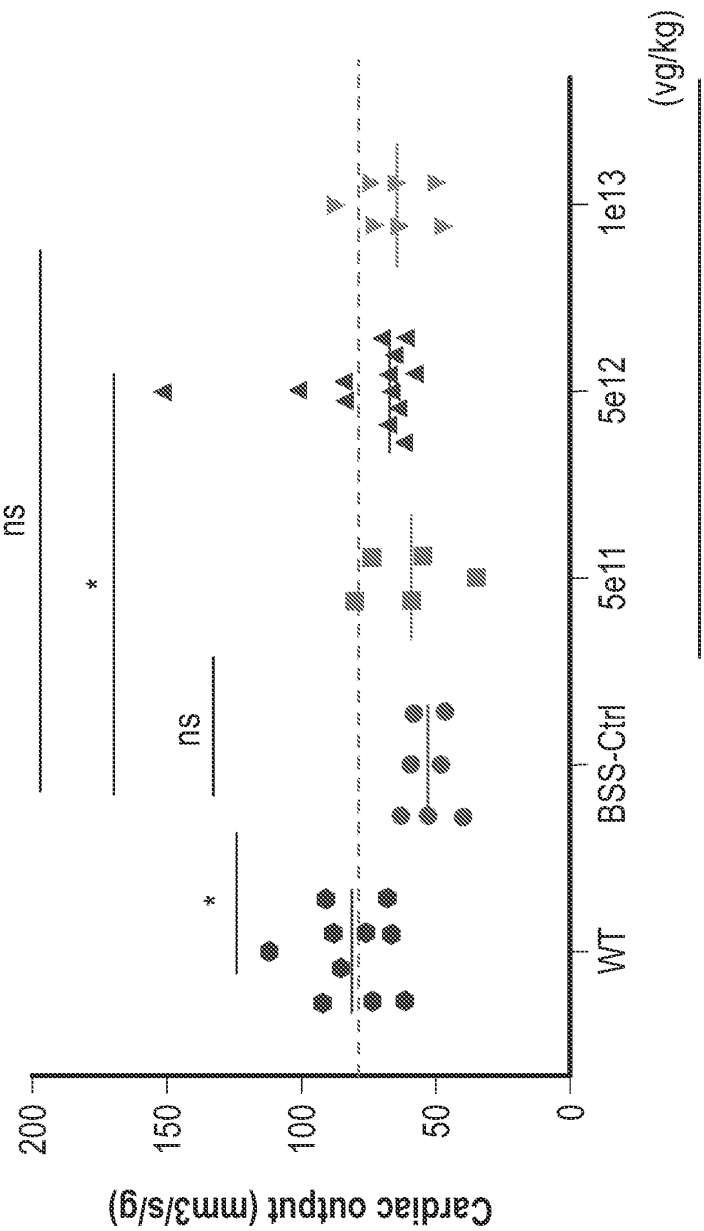

Cardiac output (mm3/s/g)
200
150
100
50
0
WT
BSS-Ctrl
5e11
5e12
1e13
(vg/kg)
AAV nDes-miR155-amiR-DMPK204
DMSXL
ns
*
ns
*

