

Paradoxical resistance to high fat diet-induced obesity and altered macrophage polarization in mineralocorticoid receptor overexpressing mice.

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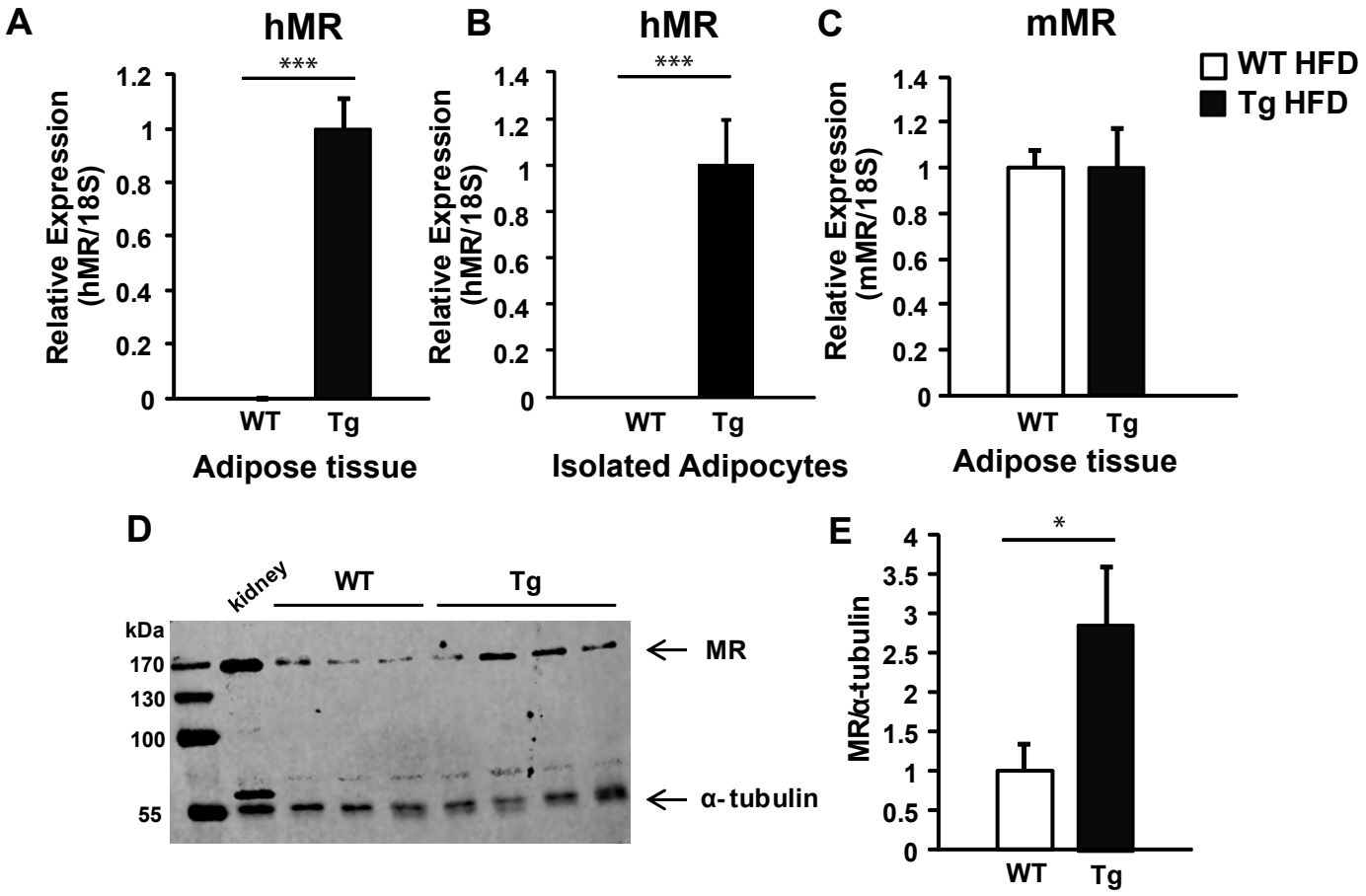

A
hMR
***
Relative Expression (hMR/18S)
1.2
1
0.8
0.6
0.4
0.2
0
WT
Tg
Adipose tissue
B
hMR
***
Relative Expression (hMR/18S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
WT
Tg
Isolated Adipocytes
C
mMR
WT HFD
Tg HFD
Relative Expression (mMR/18S)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
WT
Tg
Adipose tissue
D
kidney
WT
Tg
kDa
170
130
100
55
MR
α-tubulin
E
*
MR/α-tubulin
4
3.5
3
2.5
2
1.5
1
0.5
0
WT
Tg

