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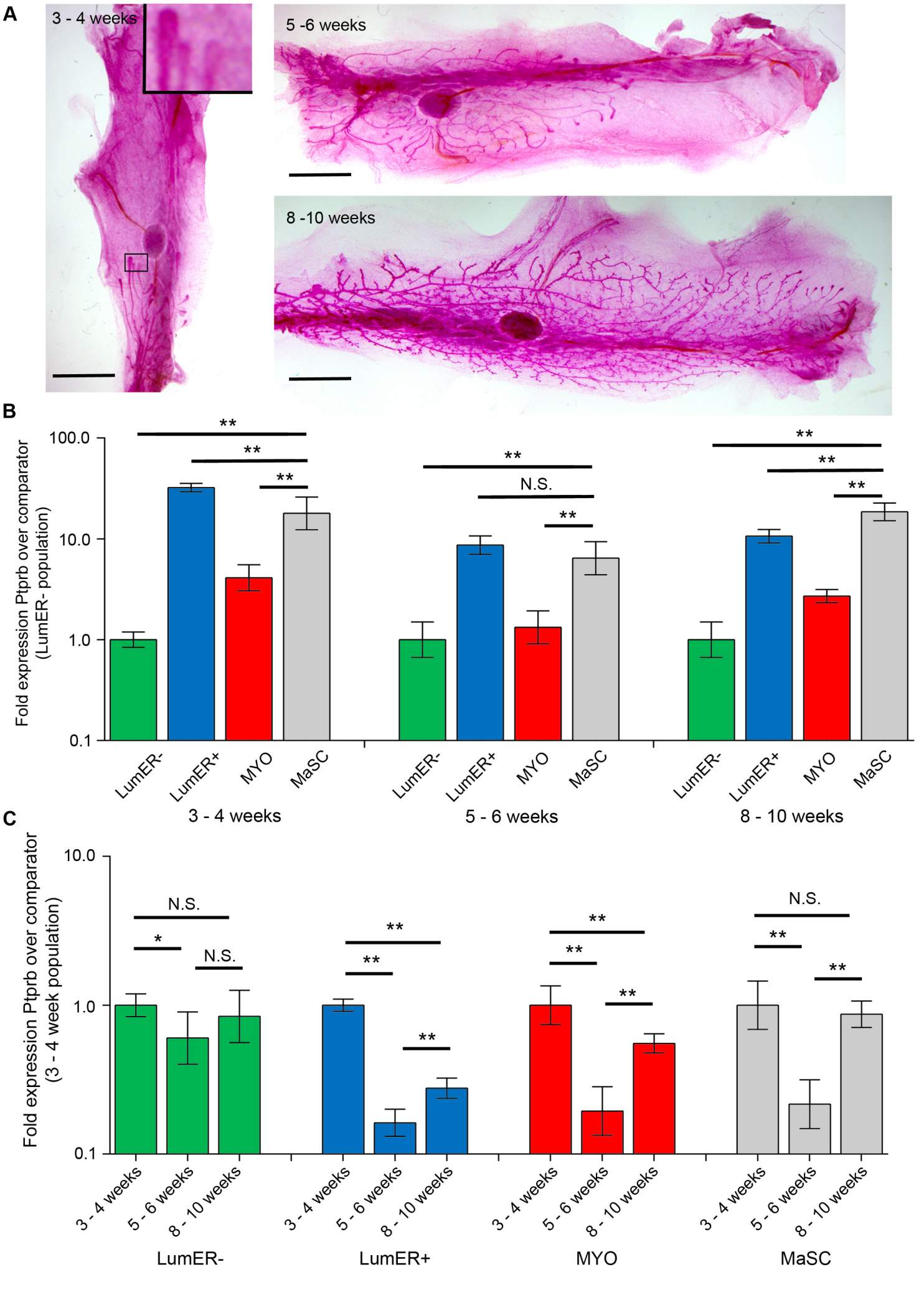