FIG. 6

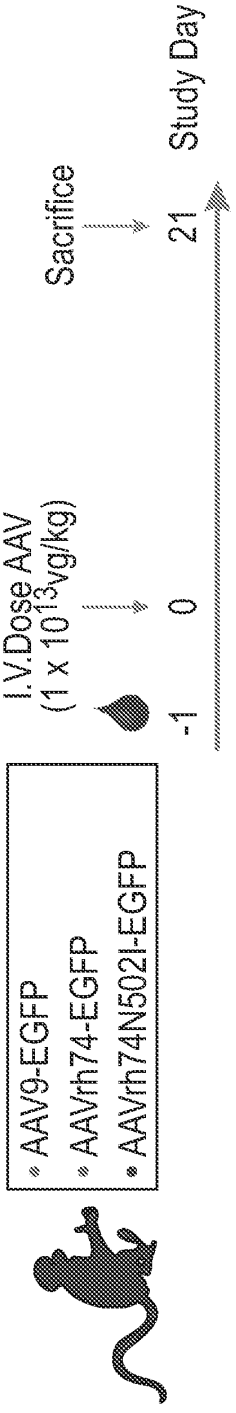


FIG. 7A

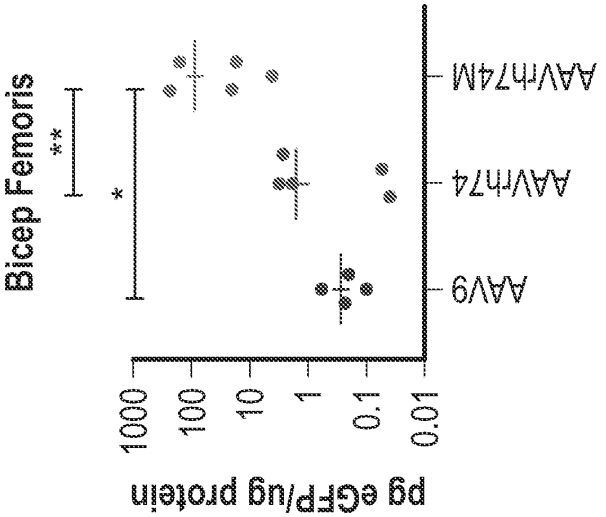


FIG. 7C

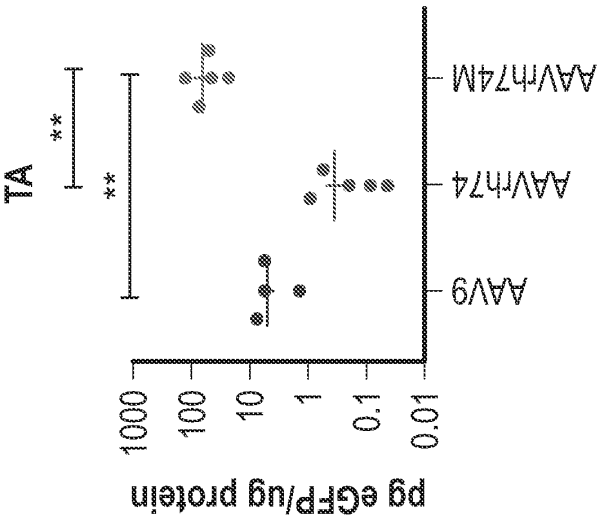


FIG. 7B

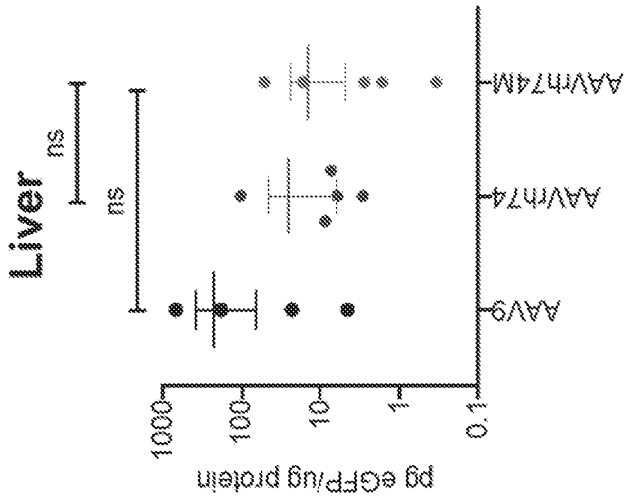


FIG. 7F

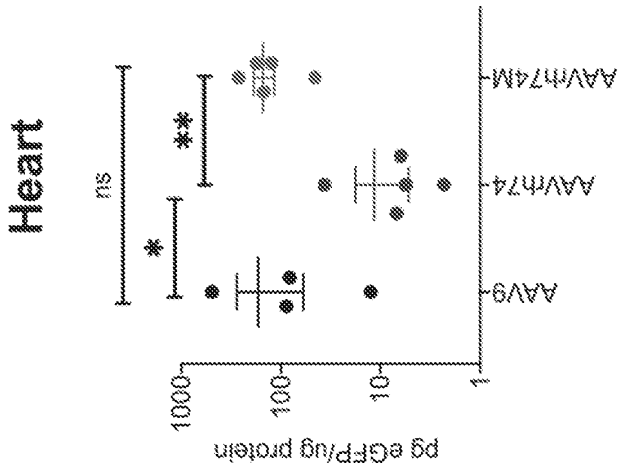