Figure 1

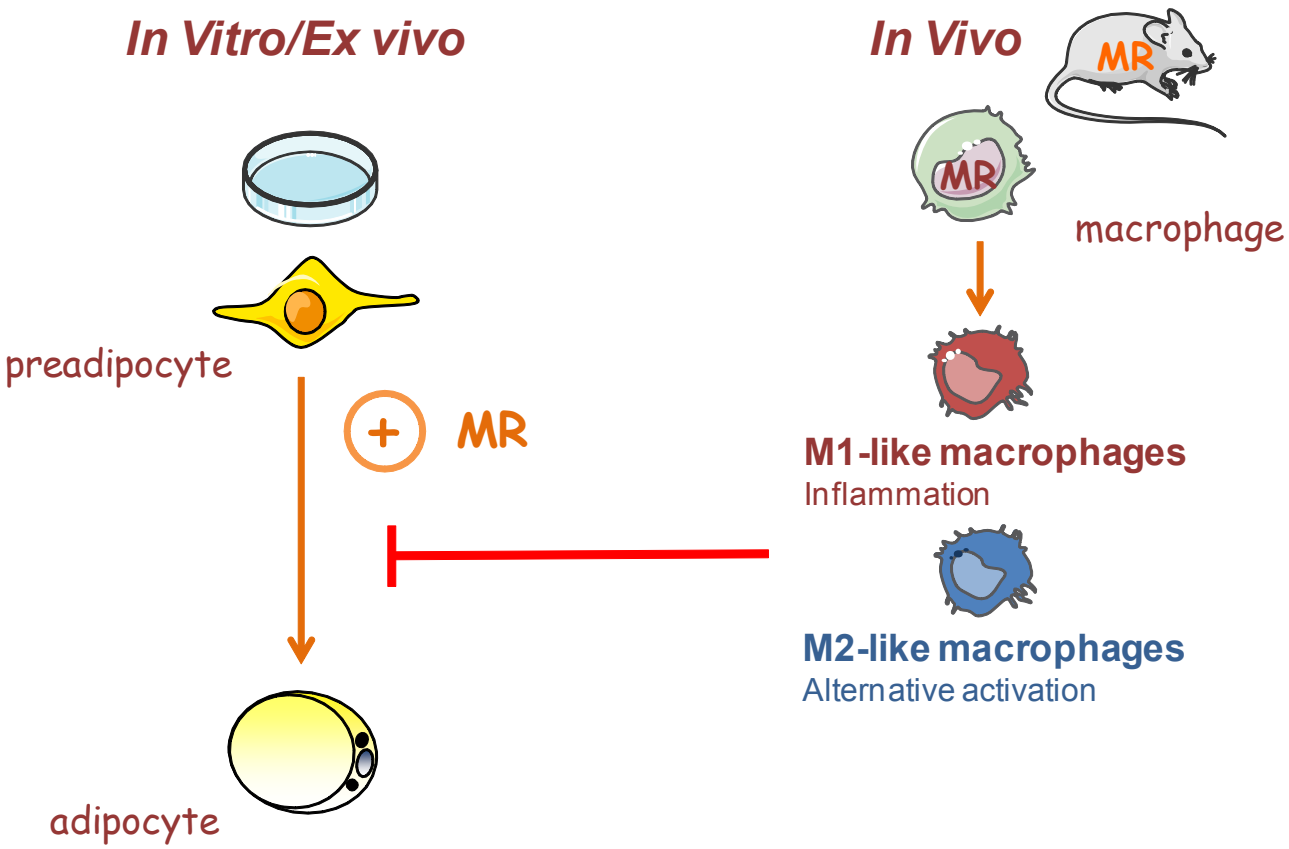
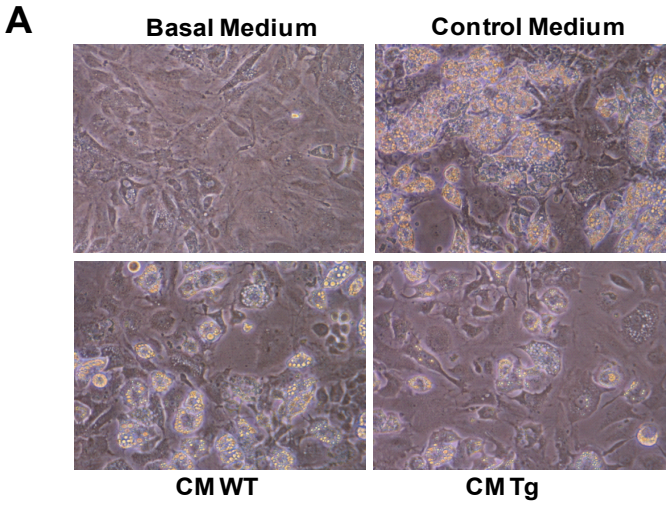
