Figure 1

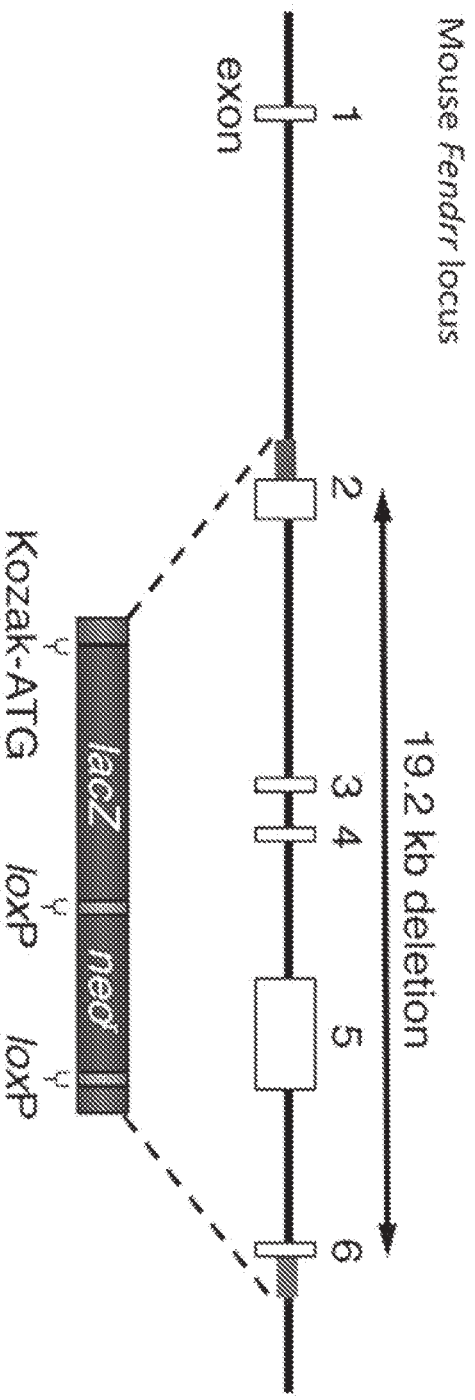
Mouse Fendrr locus
exon
1
2
3
4
5
6
19.2 kb deletion
Kozak-ATG
lacZ
loxP
neo
loxP

Figure 2A

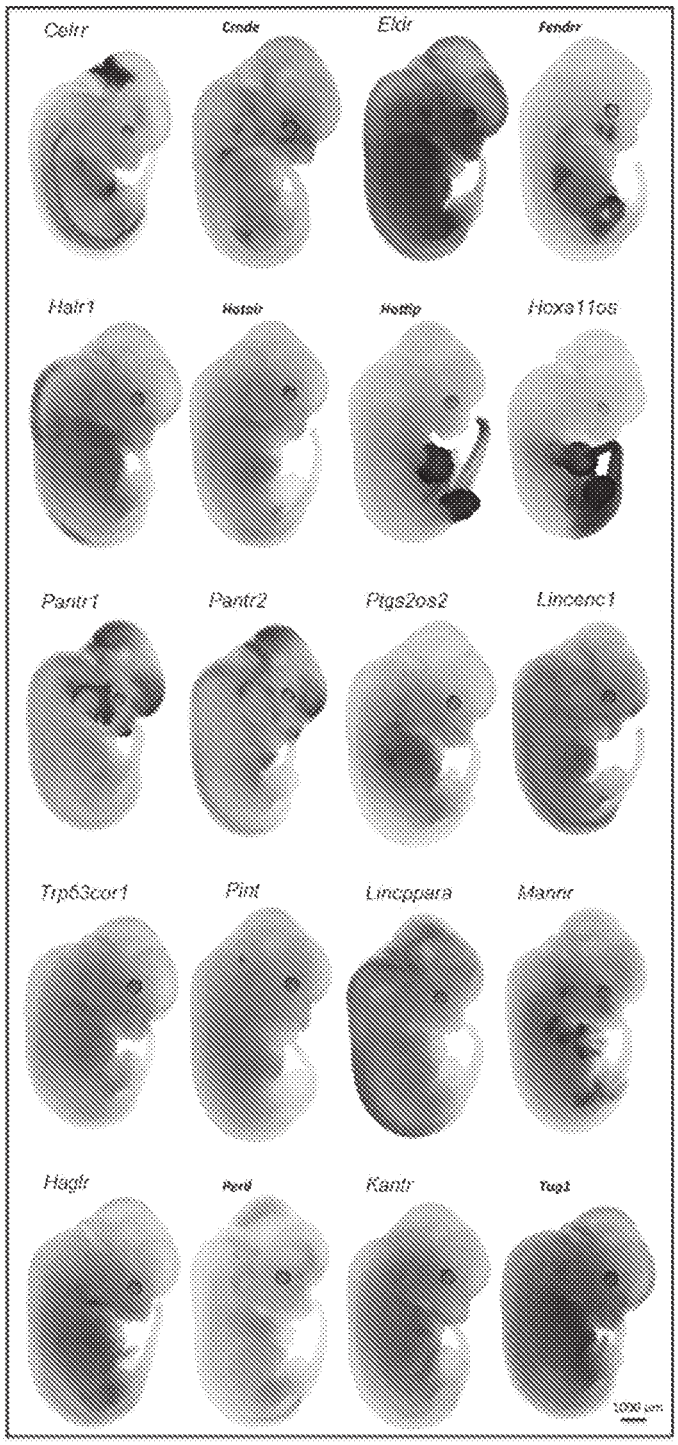
Celrr
Eldr
Fendrr
Halr1
Hoxa11os
Pantr1
Pantr2
Ptgs2os2
Lincenc1
Trp53cor1
Pint
Lincppara
Mannr
Haglr
Kantr
Tug1