FIG. 7E

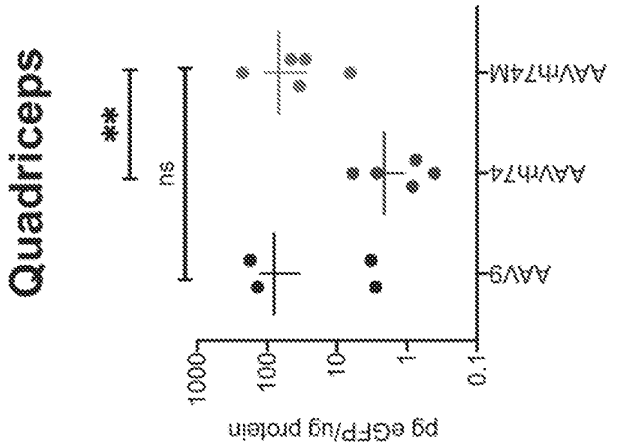


FIG. 7D

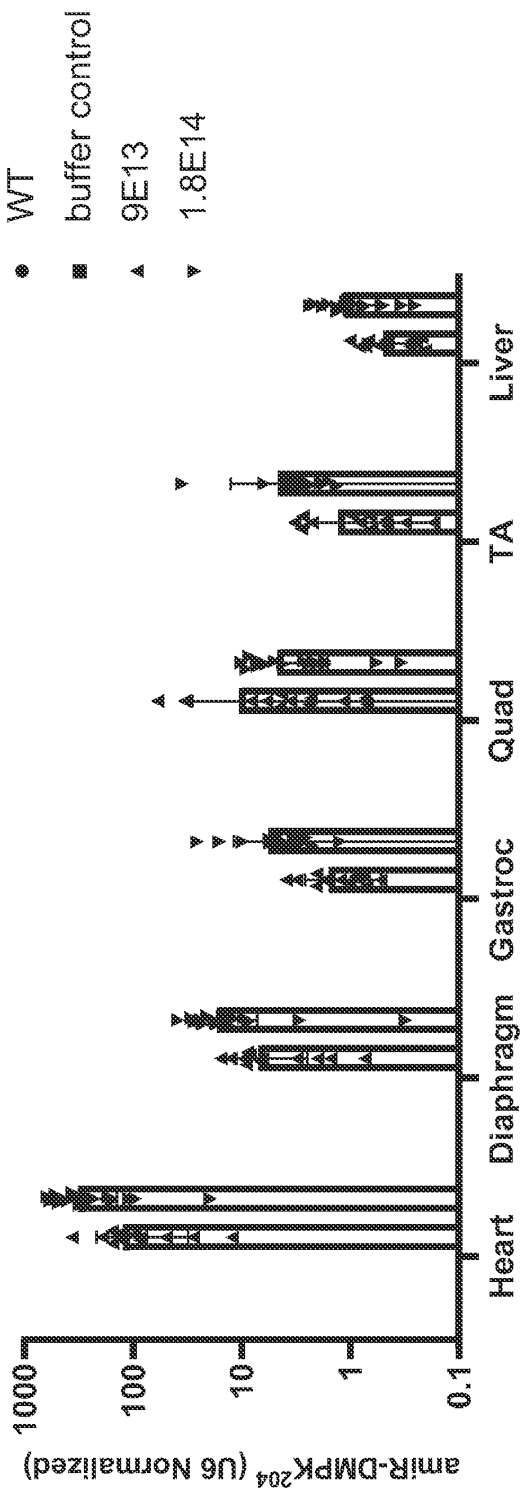

WT
buffer control
9E13
1.8E14
amiR-DMPK204 (U6 Normalized)
1000
100
10
1
0.1
Heart
Diaphragm
Gastroc
Quad
TA
Liver

