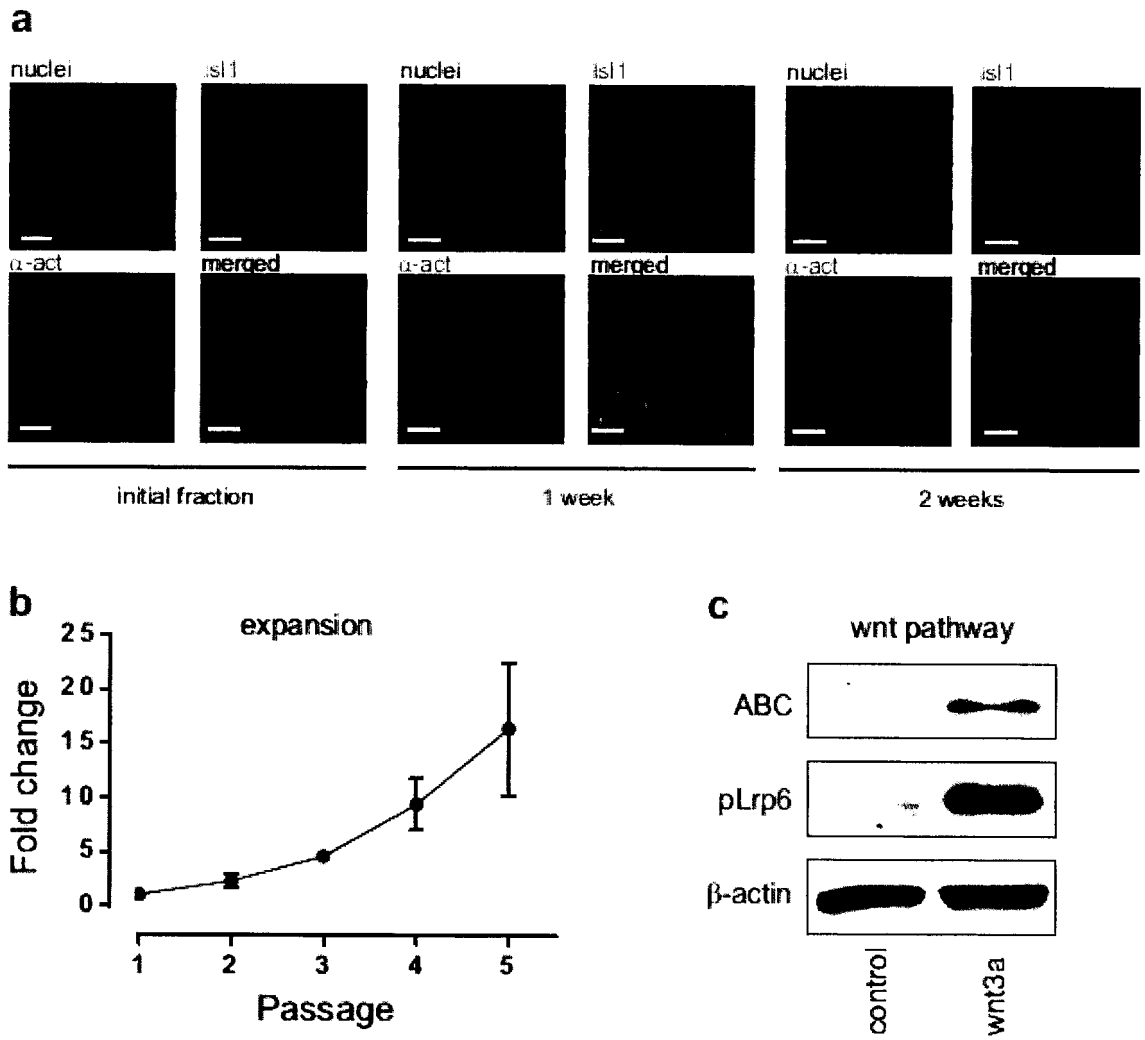

a
nuclei
isl1
nuclei
isl1
nuclei
isl1
α-act
merged
α-act
merged
α-act
merged
initial fraction
1 week
2 weeks
b
expansion
Fold change
25
20
15
10
5
0
1
2
3
4
5
Passage
c
wnt pathway
ABC
pLrp6
β-actin
control
wnt3a

Figure 1.