Figure 2B

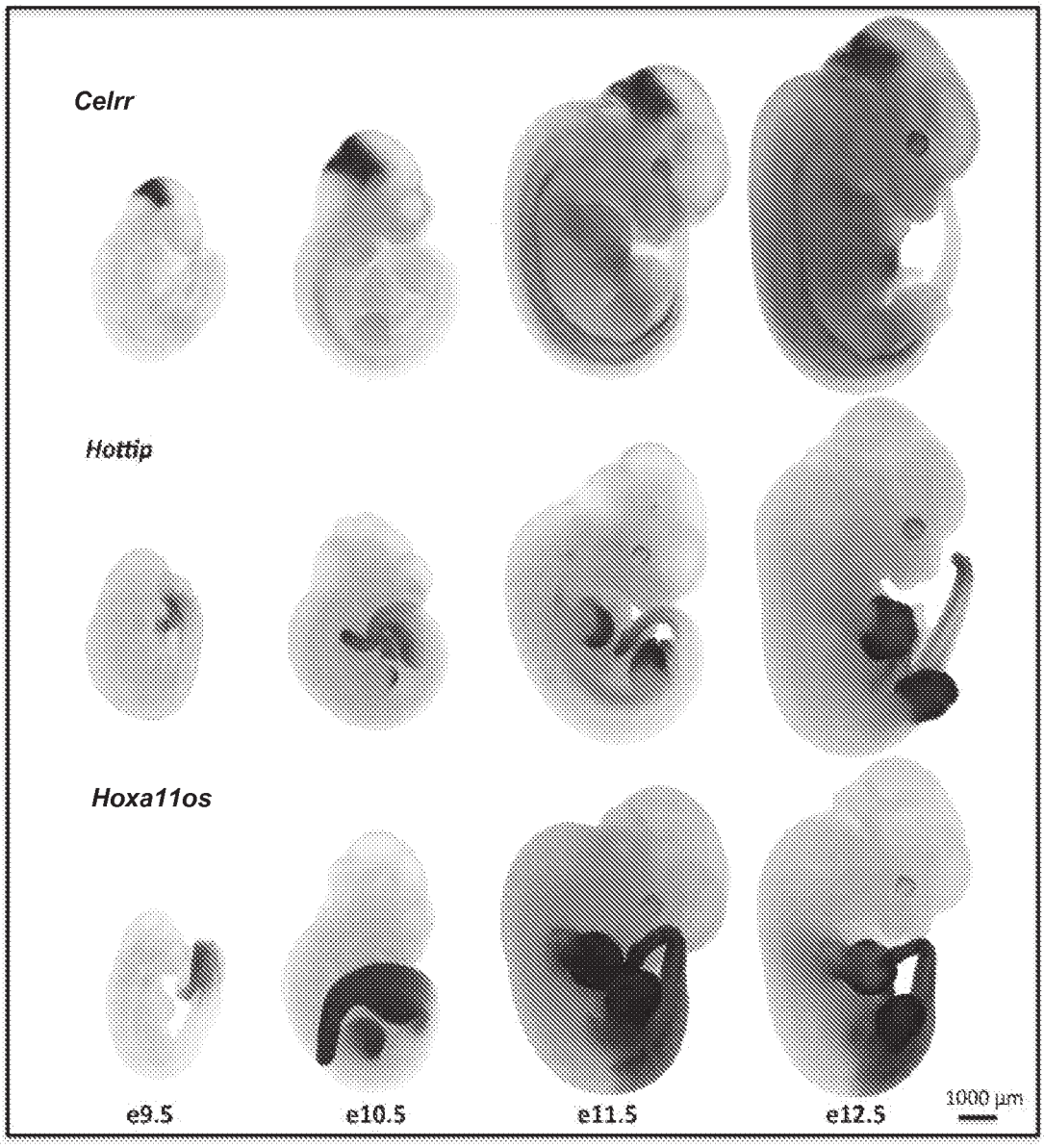

Figure 3

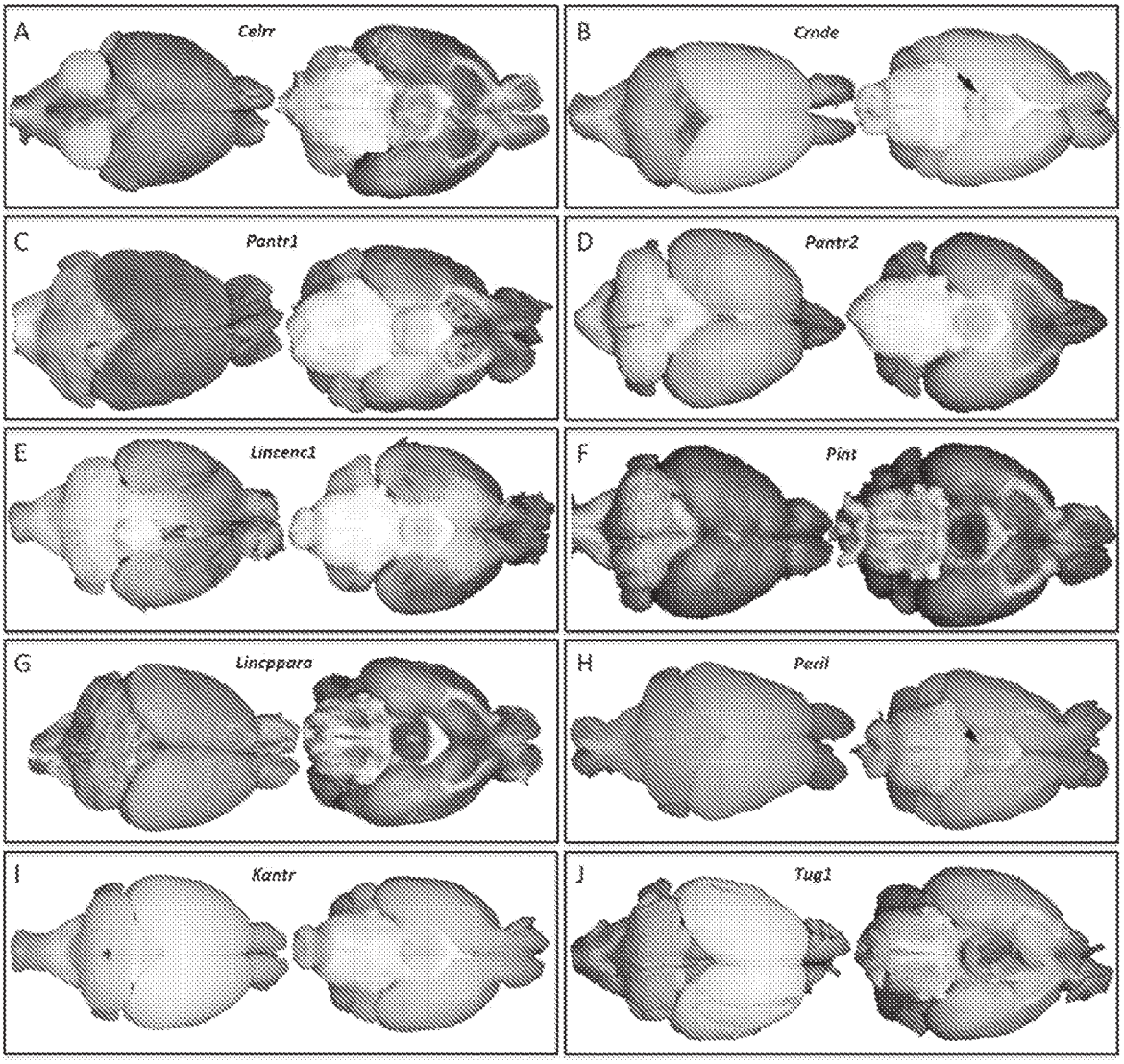
A
Celrr
B
Cnde
C
Pantr1
D
Pantr2
E
Lincenc1
F
Pint
G
Lincppara
