Supplementary Figure legends

Figure S1. Negative correlation between BMP4 and miR-200 family members in murine lung adenocarcinoma cells.

Quantitative RT-PCR (qRT-PCR) of *Bmp4* and miR-200 family members (miR-200a, 200b, 141, and 429) in 13 murine lung adenocarcinoma cells. r and p, one-tailed Spearman's rank correlation test.

Figure S2. Negative correlation between BMP4 and miR-200 family members in human lung adenocarcinomas.

mRNA and miRNA microarray data of human lung adenocarcinomas (n=32) were obtained from NCBI Gene Expression Omnibus database (GSE63459 and GSE63805, respectively). r and p, one-tailed Spearman's rank correlation test.

Figure S3. Negative correlation between BMP4 and miR-200 family members in human breast invasive carcinomas.

mRNA and miRNA expression data of human breast invasive carcinomas (TGCA, Nature 2012, n=285) were obtained from cBioPortal (http://www.cbioportal.org/). r and p, one-tailed Spearman's rank correlation test.

Figure S4. BMP4 is down-regulated in miR-200-overexpressing cells.

(A) qRT-PCR of miR-200 family members (200a, 200b, and 200c) in 344SQ transfected with miR-200b/200a/429. The expression levels were normalized to those of 344SQ_vec (=1.0). Mean+SD, n=3; p, two-tailed Student's *t*-test. (B) qRT-PCR of *Bmp4* and *Zeb1* in 531LN2

transfected with miR-200b/200a/429 (miR-200). The expression levels were normalized to those of 531LN2_vec (=1.0). Mean+SD, n=3; p, two-tailed Student's *t*-test.

Figure S5. BMP4 knockdown suppresses cancer cell growth and migration. (**A**) qRT-PCR of *BMP4* in H157 transfected with *BMP4* shRNAs (KD #3 and #5) or nontargeting control (NTC) vector. The expression levels were normalized to that of NTC (=1.0). Mean+SD, n=3; p, two-tailed Student's *t*-test. (**B**) MTT assay of H157-*BMP4*-KD and NTC cells over 4 days. Mean±SD, n=4; p, two-tailed Student's *t*-test. (**C**) Soft agar assays of H157-*BMP4*-KD and NTC cells over 2 weeks. Colonies (> 200 μm in diameter) of three randomly selected fields were counted using ImageJ. Mean+SD, n=3; p, two-tailed Student's *t*-test. (**D**) Migrated cells in Boyden chambers were photographed and counted. Mitomycin C (1 μg/mL) was added to the culture media to block cell proliferation. Mean+SD, n=3; p, two-tailed Student's *t*-test.