FIG. 8A

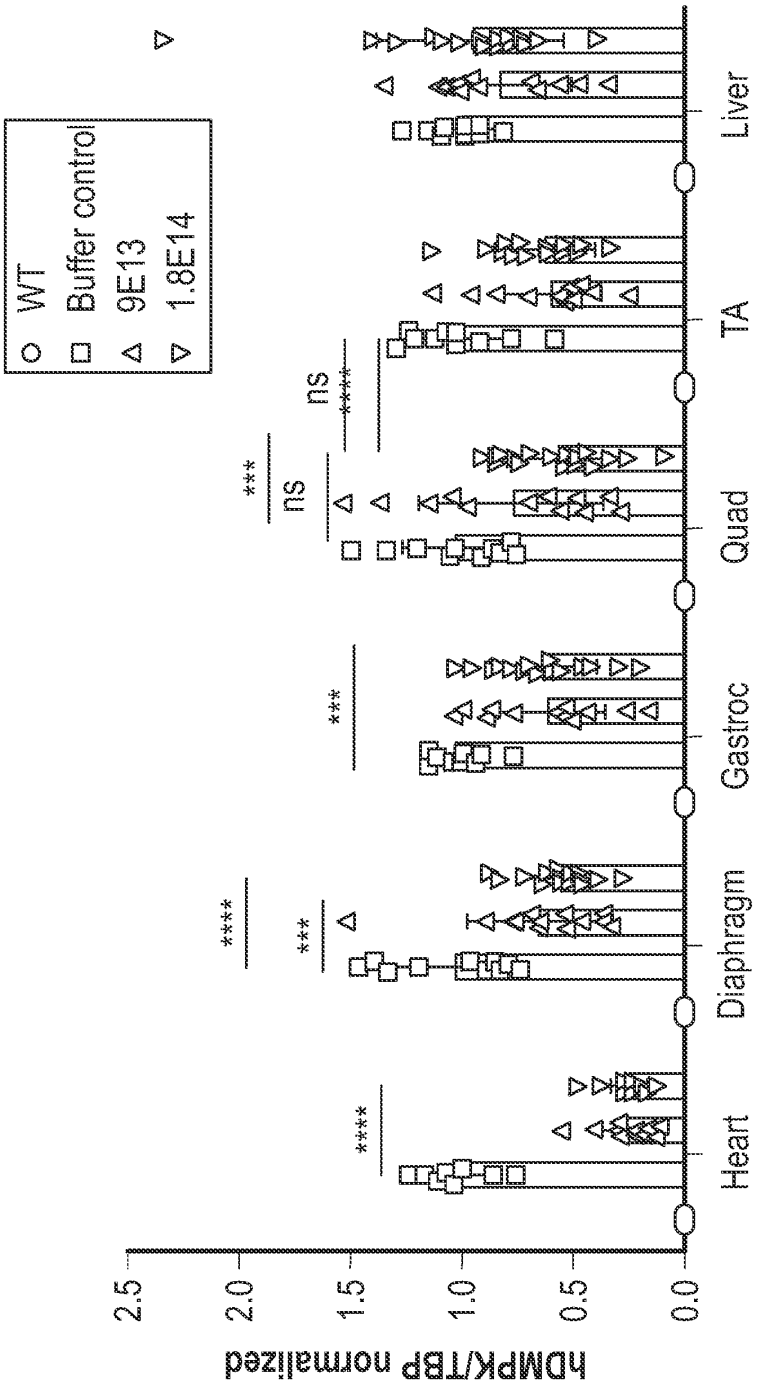

WT
Buffer control
9E13
1.8E14
hDMPK/TBP normalized
2.5
2.0
1.5
1.0
0.5
0.0
Heart
Diaphragm
Gastroc
Quad
TA
Liver
****
***
***
ns
ns
****
***
****

FIG. 8B

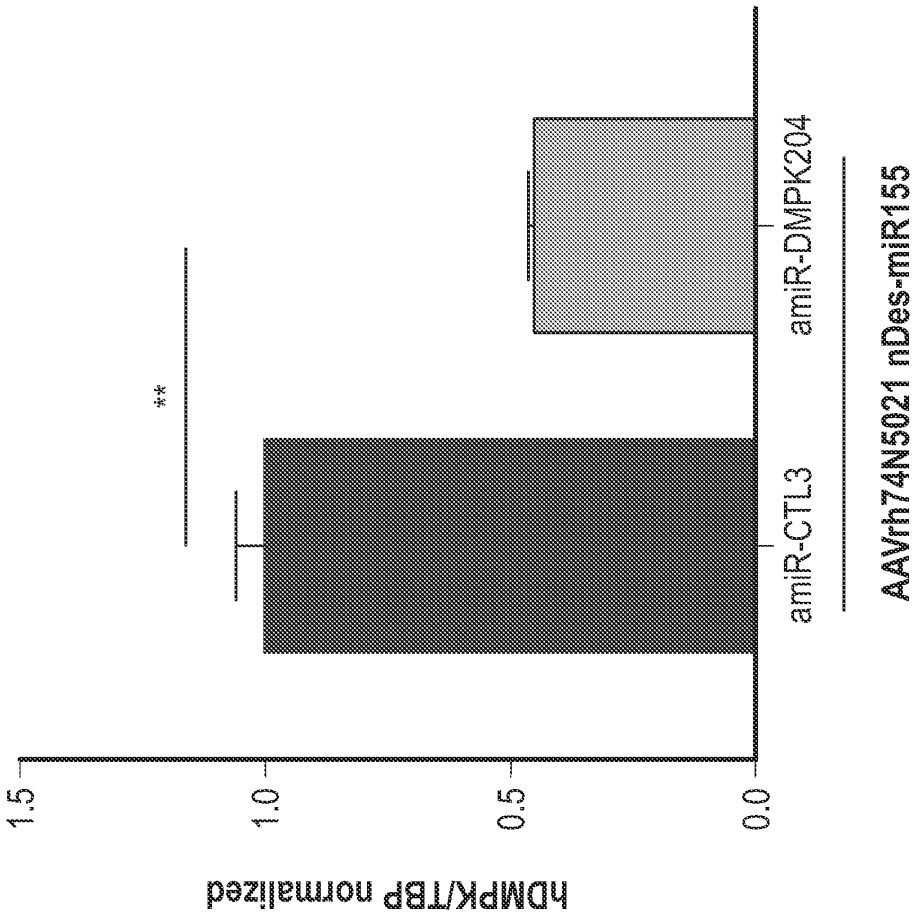

hDMPK/TBP normalized
1.5
1.0
0.5
0.0
**
amiR-CTL3
amiR-DMPK204
AAVrh74N5021 nDes-miR155