H
Peril
I
Kantr
J
Tug1

Figure 4

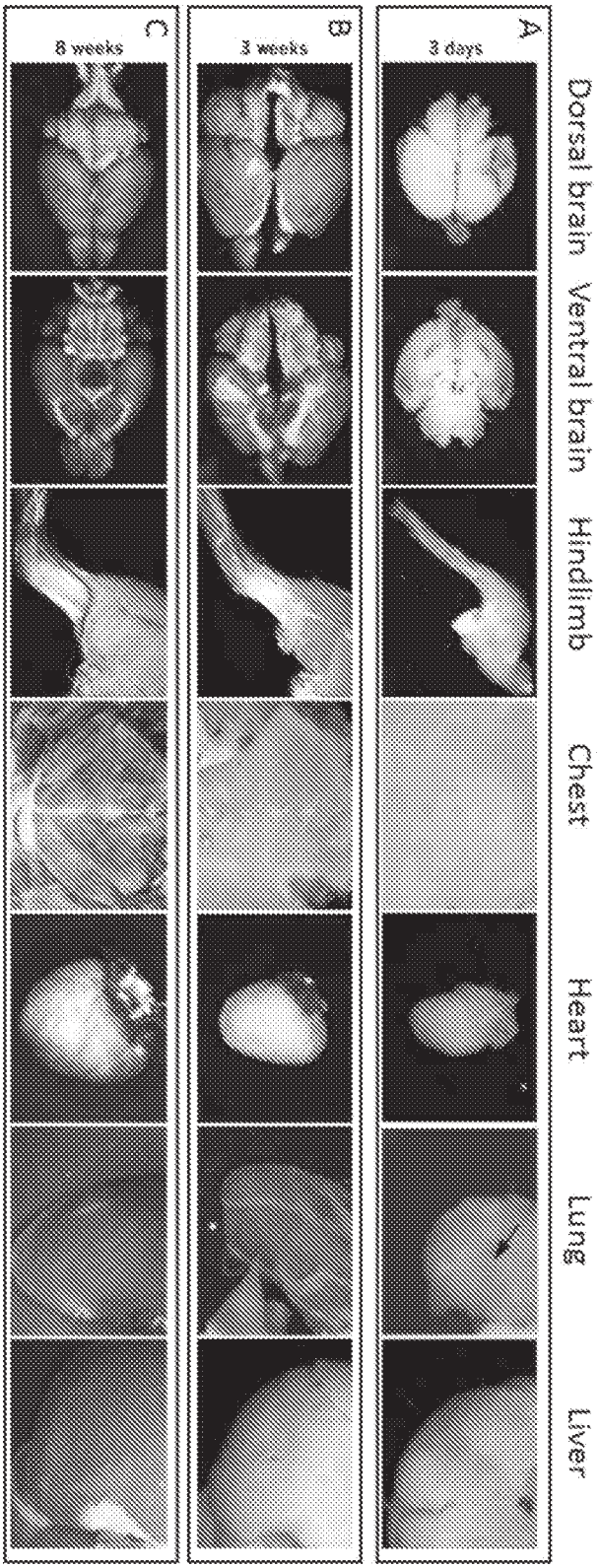
A
3 days
B
3 weeks
C
8 weeks
Dorsal brain
Ventral brain
Hindlimb
Chest
Heart
Lung
Liver