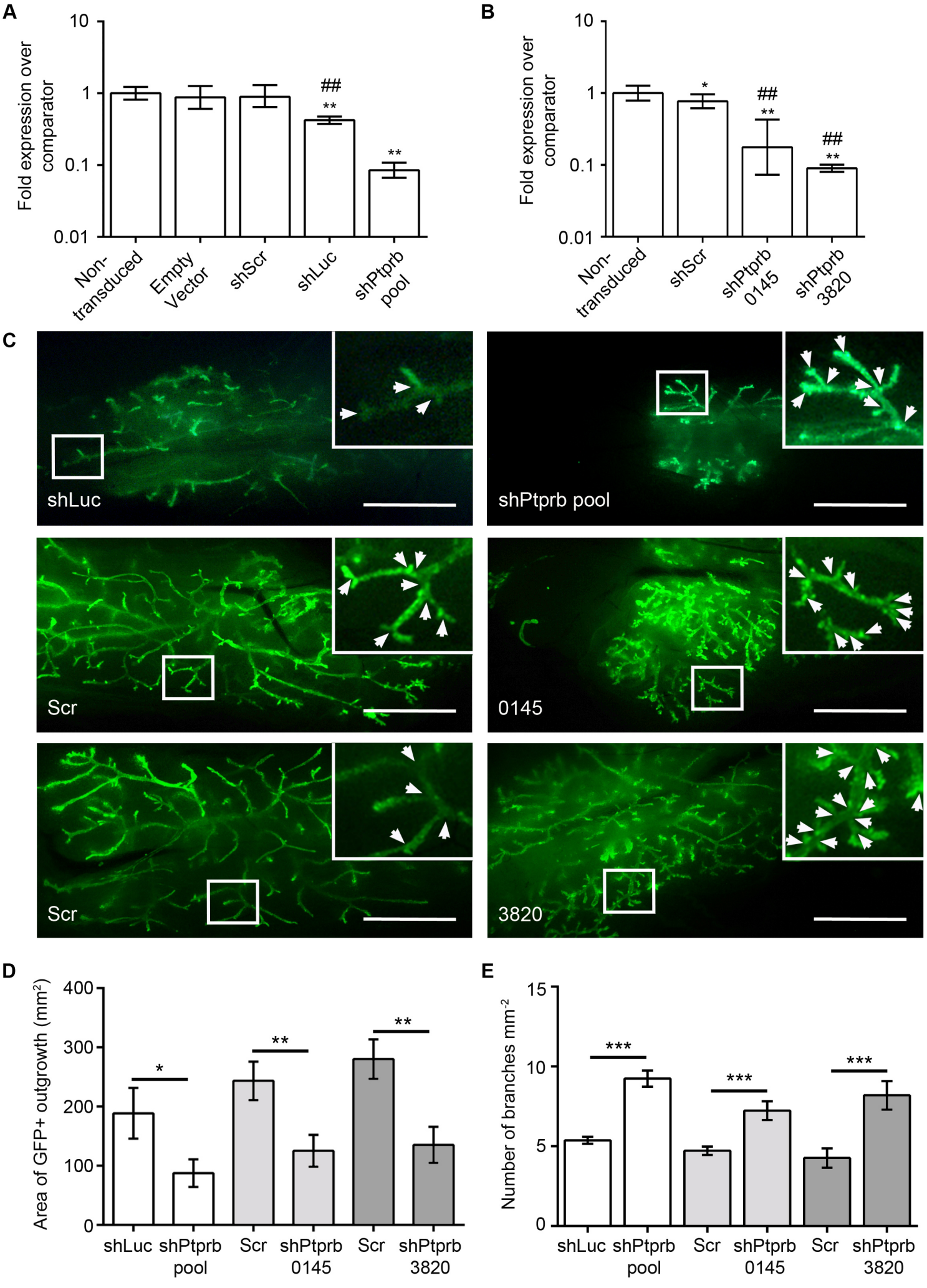
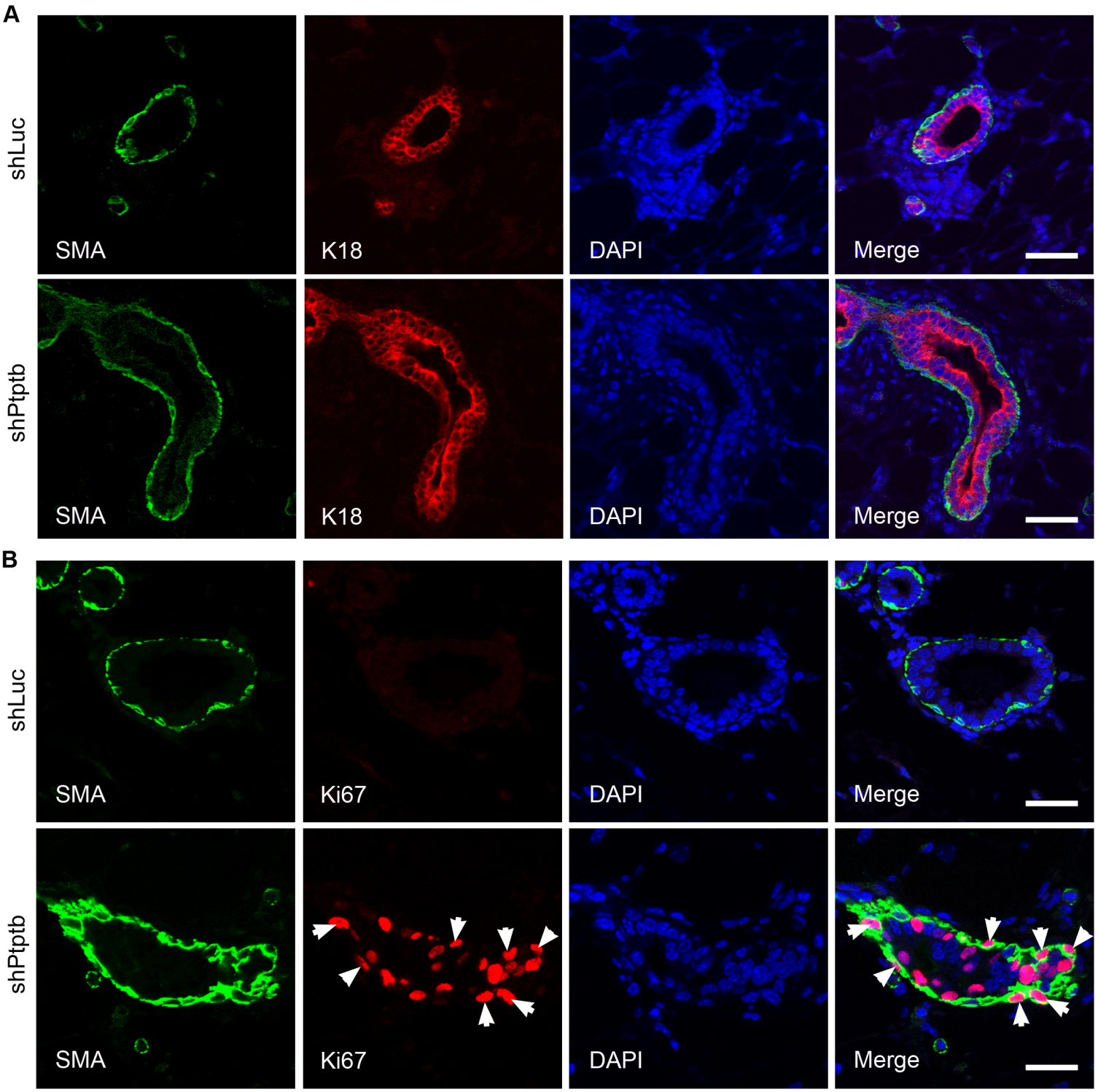