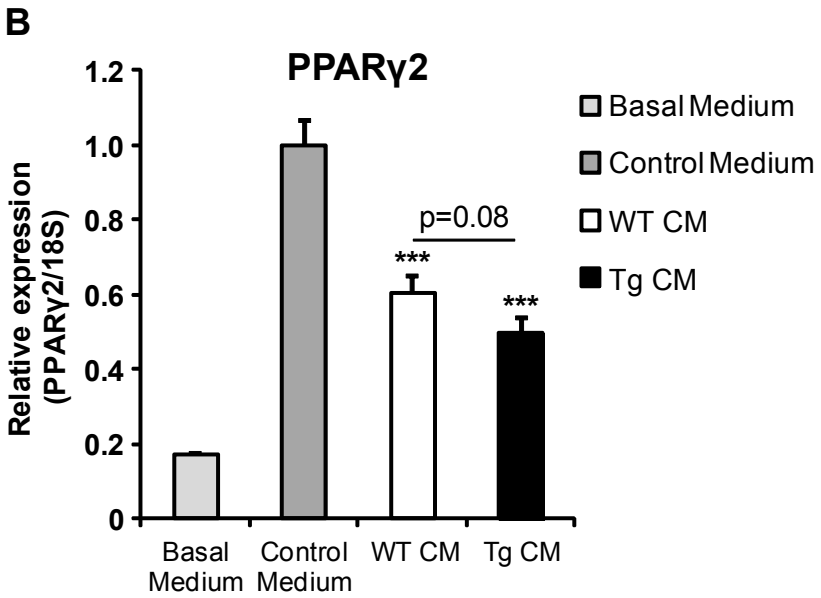
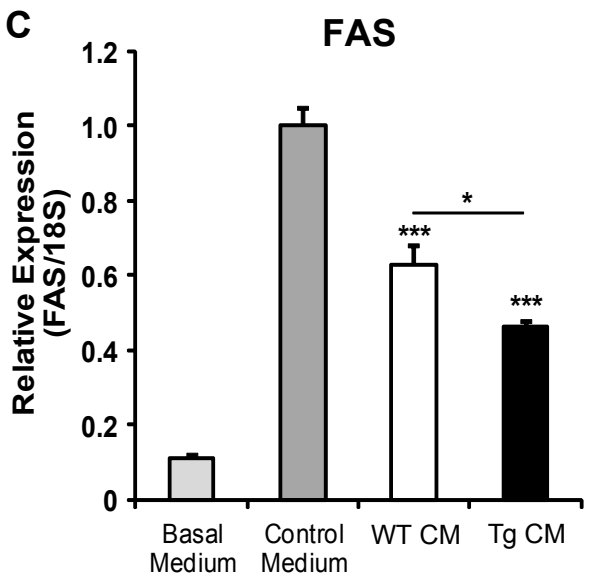