Figure 5

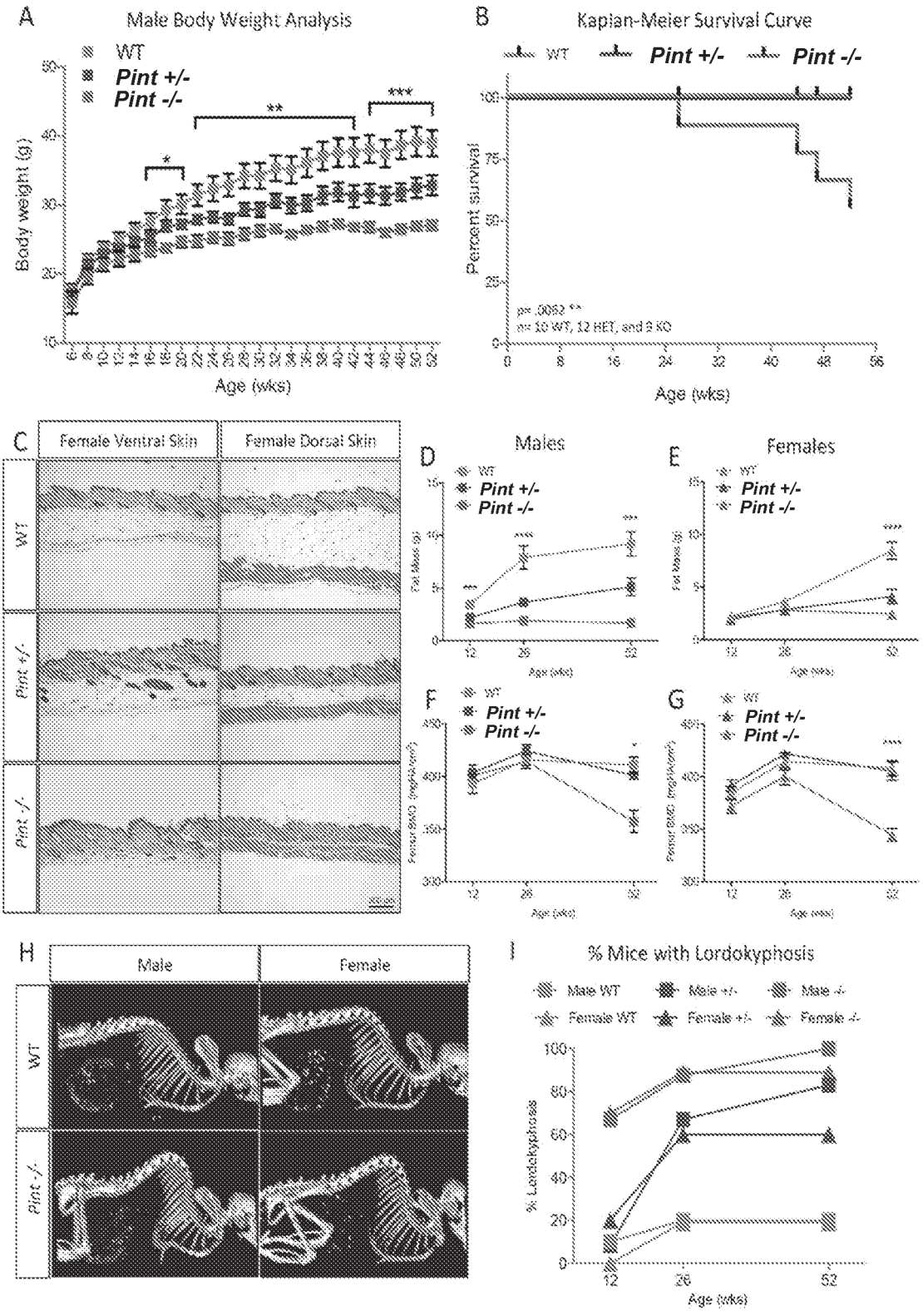
A
Male Body Weight Analysis
WT
Pint +/-
Pint -/-
Body weight (g)
Age (wks)
B
Kaplan-Meier Survival Curve
WT
Pint +/-
Pint -/-
Percent survival
Age (wks)
C
Female Ventral Skin
Female Dorsal Skin
WT
Pint +/-
Pint -/-
D
Males
E
Females
F
G
H
Male
Female
I
% Mice with Lordokyphosis
Male WT
Male +/-
Male -/-
Female WT
Female +/-
Female -/-
% Lordokyphosis
Age (wks)