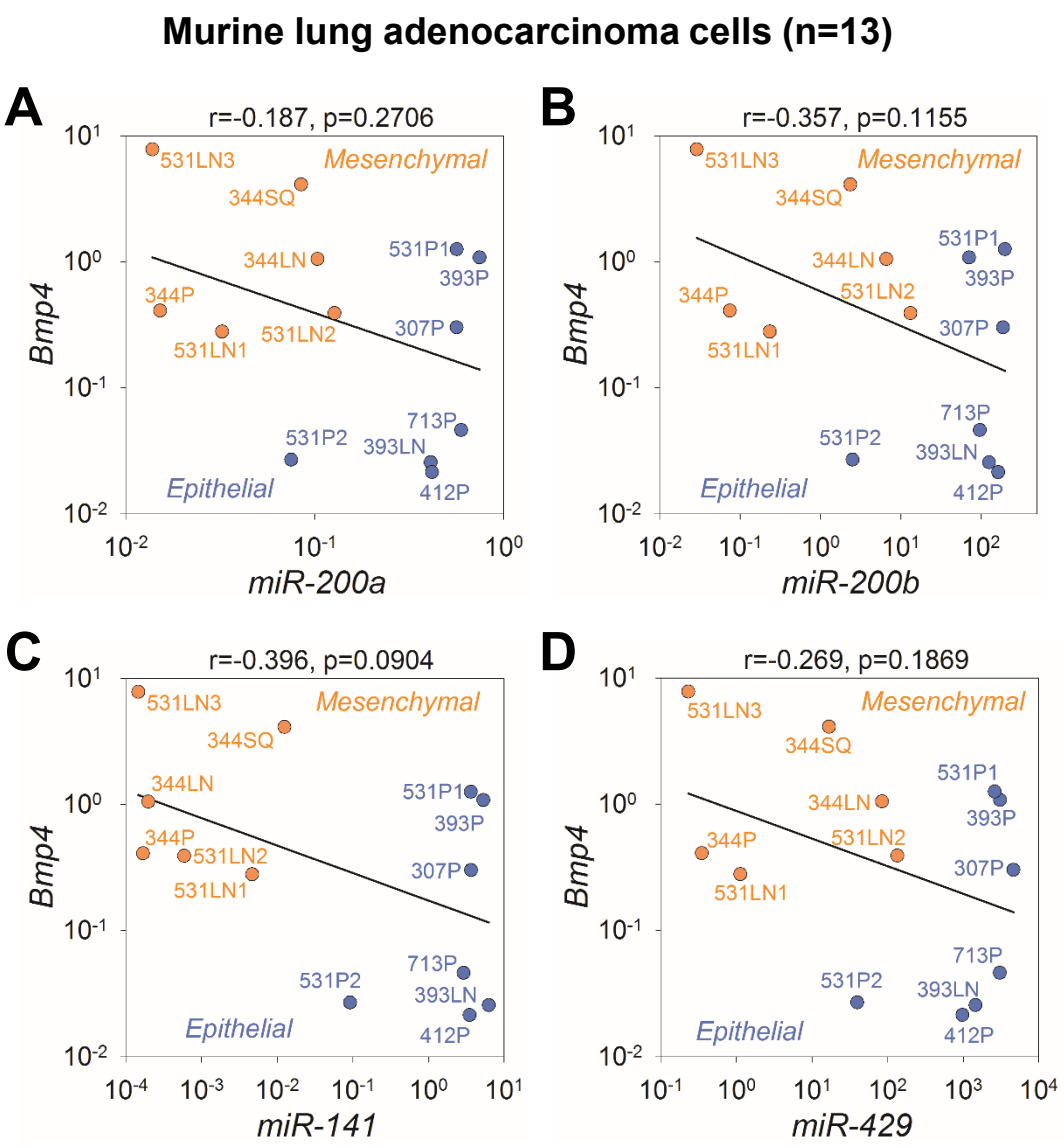
Murine lung adenocarcinoma cells (n=13)
A
r=-0.187, p=0.2706
Bmp4
miR-200a
B
r=-0.357, p=0.1155
Bmp4
miR-200b
C
r=-0.396, p=0.0904
Bmp4
miR-141
D
r=-0.269, p=0.1869
Bmp4
miR-429
Mesenchymal
Epithelial
531LN3
344SQ
344LN
344P
531LN1
531LN2
531P1
393P
307P
531P2
713P
393LN
412P