In Vitro/Ex vivo
In Vivo
MR
MR
macrophage
preadipocyte
MR
M1-like macrophages
Inflammation
M2-like macrophages
Alternative activation
adipocyte

Figure 10


A
Basal Medium
Control Medium
CM WT
CM Tg


B
PPARγ2
Relative expression (PPARγ2/18S)
1.2
1.0
0.8
0.6
0.4
0.2
0
p=0.08
***
***
Basal Medium
Control Medium
WT CM
Tg CM
Basal Medium
Control Medium
WT CM
Tg CM


C
FAS
Relative Expression (FAS/18S)
1.2
1.0
0.8
0.6
0.4
0.2
0
*
***
***
Basal Medium
Control Medium
WT CM
Tg CM

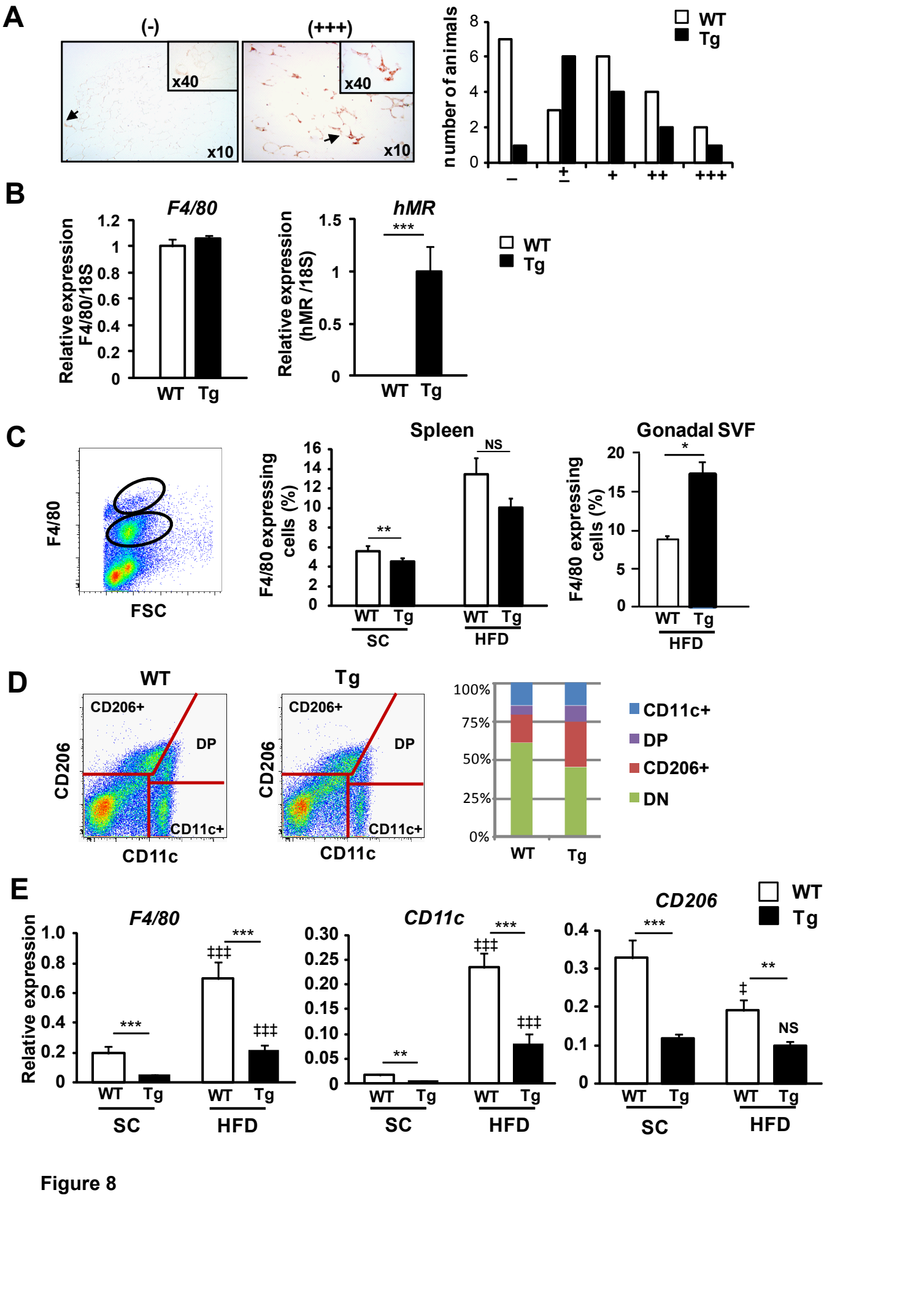

A
(-)
(+++)
x40
x10
number of animals
WT
Tg
B
F4/80
hMR
Relative expression F4/80/18S
Relative expression (hMR /18S)
***
WT Tg
C
F4/80
FSC
Spleen
Gonadal SVF
F4/80 expressing cells (%)
**
NS
*
SC
HFD
D
WT
Tg
CD206+
DP
CD11c+
CD206
CD11c
100%
75%
50%
25%
0%
CD11c+
DP
CD206+
DN
E
F4/80
CD11c
CD206
Relative expression
‡‡‡
‡
NS