FIG. 9

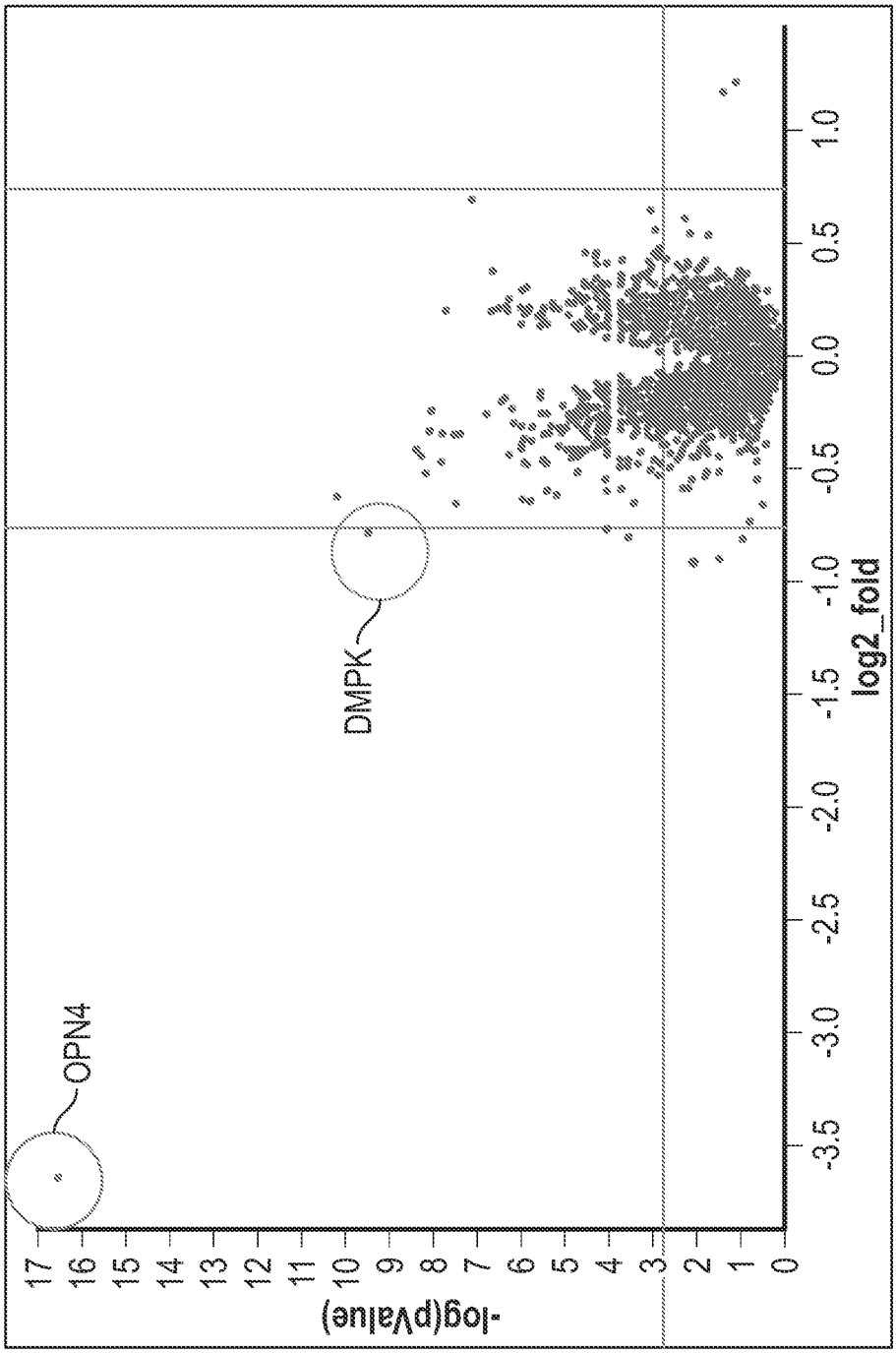

OPN4
DMPK
-log(pValue)
log2_fold
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-3.5
-3.0
-2.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0