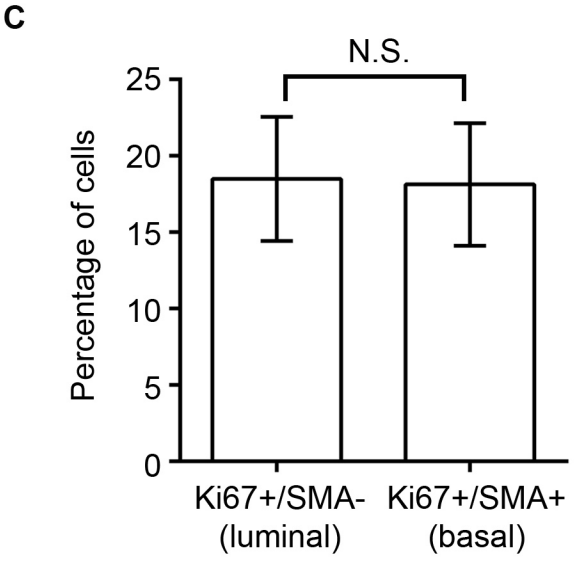
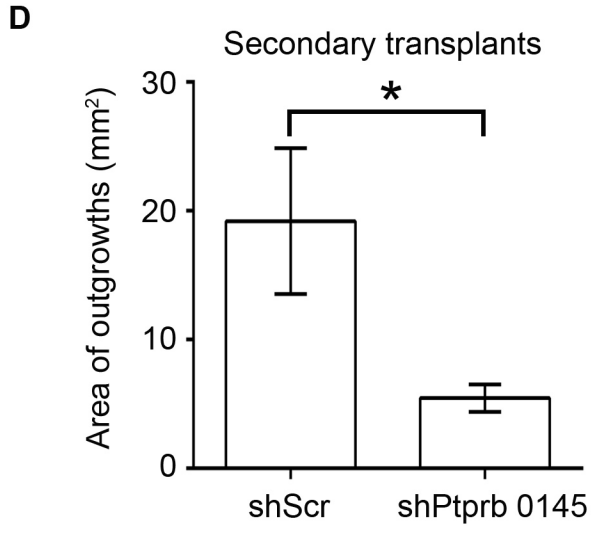