Figure 6

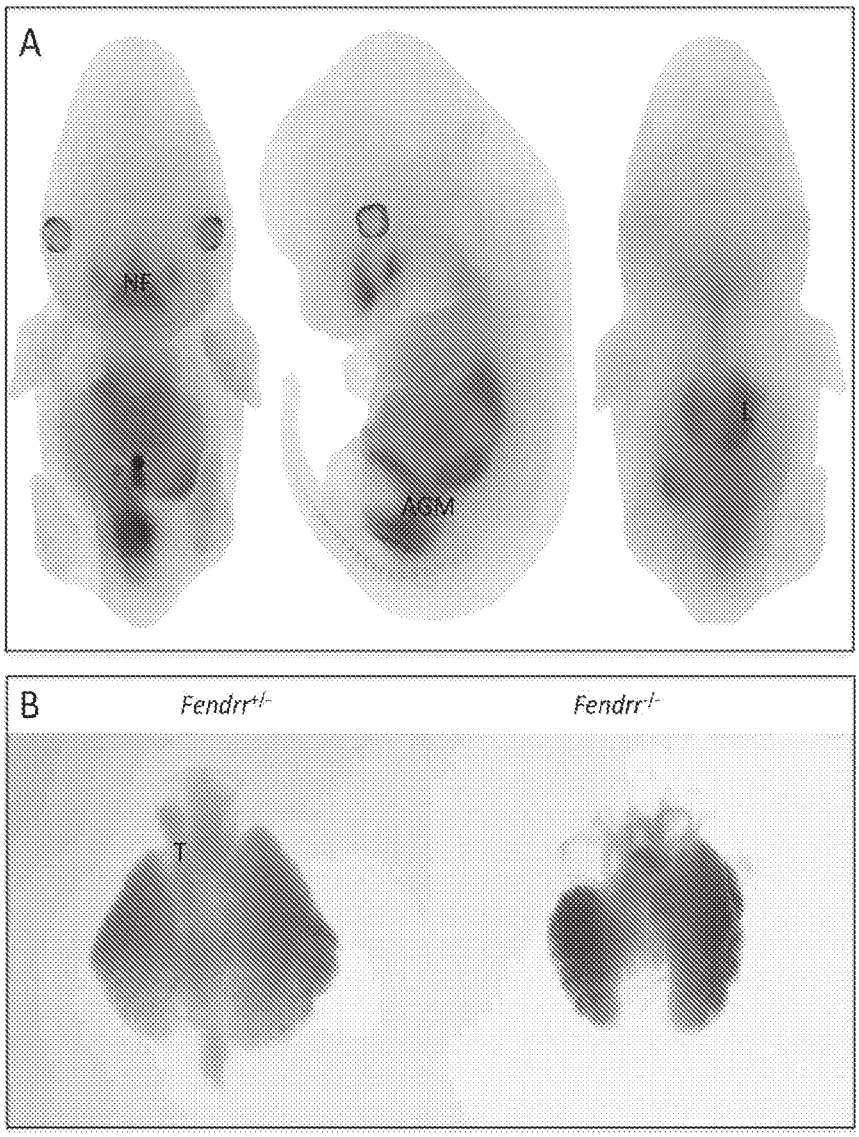

Figure 7

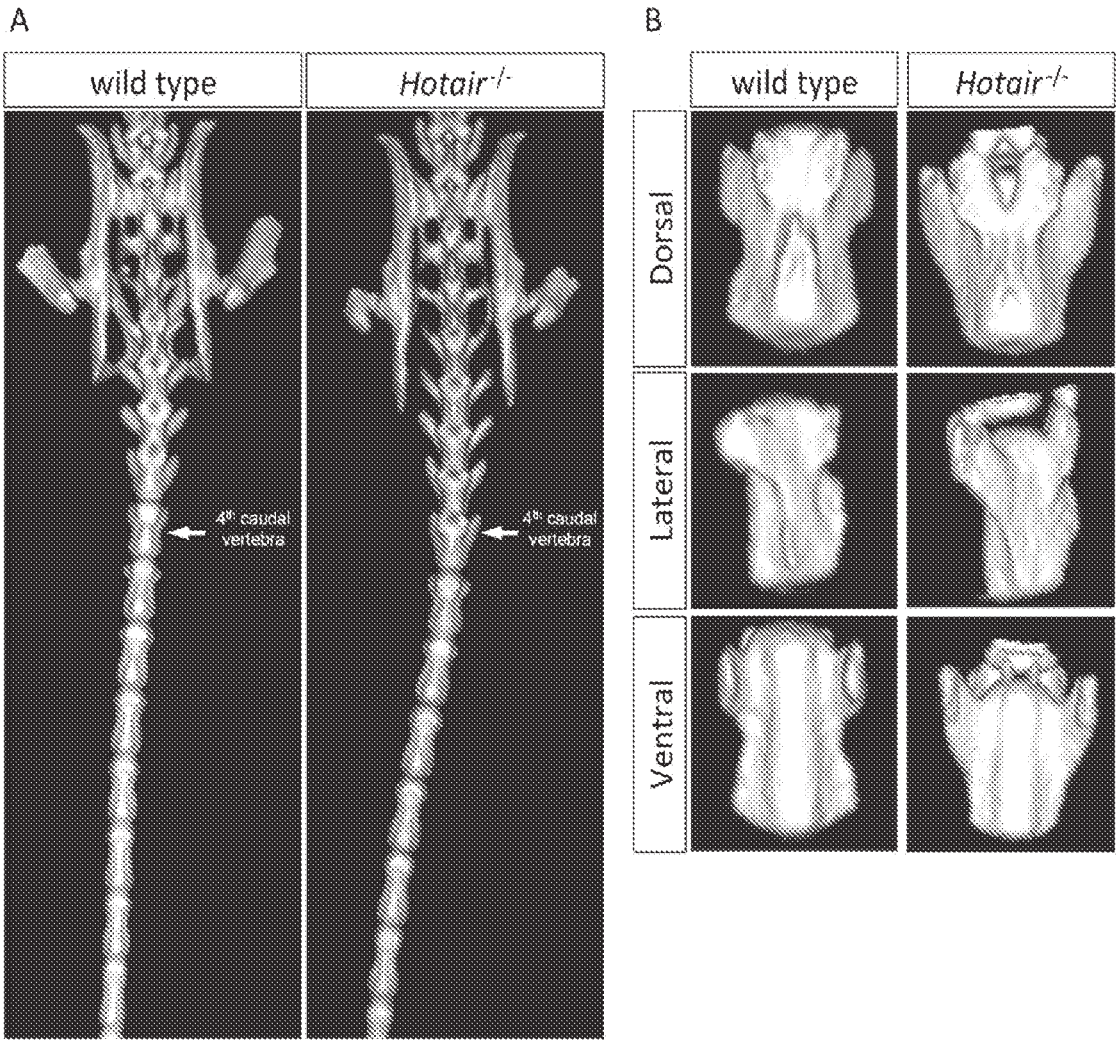
A
wild type
Hotair-/-
4th caudal vertebra
4th caudal vertebra
B
wild type
Hotair-/-
Dorsal
Lateral
Ventral

Figure 8

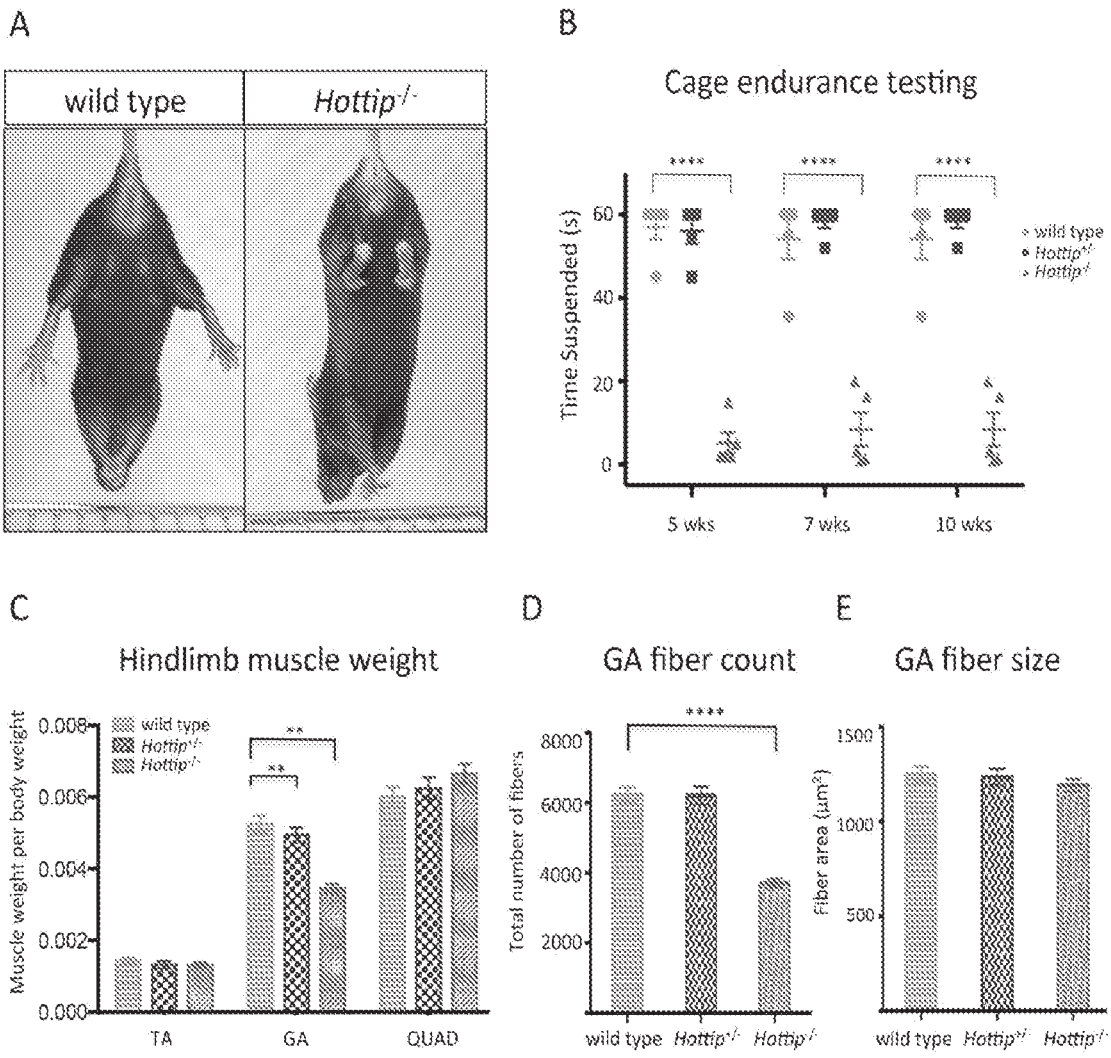
A
wild type
Hottip-/-
B
Cage endurance testing
Time Suspended (s)
0
20
40
60
****
****
****
5 wks
7 wks
10 wks
wild type
Hottip+/-
Hottip-/-
C
Hindlimb muscle weight
Muscle weight per body weight
0.000
0.002
0.004
0.006
0.008
**
**
TA
GA
QUAD
D
GA fiber count
Total number of fibers
2000
4000
6000
8000
****
wild type
Hottip+/-
Hottip-/-
E
GA fiber size
Fiber area (µm²)
500
1000
1500
wild type
Hottip+/-
Hottip-/-