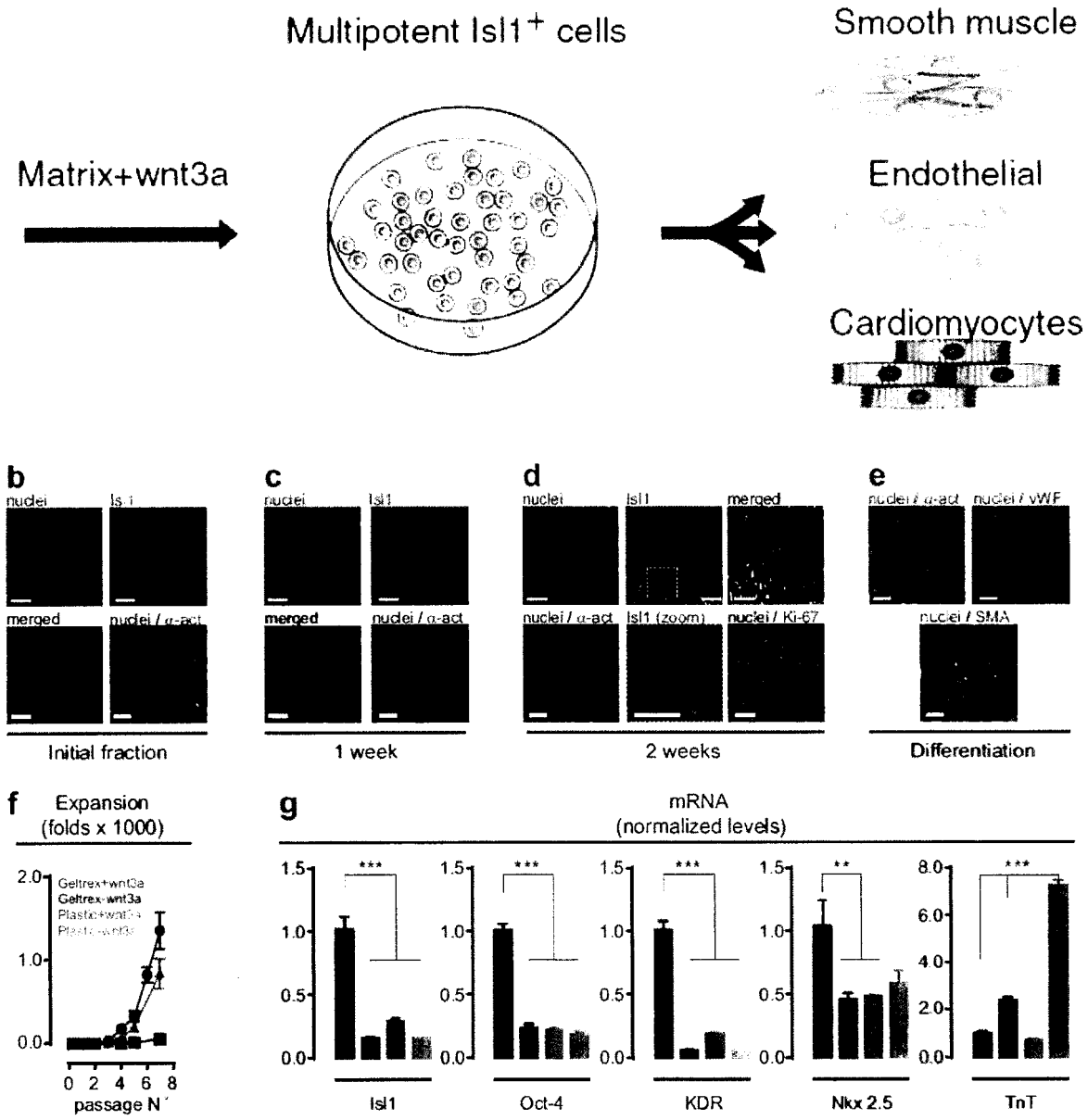

Multipotent Isl1+ cells
Smooth muscle
Matrix+wnt3a
Endothelial
Cardiomyocytes
b
nuclei
merged
nuclei / α-act
Initial fraction
c
nuclei
Isl1
merged
nuclei / α-act
1 week
d
nuclei
Isl1
merged
nuclei / α-act
Isl1 (zoom)
nuclei / Ki-67
2 weeks
e
nuclei / α-act
nuclei / vWF
nuclei / SMA
Differentiation
f
Expansion
(folds x 1000)
Geltrex+wnt3a
Geltrex-wnt3a
passage N
g
mRNA
(normalized levels)
Isl1
Oct-4
KDR
Nkx 2.5
TnT

Figure 2.