A
3 - 4 weeks
5 -6 weeks
8 -10 weeks
B
Fold expression Ptprb over comparator (LumER- population)
100.0
10.0
1.0
0.1
**
**
**
**
N.S.
**
**
**
**
LumER-
LumER+
MYO
MaSC
3 - 4 weeks
5 - 6 weeks
8 - 10 weeks
C
Fold expression Ptprb over comparator (3 - 4 week population)
10.0
1.0
0.1
N.S.
*
N.S.
**
**
**
**
**
**
N.S.
**
**
3 - 4 weeks
5 - 6 weeks
8 - 10 weeks
LumER-
LumER+
MYO
MaSC

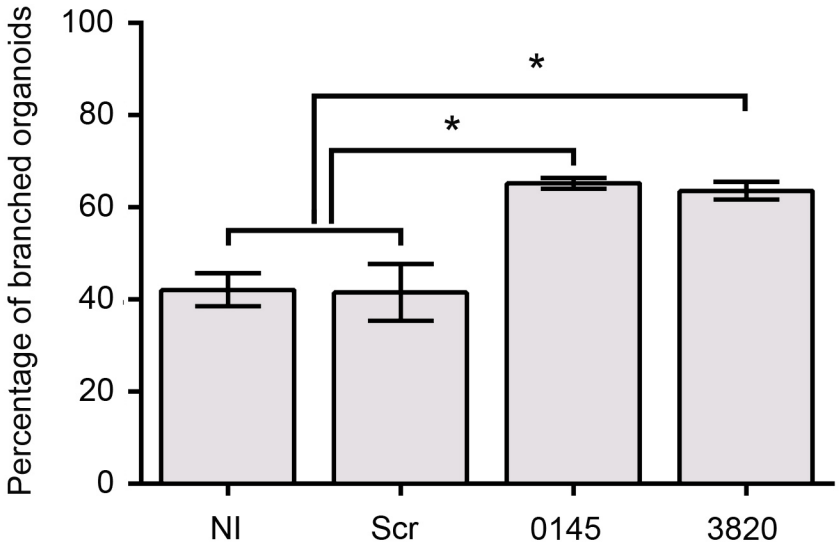

A
Fold expression over comparator
10
1
0.1
0.01
##
**
**
Non-transduced
Empty Vector
shScr
shLuc
shPtprb pool
B
Fold expression over comparator
10
1
0.1
0.01
*
##
**
##
**
Non-transduced
shScr
shPtprb 0145
shPtprb 3820
C
shLuc
shPtprb pool
Scr
0145
Scr
3820
D
Area of GFP+ outgrowth (mm²)
400
300
200
100
0
*
**
**
shLuc
shPtprb pool
Scr
shPtprb 0145
Scr
shPtprb 3820
E
Number of branches mm⁻²
15
10
5
0
***
***
***
shLuc
shPtprb pool
Scr
shPtprb 0145
Scr
shPtprb 3820


A
shLuc
SMA
K18
DAPI
Merge
shPtptb
SMA
K18
DAPI
Merge
B
shLuc
SMA
Ki67
DAPI
Merge
shPtptb
SMA
Ki67
DAPI
Merge

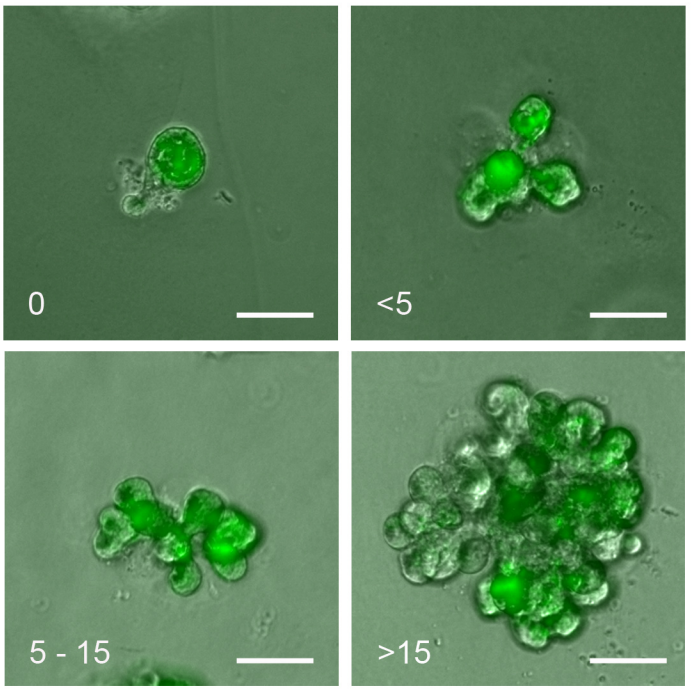

C
N.S.
Percentage of cells
25
20
15
10
5
0
Ki67+/SMA-
(luminal)
Ki67+/SMA+
(basal)