FIG. 10

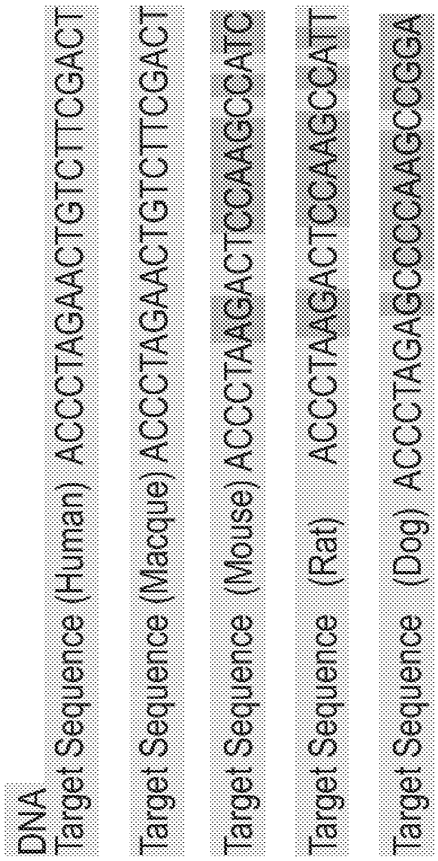

DNA
Target Sequence (Human) ACCCTAGAACTGTCTTCGACT
Target Sequence (Macque) ACCCTAGAACTGTCTTCGACT
Target Sequence (Mouse) ACCCTAAGACTCCAAGCCATC
Target Sequence (Rat) ACCCTAAGACTCCAAGCCATT
Target Sequence (Dog) ACCCTAGAGCCCCAAGCCGGA

FIG. 11

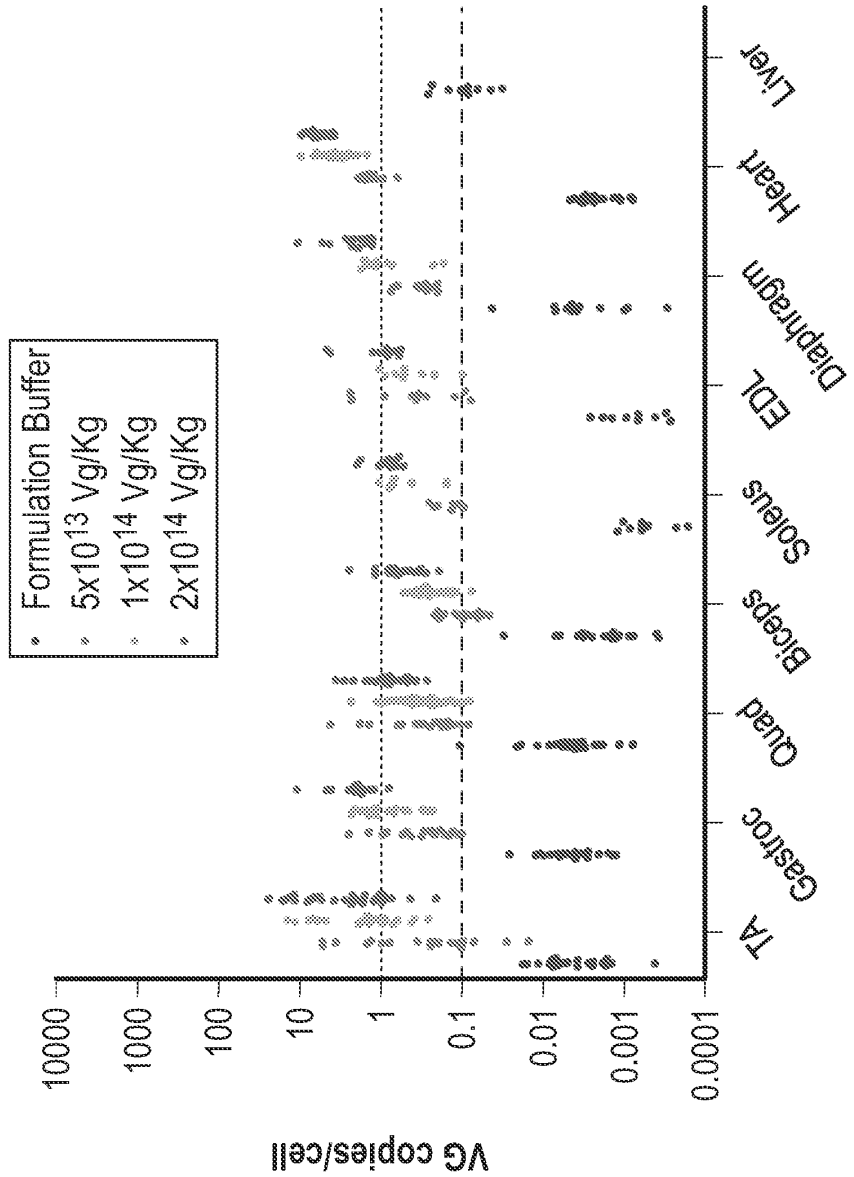

Formulation Buffer
5x10^13 Vg/Kg
1x10^14 Vg/Kg
2x10^14 Vg/Kg
VG copies/cell
10000
1000
100
10
1
0.1
0.01
0.001
0.0001
TA
Gastroc
Quad
Biceps
Soleus
EDL
Diaphragm
Heart
Liver