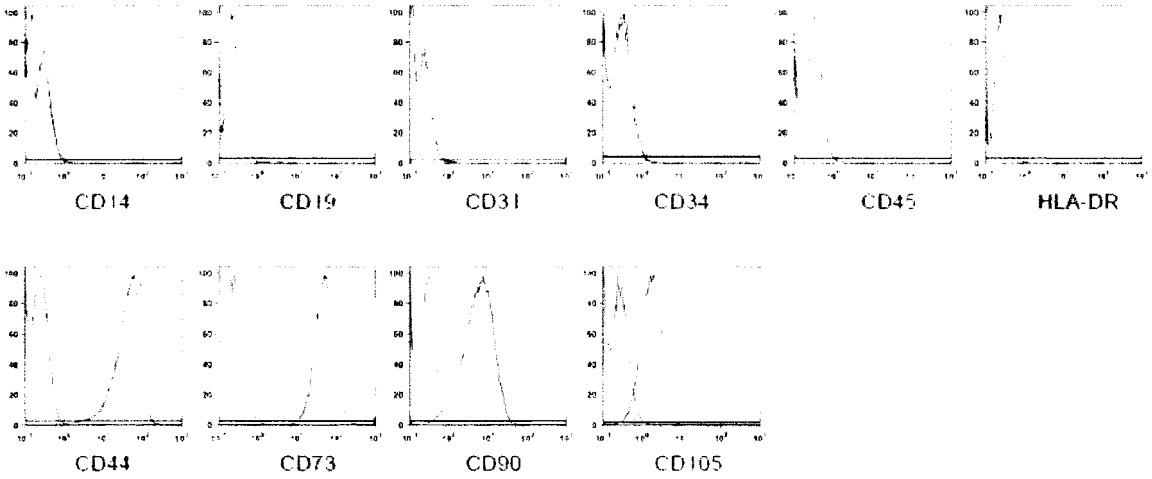


Figure 3.

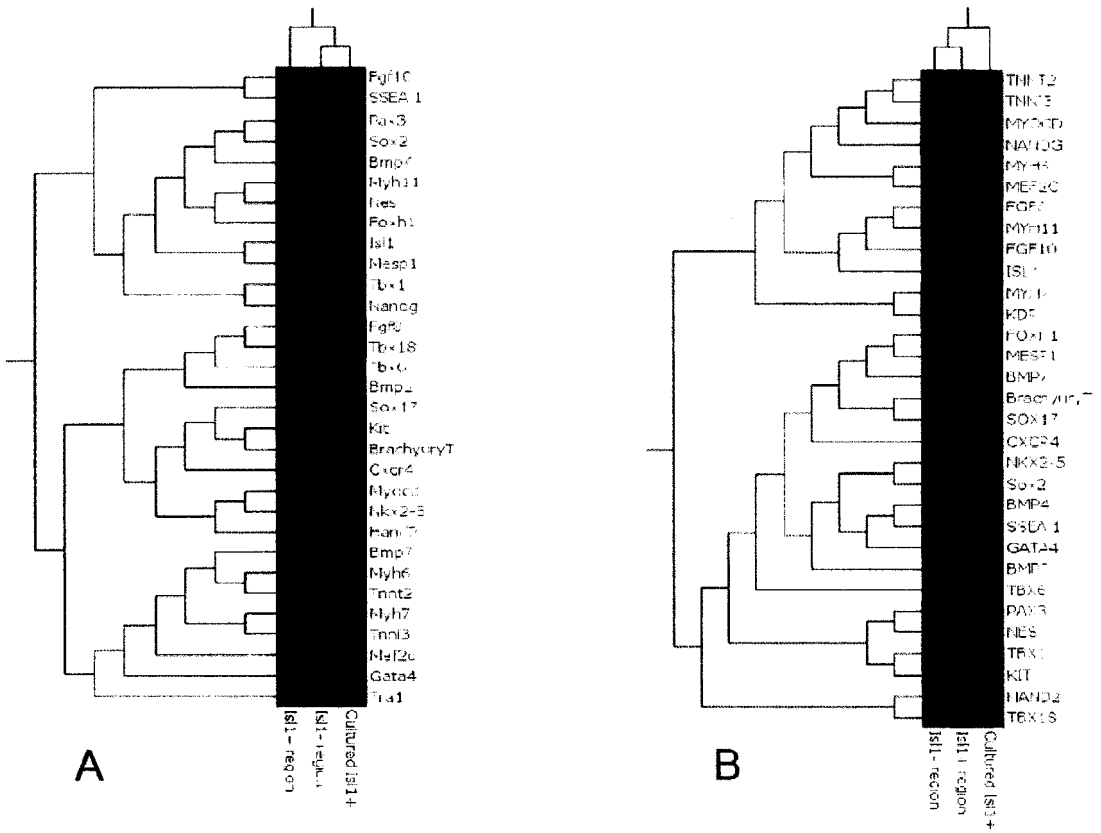


Figure 4.