Figure 8

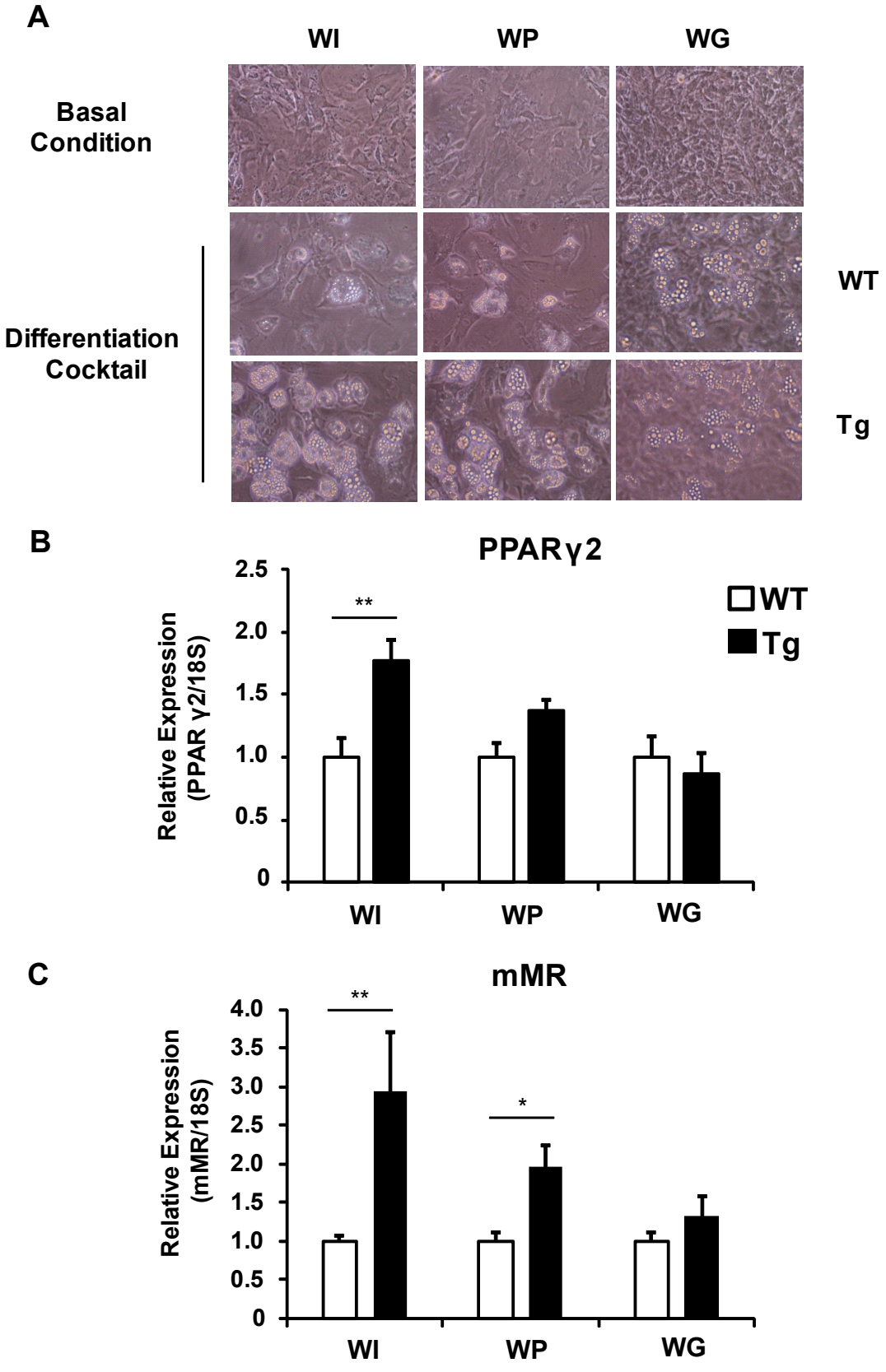

A
WI
WP
WG
Basal Condition
Differentiation Cocktail
WT
Tg
B
PPARγ2
WT
Tg
Relative Expression (PPAR γ2/18S)
2.5
2.0
1.5
1.0
0.5
0
**
WI
WP
WG
C
mMR
Relative Expression (mMR/18S)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0
**
*
WI
WP
WG