FIG. 12

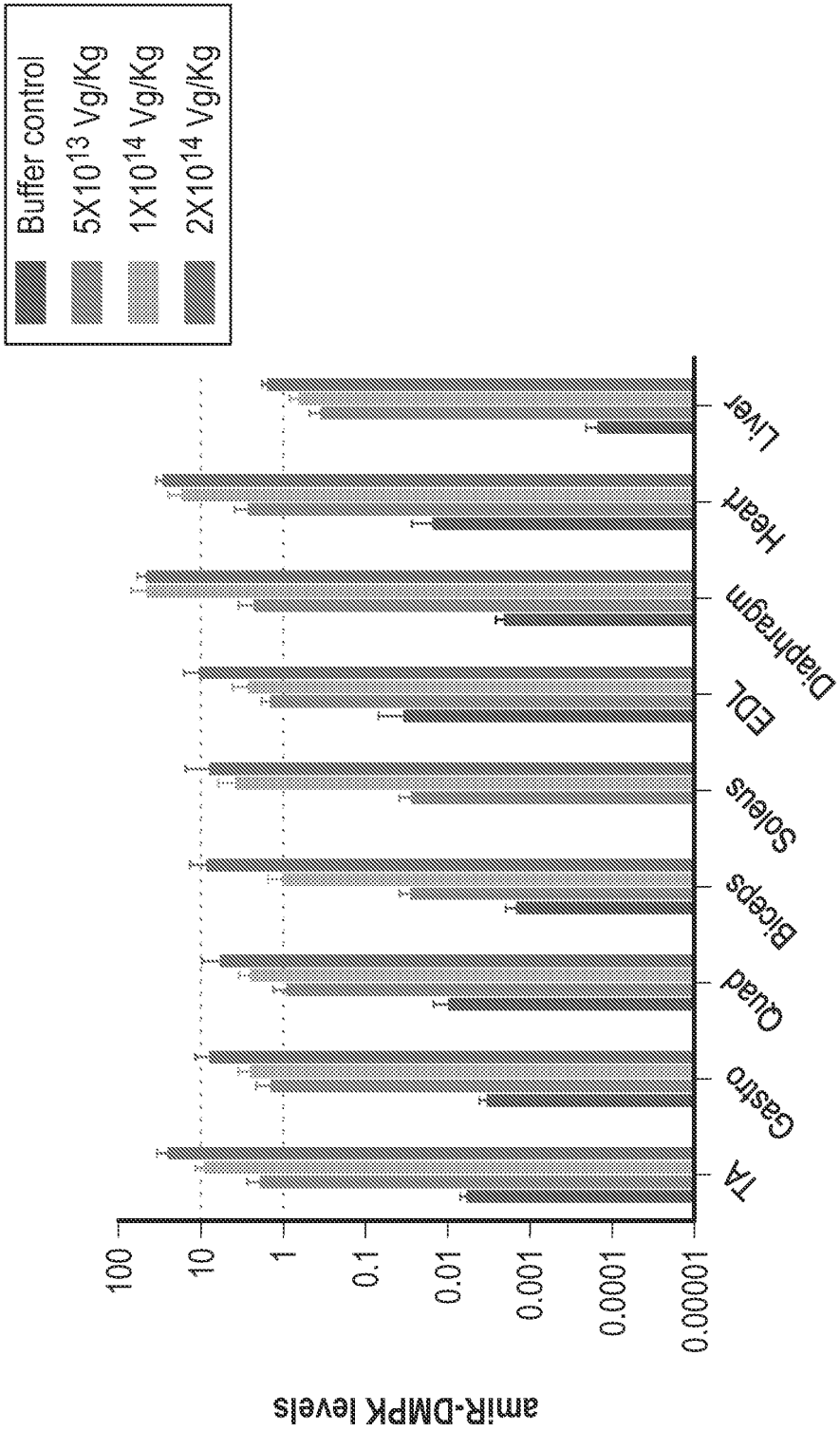

Buffer control
5X10^13 Vg/Kg
1X10^14 Vg/Kg
2X10^14 Vg/Kg
amiR-DMPK levels
100
10
1
0.1
0.01
0.001
0.0001
0.00001
TA
Gastro
Quad
Biceps
Soleus
EDL
Diaphragm
Heart
Liver