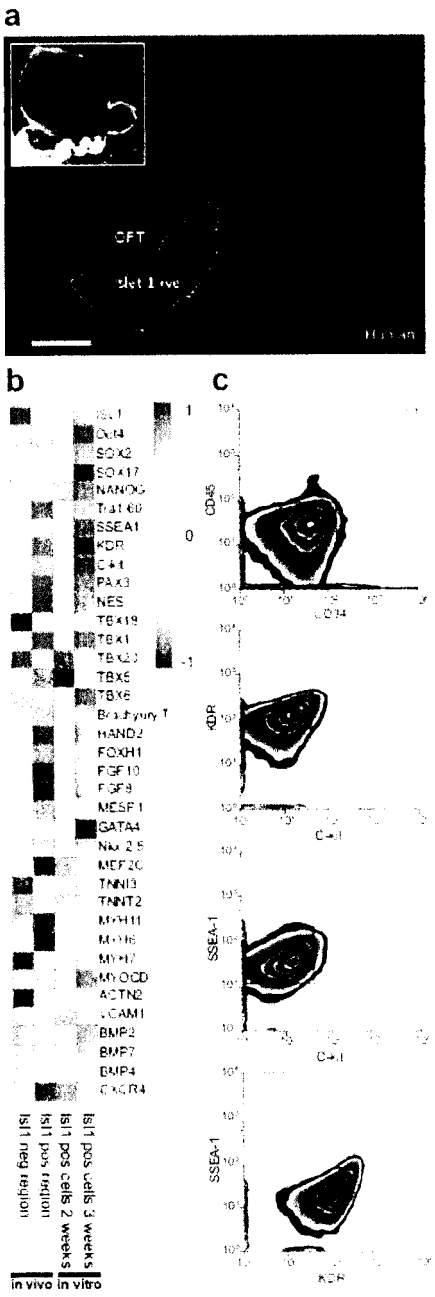

a
b
c
Isl1
Oct4
SOX2
SOX17
NANOG
Tra1-60
SSEA1
KDR
C-kit
PAX3
NES
TBX19
TBX1
TBX20
TBX6
TBX6
Brachyury T
HAND2
FOXH1
FGF10
FGF9
MESP1
GATA4
Nkx 2.5
MEF2C
TNNI3
TNNT2
MYH11
MYH6
MYH7
MYOCD
ACTN2
VCAM1
BMP2
BMP7
BMP4
CXCR4
1
0
-1
Isl1 neg region
Isl1 pos region
Isl1 pos cells 2 weeks
Isl1 pos cells 3 weeks
in vivo
in vitro
CD45
CD34
KDR
c-kit
SSEA-1
c-kit
SSEA-1
KDR

Figure 5.