Figure 7

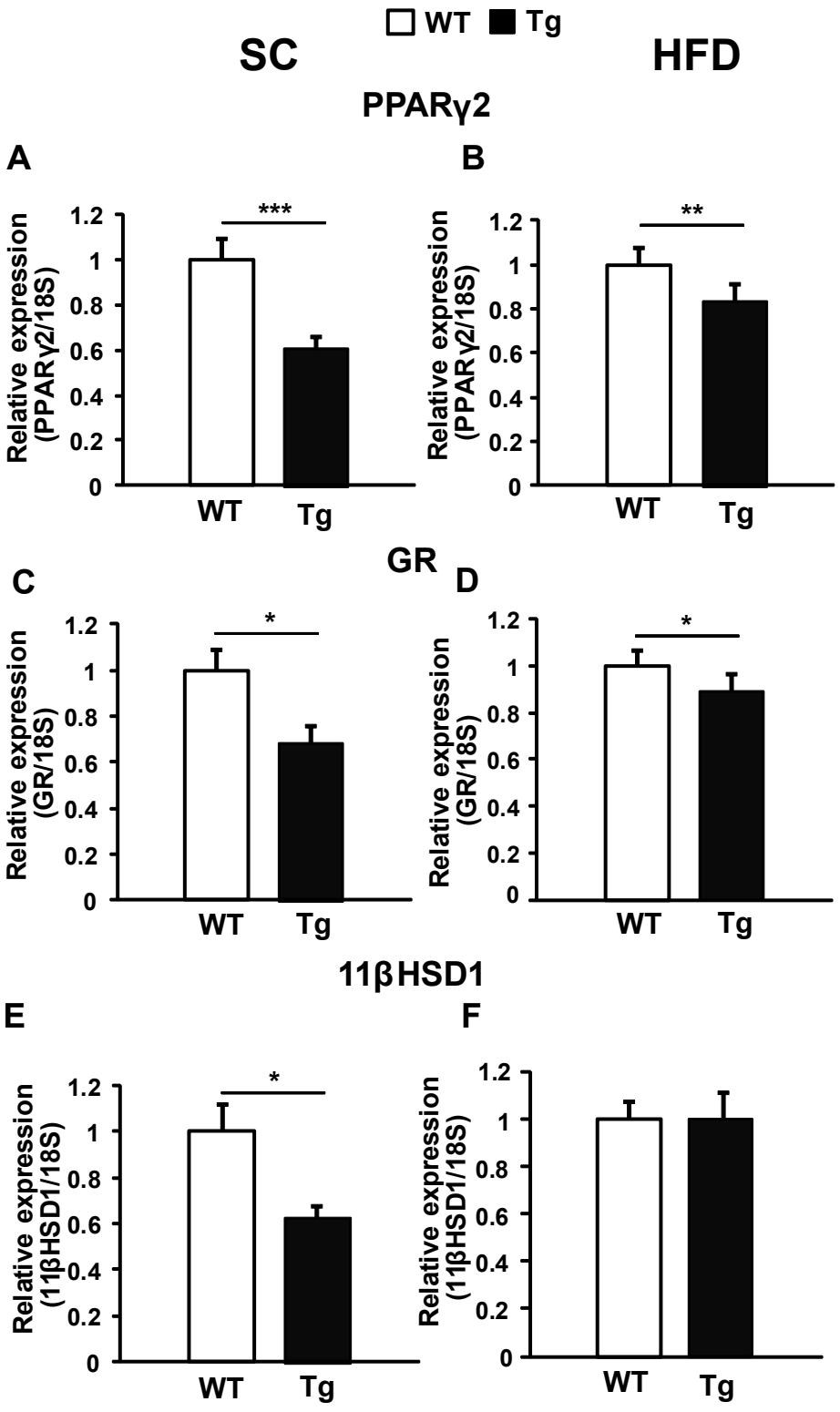

WT
Tg
SC
HFD
PPARγ2
A
B
Relative expression (PPARγ2/18S)
***
**
1.2
1
0.8
0.6
0.4
0.2
0
WT
Tg
GR
C
D
Relative expression (GR/18S)
*
11βHSD1
E
F
Relative expression (11βHSD1/18S)