D
Secondary transplants
*
Area of outgrowths (mm²)
30
20
10
0
shScr
shPtprb 0145

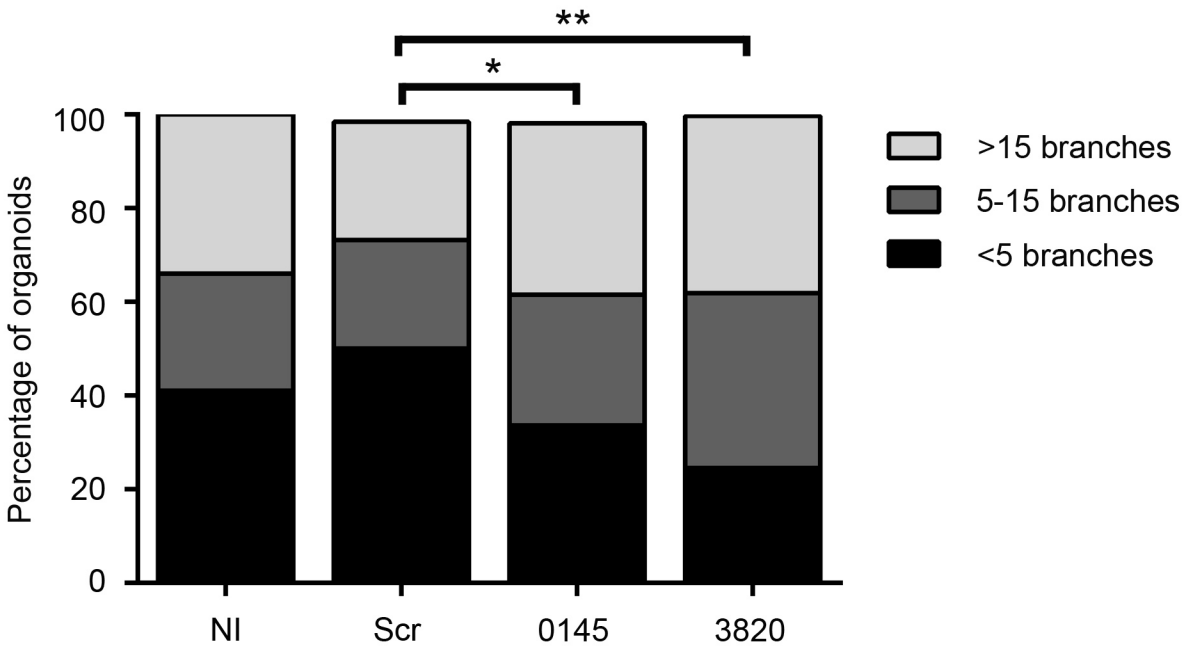
A

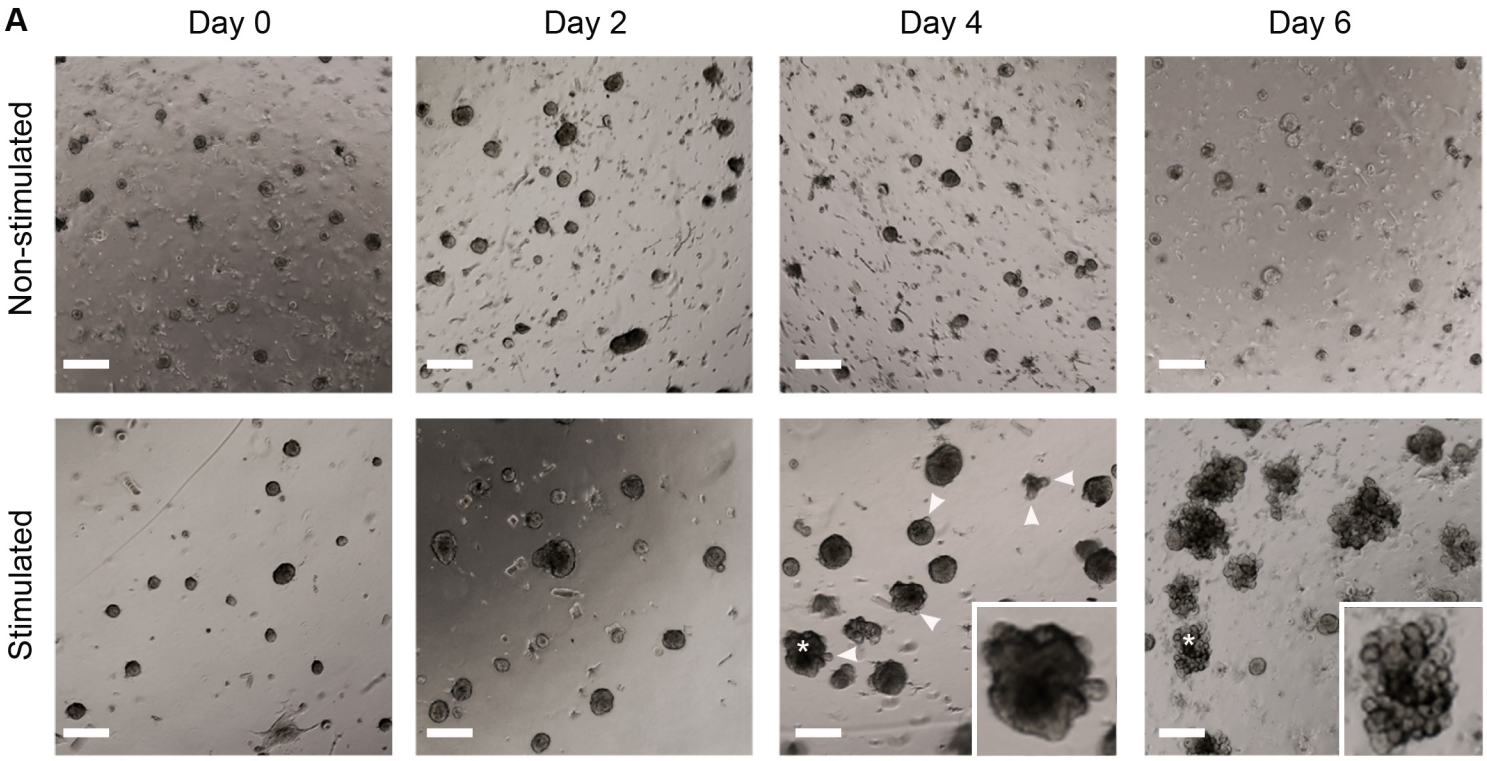

Percentage of branched organoids
100
80
60
40
20
0
*
*
NI
Scr
0145
3820

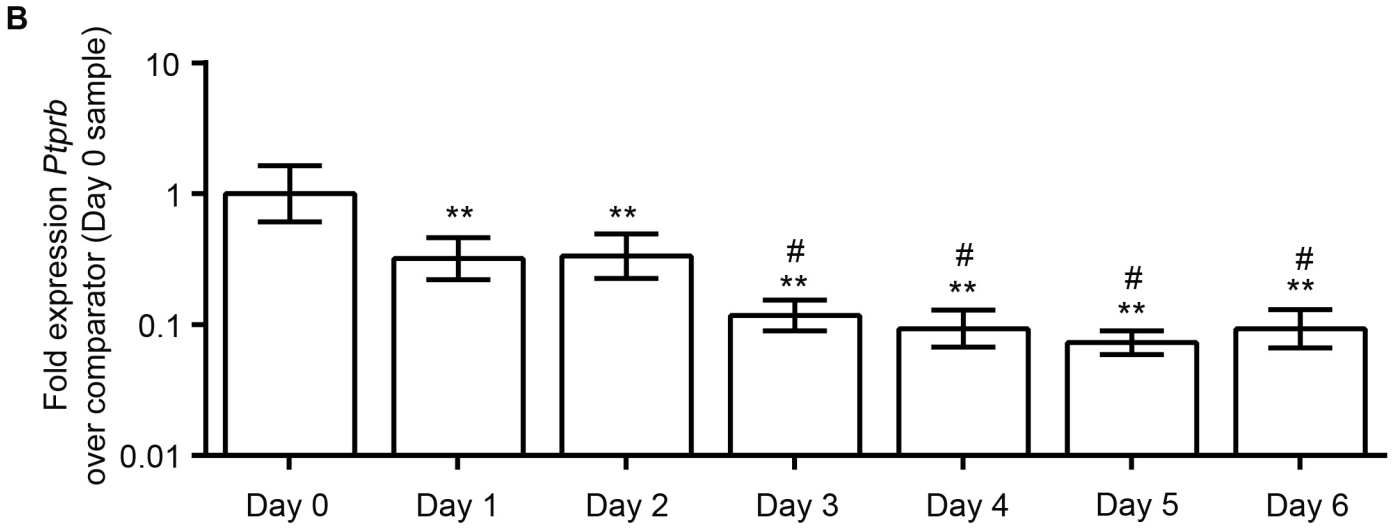
B

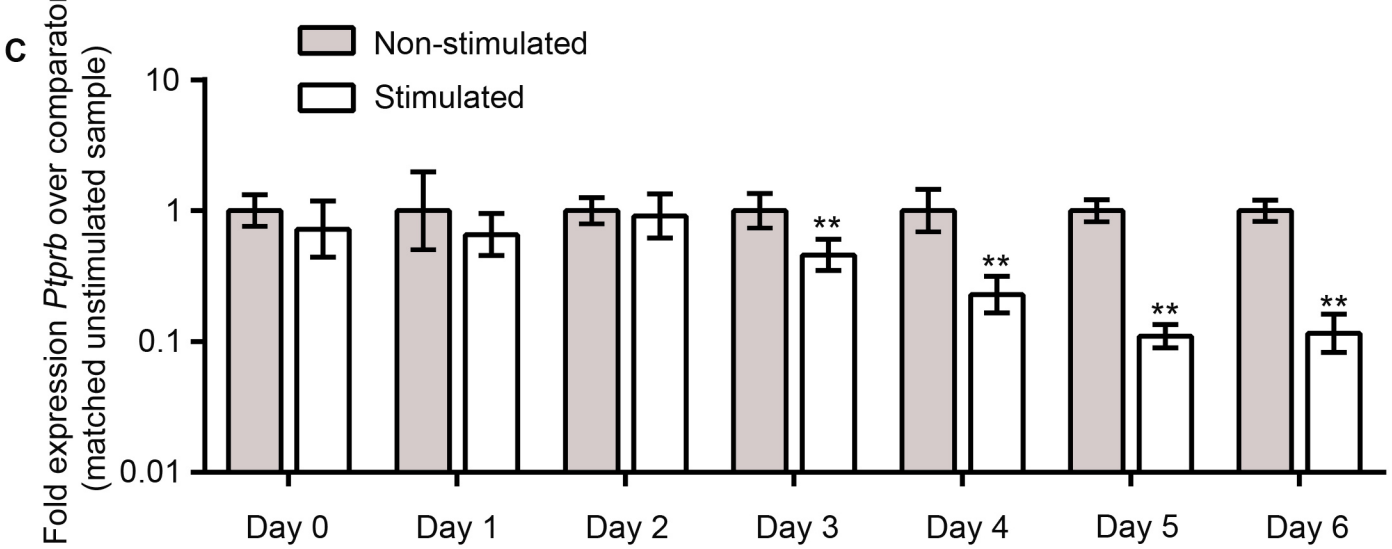

0
<5
5 - 15
>15

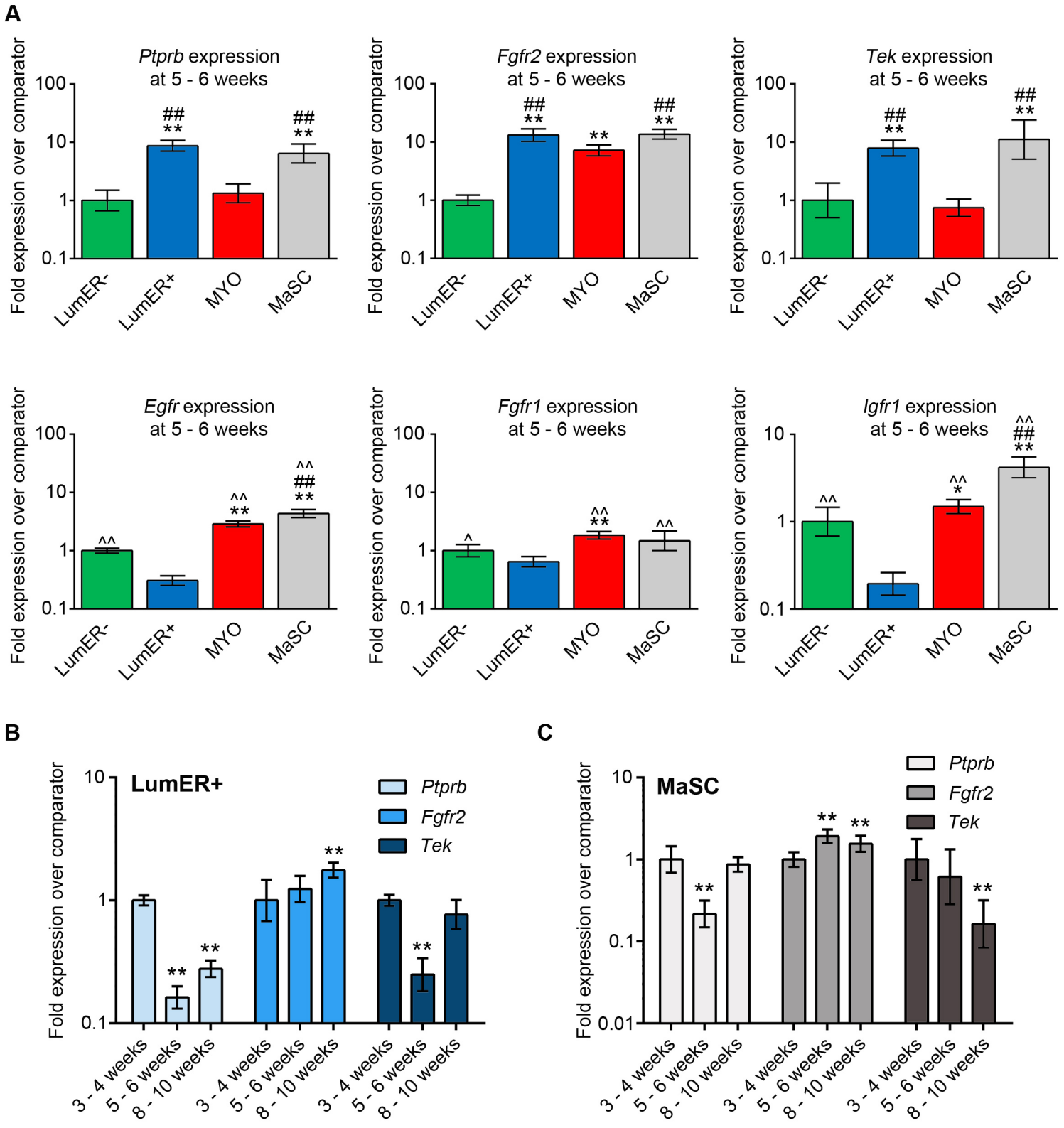
C

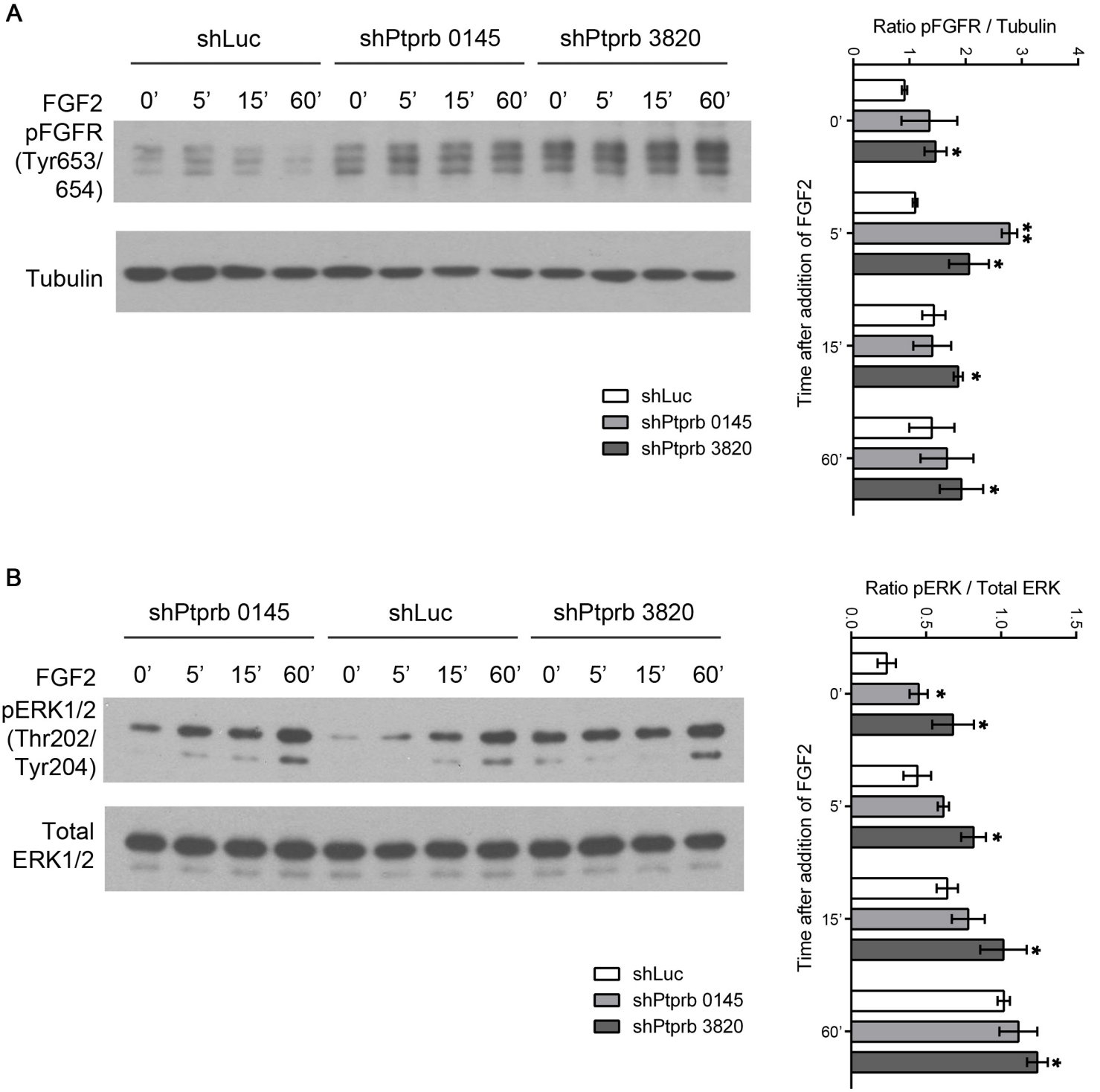

**
*
Percentage of organoids