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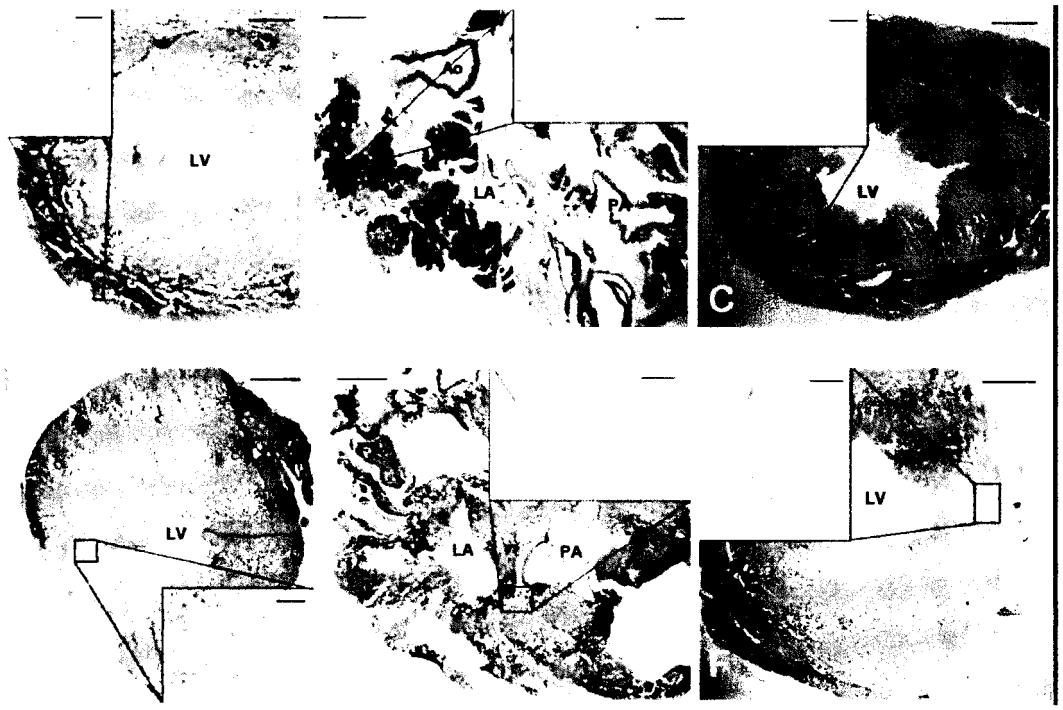


Figure 6.

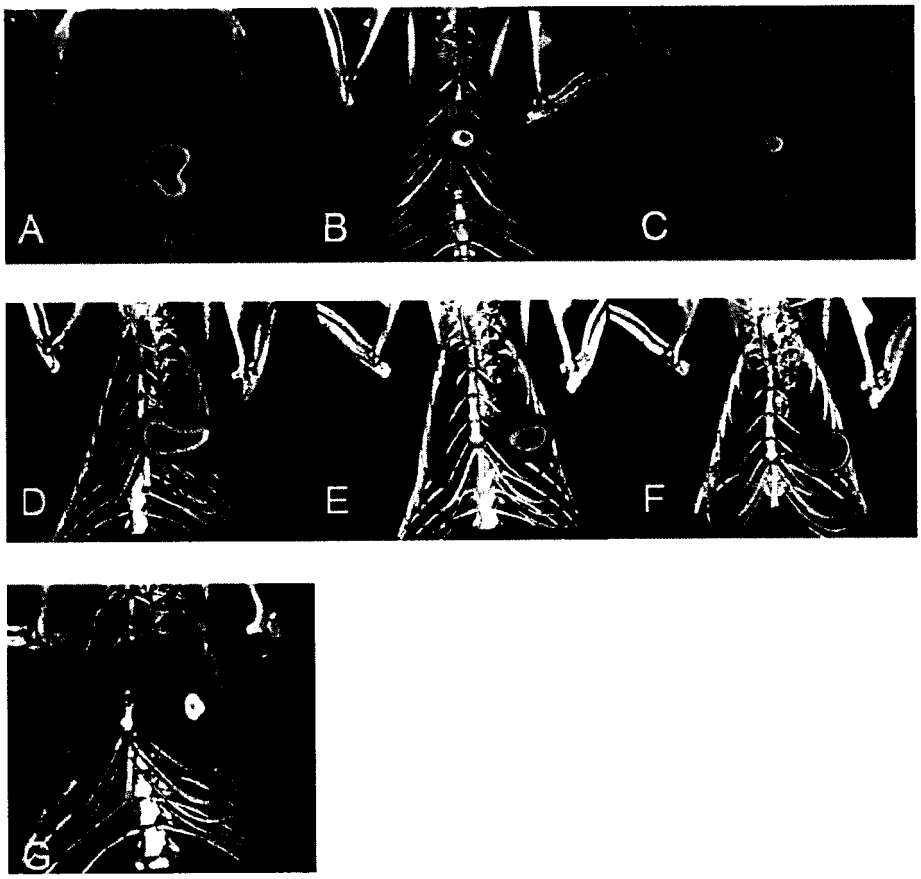


Figure 7.