Figure S1

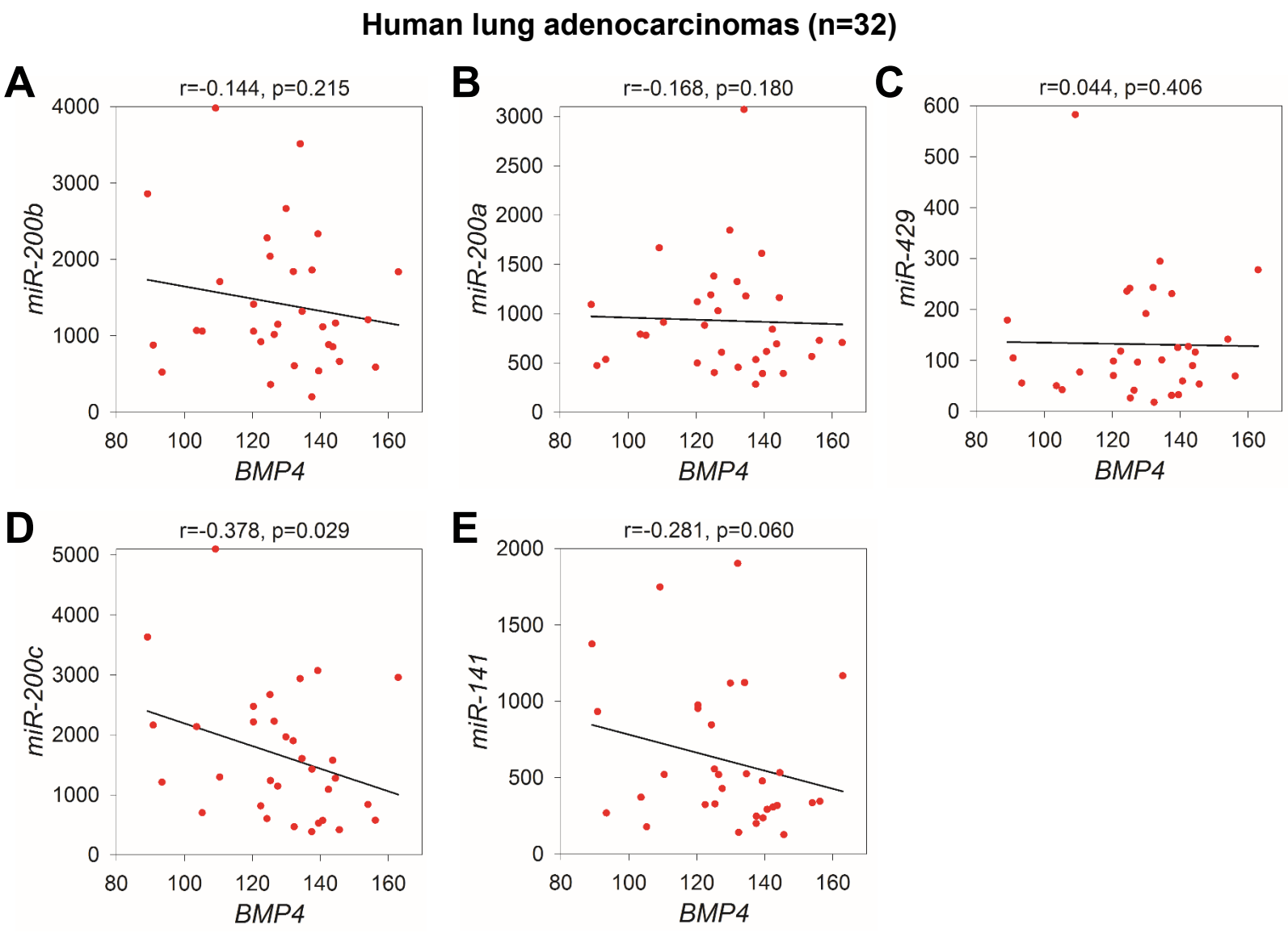
Human lung adenocarcinomas (n=32)
A
r=-0.144, p=0.215
miR-200b
BMP4
B
r=-0.168, p=0.180
miR-200a
BMP4
C
r=0.044, p=0.406
miR-429
BMP4
D
r=-0.378, p=0.029
miR-200c
BMP4
E
r=-0.281, p=0.060
miR-141
BMP4