Figure 6

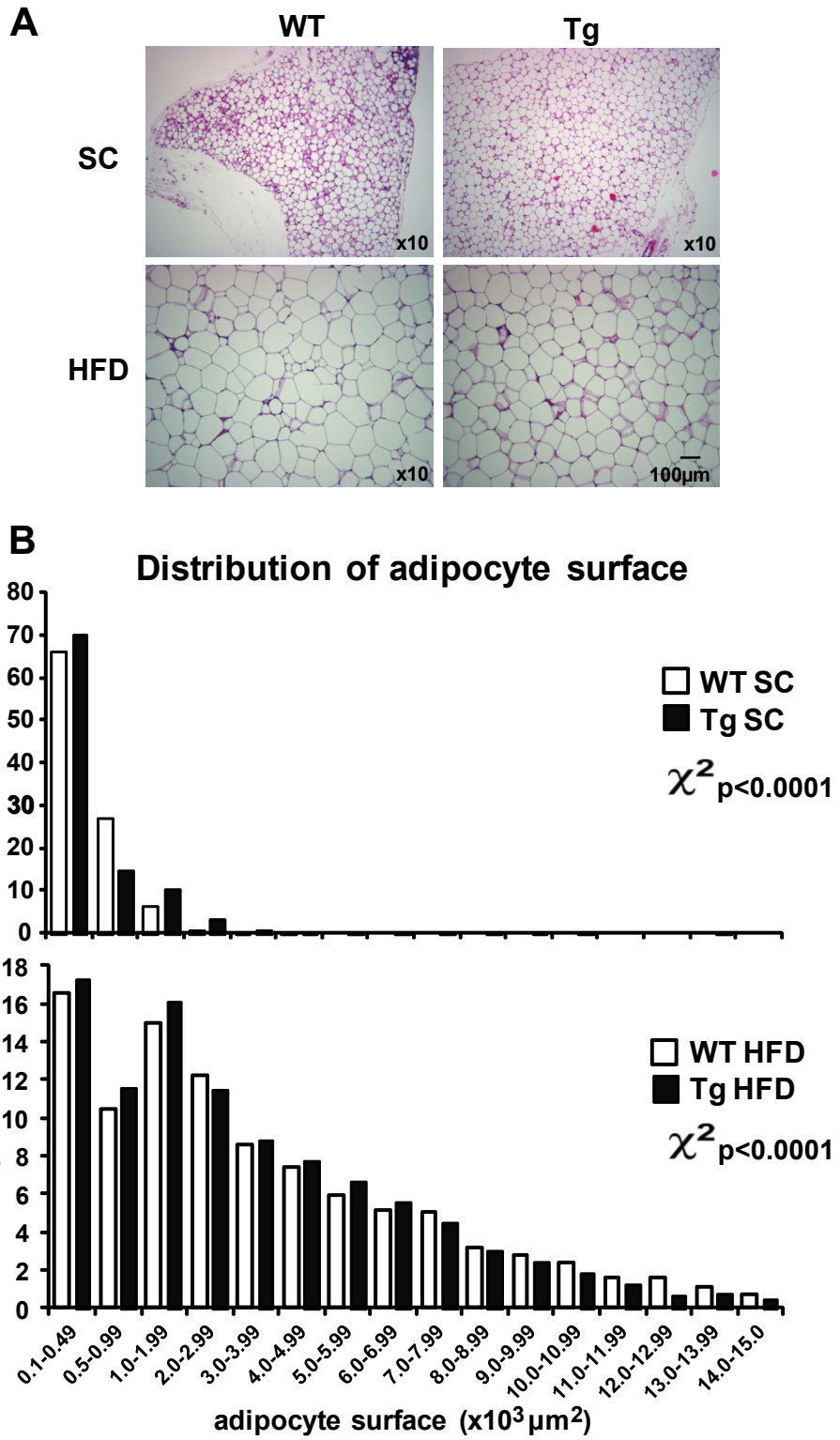

A
WT
Tg
SC
HFD
x10
x10
x10
100µm
B
Distribution of adipocyte surface
% adipocyte per class
WT SC
Tg SC
χ² p<0.0001
% adipocytes per class
WT HFD
Tg HFD
χ² p<0.0001
0.1-0.49
0.5-0.99
1.0-1.99
2.0-2.99
3.0-3.99
4.0-4.99
5.0-5.99
6.0-6.99
7.0-7.99
8.0-8.99
9.0-9.99
10.0-10.99
11.0-11.99
12.0-12.99
13.0-13.99
14.0-15.0
adipocyte surface (x10³ µm²)

Figure 5

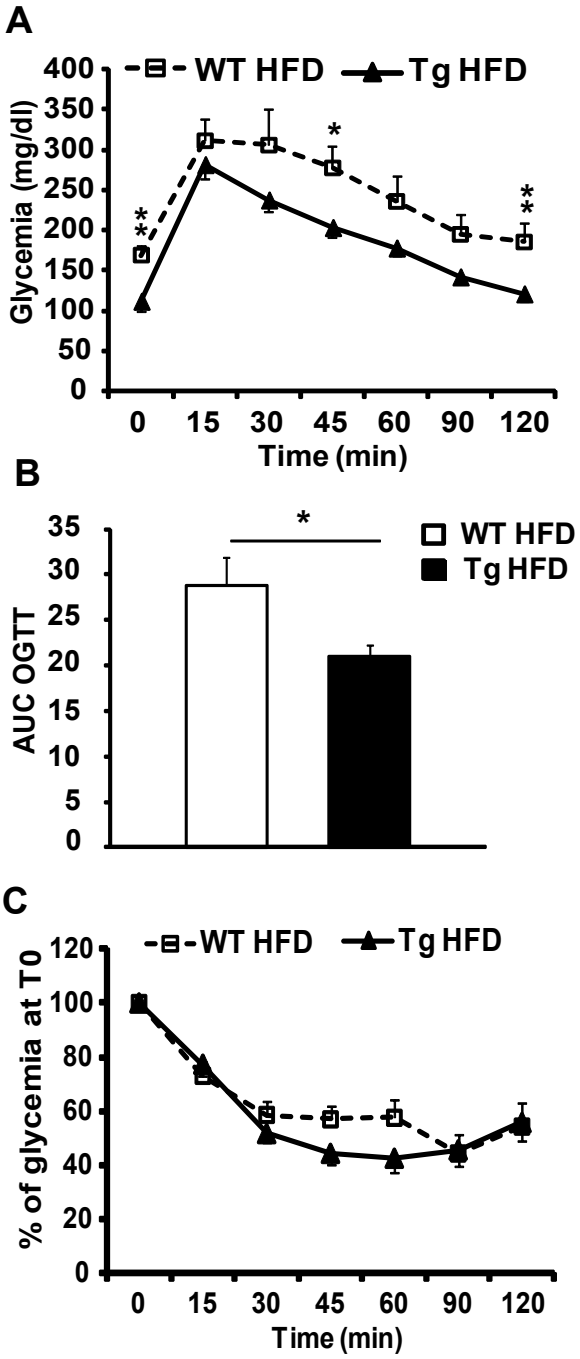

A
WT HFD
Tg HFD
Glycemia (mg/dl)
400
350
300
250
200
150
100
50
0
0 15 30 45 60 90 120
Time (min)
B
AUC OGTT
35
30
25
20
15
10
5
0
WT HFD
Tg HFD
C
% of glycemia at T0
120
100
80
60
40
20
0
0 15 30 45 60 90 120
Time (min)