Figure 9

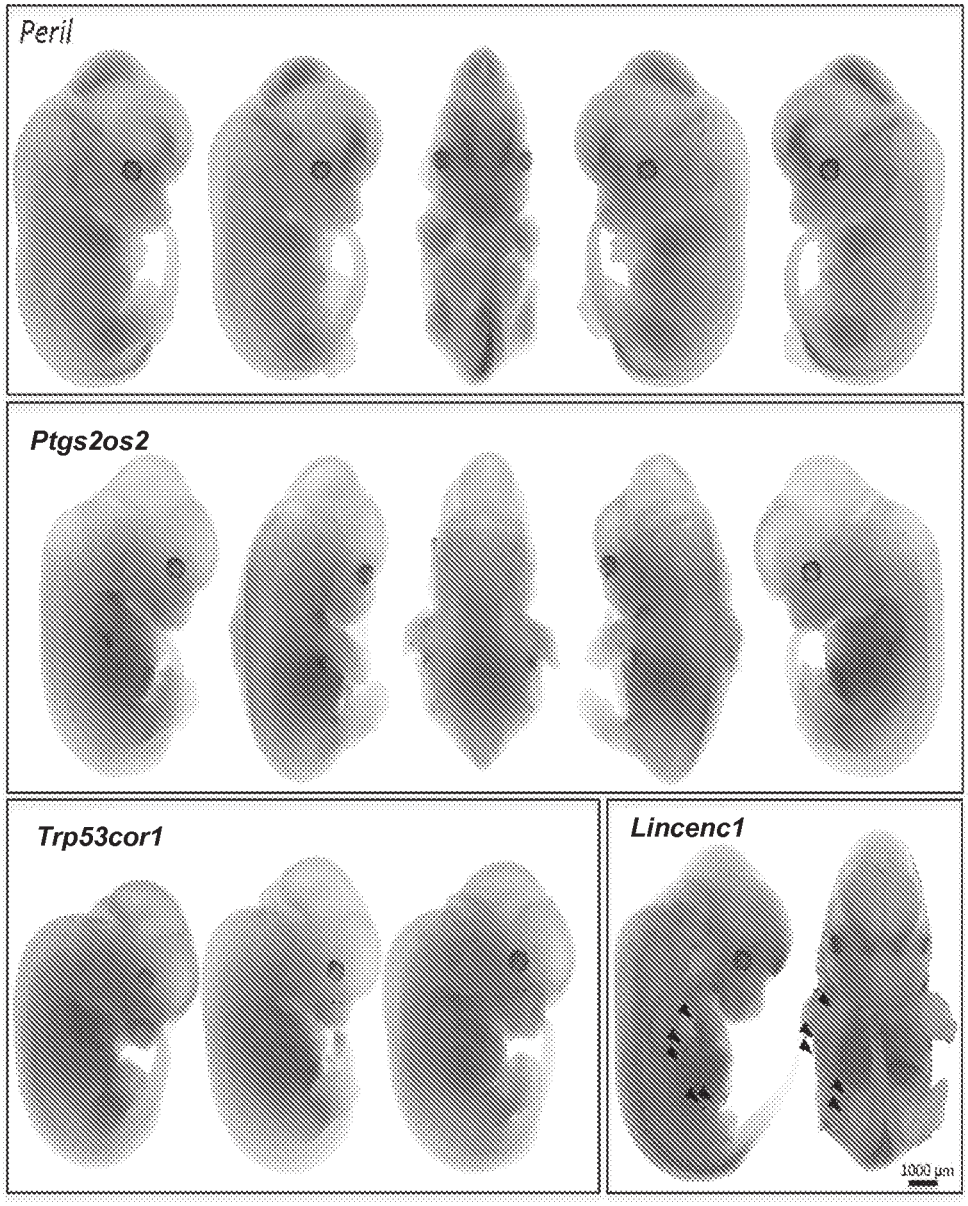

Figure 10

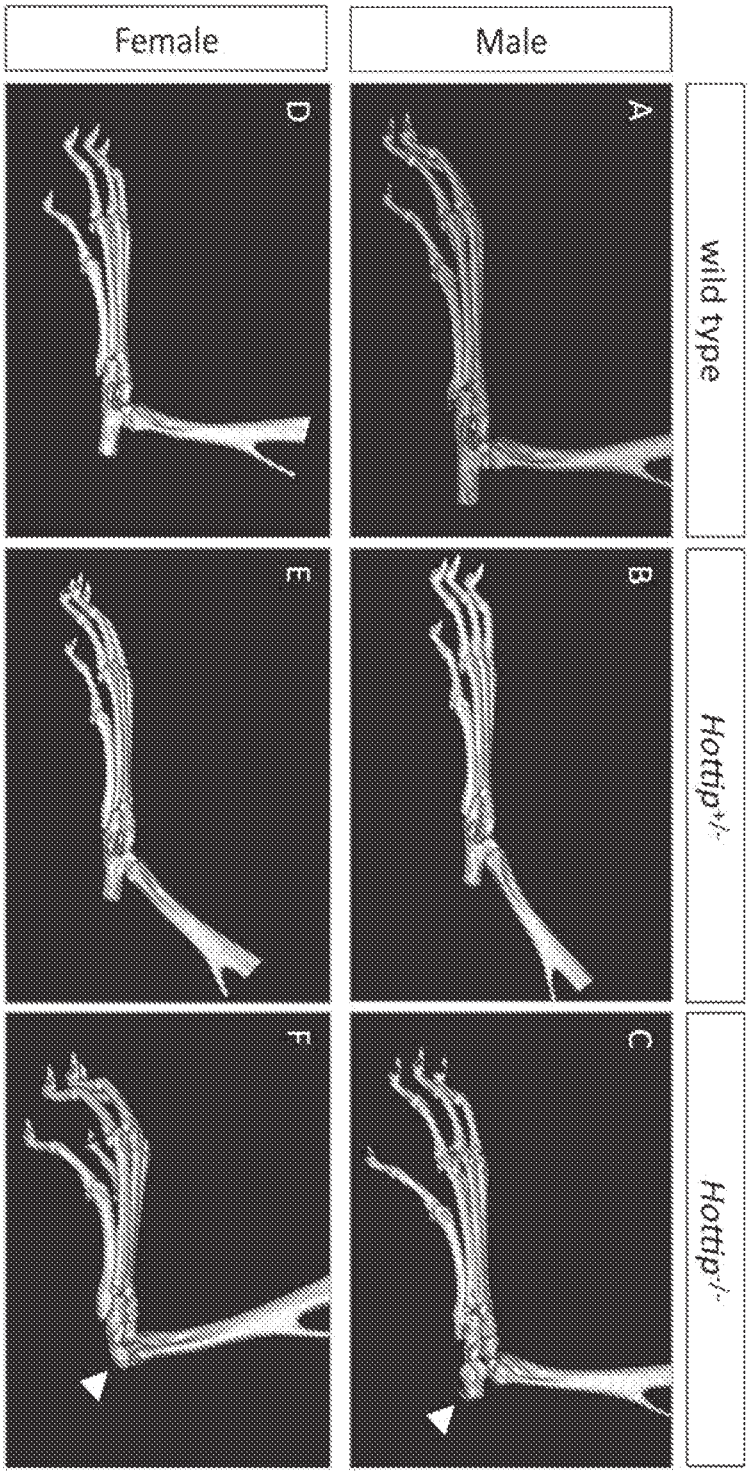

Figure 11

Table 2. Summary of *lacZ* reporter expression in embryo and adult tissue

LincRNA	Embryo	Brain	Heart	Lungs	Liver	Ribs	Spleen	Intestine	Stomach	Kidney	Urogenital	Hindlimb
Celrr	+	+				+						+
Crnde	+	+		+		+					+	+
Eldr	+										+	
Fendrr	+			+								
Halr1	+					+						
Hotair	+											
Hottip	+							+			+	+
Hoxa11os	+					+		+		+	+	+
Pantr1	+	+				+				+		
Pantr2	+	+										
Ptgs2os2	+											
lincenc1	+	+										+
Trp53cor1	+									+	+	
Pint	+	+	+	+	+	+	+	+	+	+	+	+
lincppara	+	+		+		+			+		+	+
Mantr	+			+								
Haglr	+											
Peril	+	+										
Kantr	+	+										
Tug1	+	+	+			+				+	+	