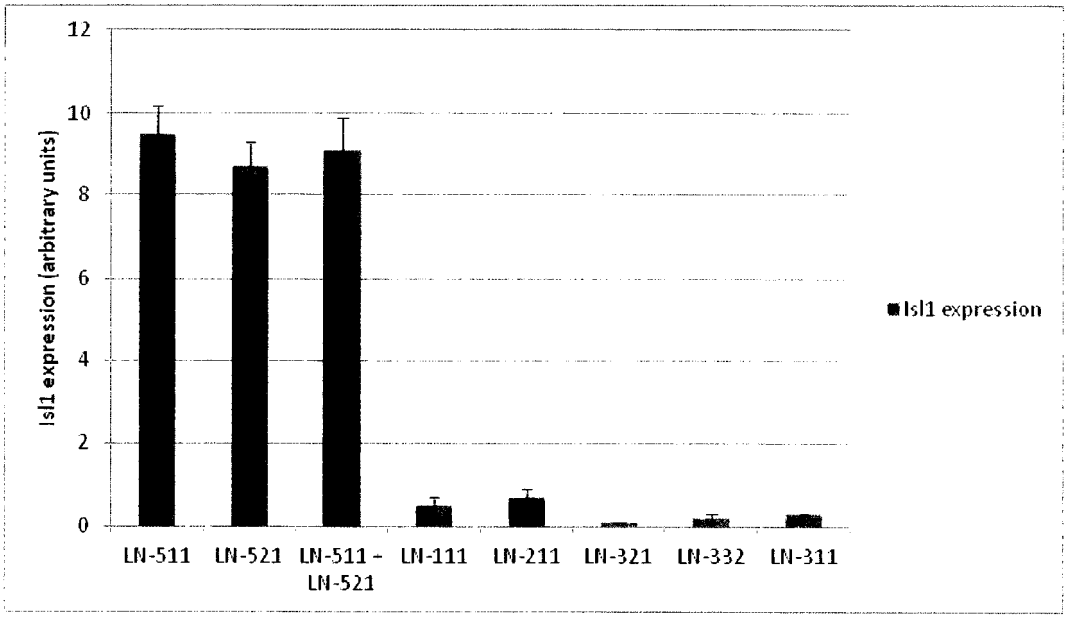

12
10
8
6
4
2
0
Isl1 expression (arbitrary units)
LN-511
LN-521
LN-511 - LN-521
LN-111
LN-211
LN-321
LN-332
LN-311
Isl1 expression

Figure 8.

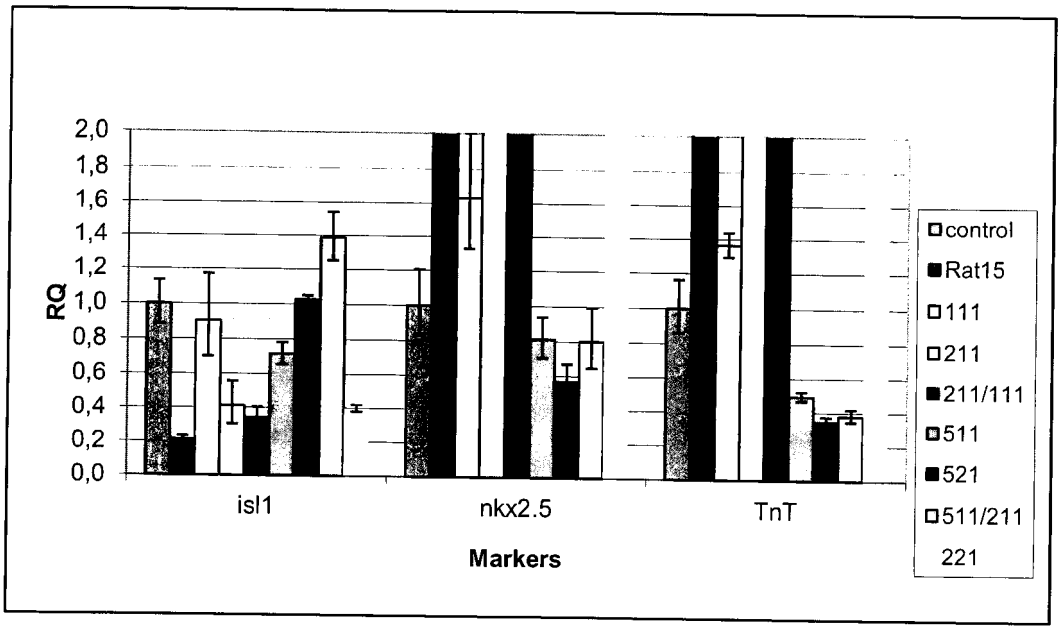

2,0
1,8
1,6
1,4
1,2
1,0
0,8
0,6
0,4
0,2
0,0
RQ
isl1
nkx2.5
TnT
Markers
control
Rat15
111
211
211/111
511
521
511/211
221

Figure 9.