Figure 4

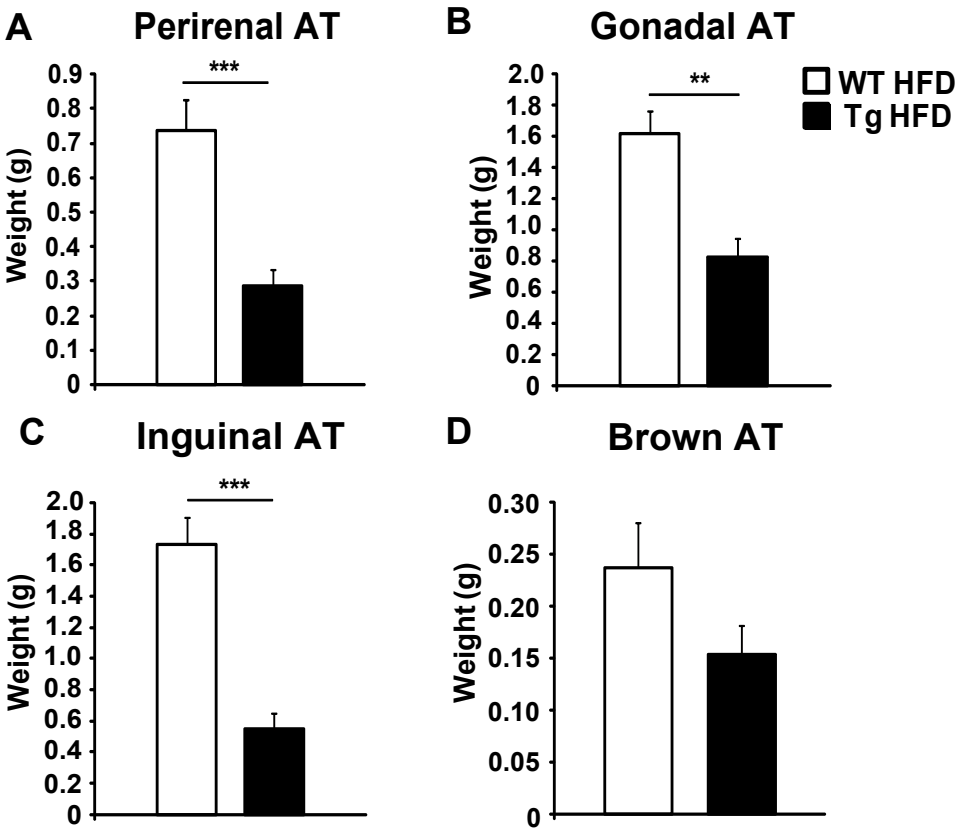

A
Perirenal AT
***
Weight (g)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
B
Gonadal AT
**
WT HFD
Tg HFD
Weight (g)
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
C
Inguinal AT
***
Weight (g)
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
D
Brown AT
Weight (g)
0.30
0.25
0.20
0.15
0.10
0.05
0

Figure 3

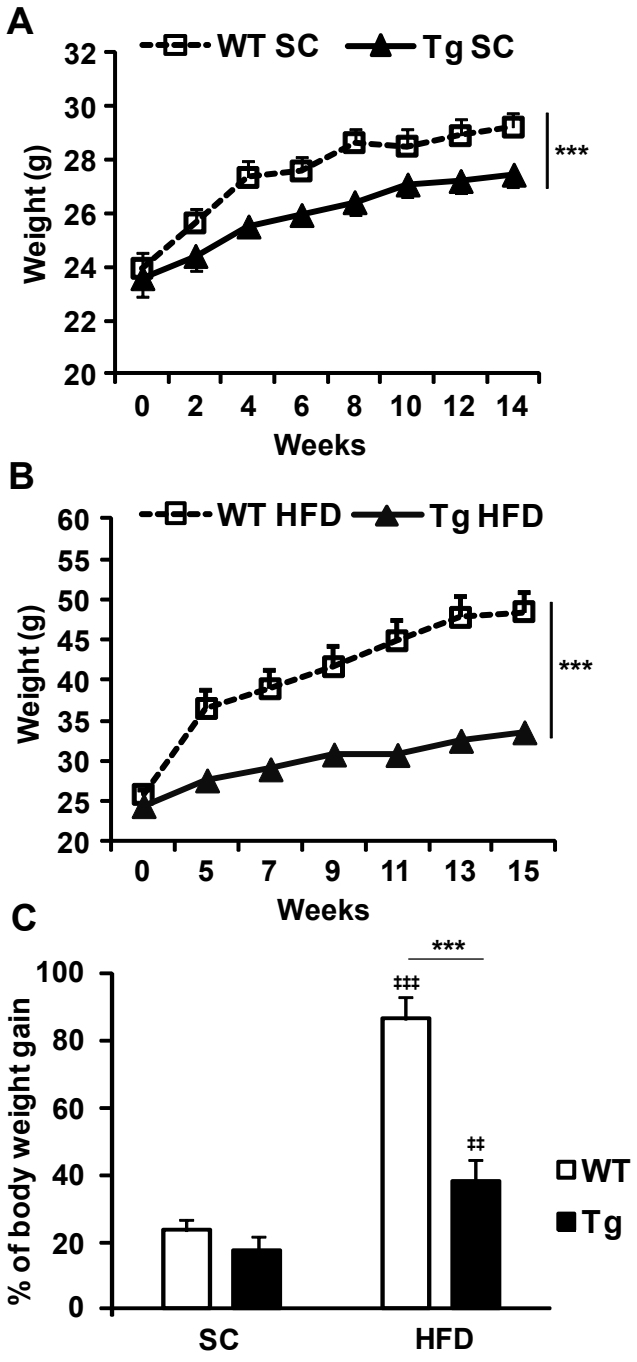

A
WT SC
Tg SC
Weight (g)
Weeks
***
B
WT HFD
Tg HFD
Weight (g)
Weeks
***
C
% of body weight gain
***
‡‡‡
‡‡
WT
Tg
SC
HFD

Figure 2