FIG. 13

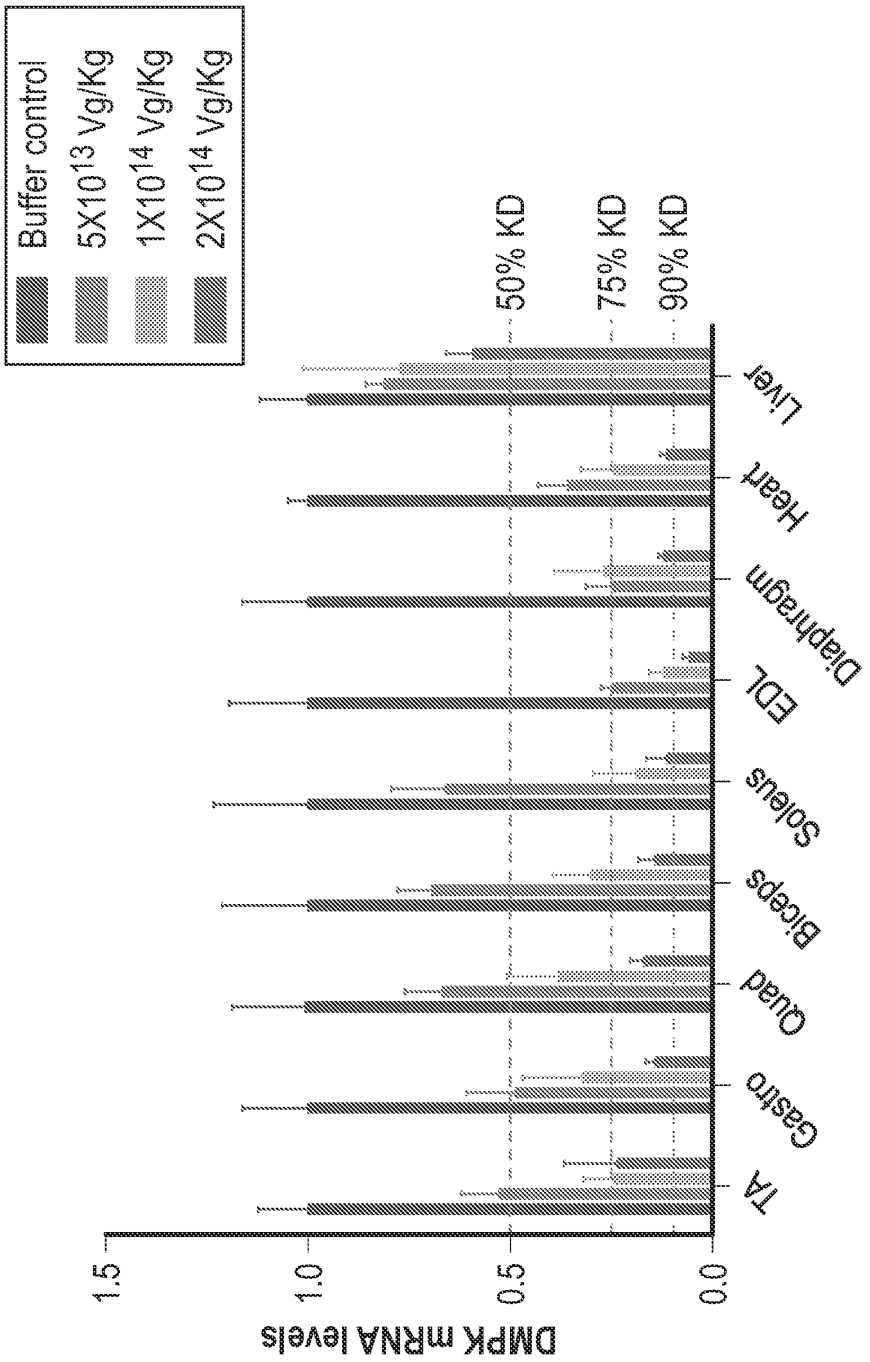

Buffer control
5X10^13 Vg/Kg
1X10^14 Vg/Kg
2X10^14 Vg/Kg
50% KD
75% KD
90% KD
Liver
Heart
Diaphragm
EDL
Soleus
Biceps
Quad
Gastro
TA
1.5
1.0
0.5
0.0
DMPK mRNA levels

FIG. 14