100
80
60
40
20
0
NI
Scr
0145
3820
>15 branches
5-15 branches
<5 branches


A
Day 0
Day 2
Day 4
Day 6
Non-stimulated
Stimulated


B
Fold expression Ptprb over comparator (Day 0 sample)
10
1
0.1
0.01
**
#
Day 0
Day 1
Day 2
Day 3
Day 4
Day 5
Day 6


C
Fold expression Ptprb over comparator (matched unstimulated sample)
Non-stimulated
Stimulated
10
1
0.1
0.01
**
Day 0
Day 1
Day 2
Day 3
Day 4
Day 5
Day 6


A
Ptprb expression at 5 - 6 weeks
Fgfr2 expression at 5 - 6 weeks
Tek expression at 5 - 6 weeks
Egfr expression at 5 - 6 weeks
Fgfr1 expression at 5 - 6 weeks
Igfr1 expression at 5 - 6 weeks
Fold expression over comparator
LumER-
LumER+
MYO
MaSC
B
LumER+
Ptprb
Fgfr2
Tek
3 - 4 weeks
5 - 6 weeks
8 - 10 weeks
C
MaSC


A
shLuc
shPtprb 0145
shPtprb 3820
FGF2
0’ 5’ 15’ 60’ 0’ 5’ 15’ 60’ 0’ 5’ 15’ 60’
pFGFR (Tyr653/654)
Tubulin
shLuc
shPtprb 0145
shPtprb 3820
Ratio pFGFR / Tubulin
0 1 2 3 4
Time after addition of FGF2
0’
5’
15’
60’
*
**
B
shPtprb 0145
shLuc
shPtprb 3820
FGF2
0’ 5’ 15’ 60’ 0’ 5’ 15’ 60’ 0’ 5’ 15’ 60’
pERK1/2 (Thr202/Tyr204)
Total ERK1/2
shLuc
shPtprb 0145
shPtprb 3820
Ratio pERK / Total ERK
0.0 0.5 1.0 1.5
Time after addition of FGF2
0’
5’
15’
60’
*
C
Percentage of organoids
0 20 40 60 80 100
*** * *** N.S.
bFGF + + + + +
shRNA Scr 0145 0145 3820 3820
ERK1/2 i - - + - +
< 5 branches
5 - 15 branches
>15 branches