Figure S2

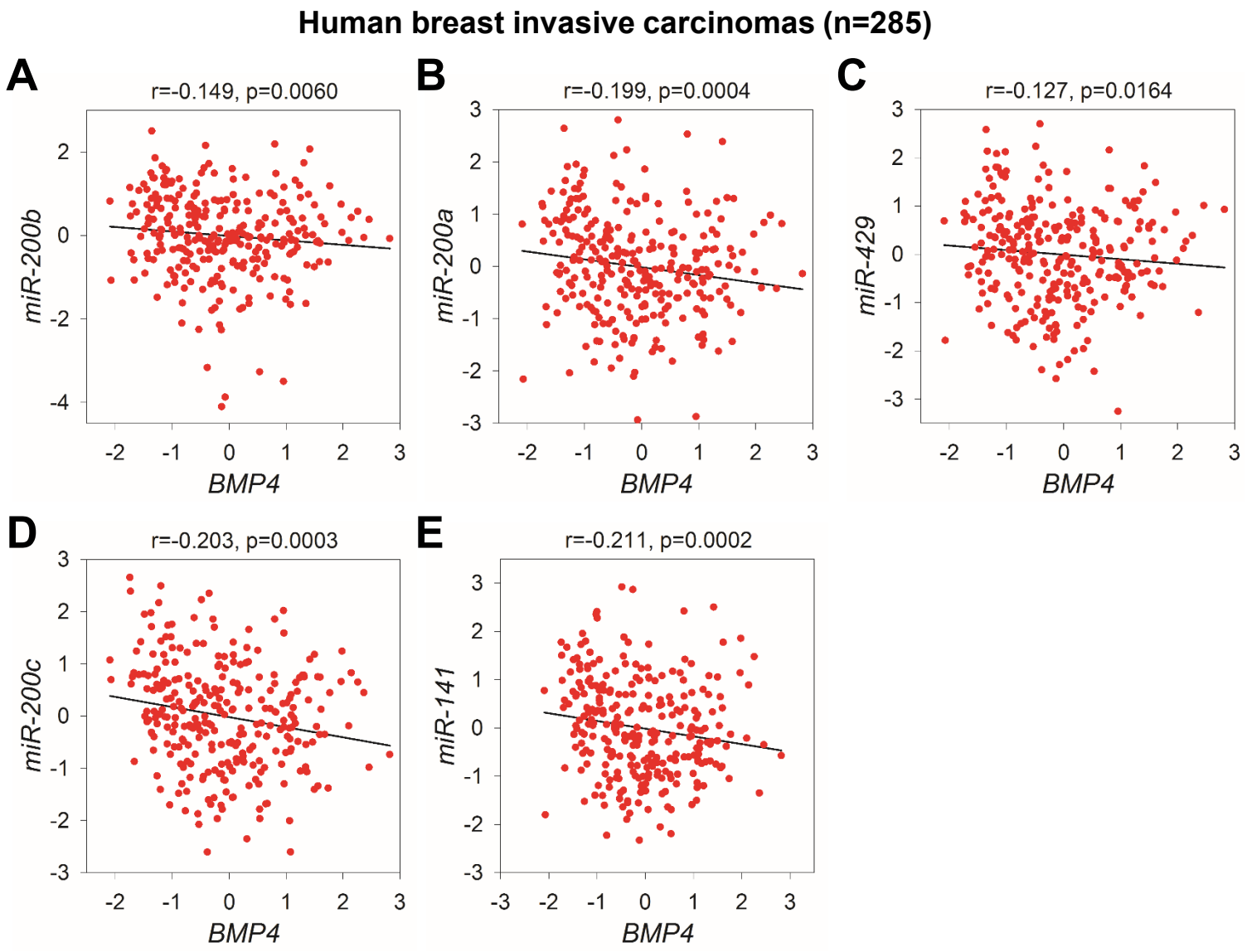
Human breast invasive carcinomas (n=285)
A
r=-0.149, p=0.0060
miR-200b
BMP4
B
r=-0.199, p=0.0004
miR-200a
BMP4
C
r=-0.127, p=0.0164
miR-429
BMP4
D
r=-0.203, p=0.0003
miR-200c
BMP4
E
r=-0.211, p=0.0002
miR-141
BMP4

Figure S3

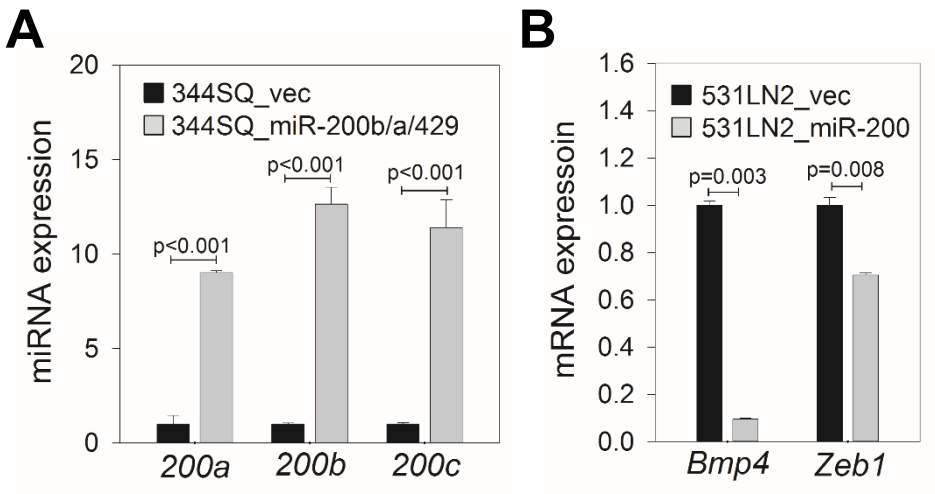
A
B
344SQ_vec
344SQ_miR-200b/a/429
miRNA expression
20
15
10
5
0
p<0.001
p<0.001
p<0.001
200a
200b
200c
531LN2_vec
531LN2_miR-200
mRNA expressoin
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
p=0.003
p=0.008
Bmp4
Zeb1

Figure S4

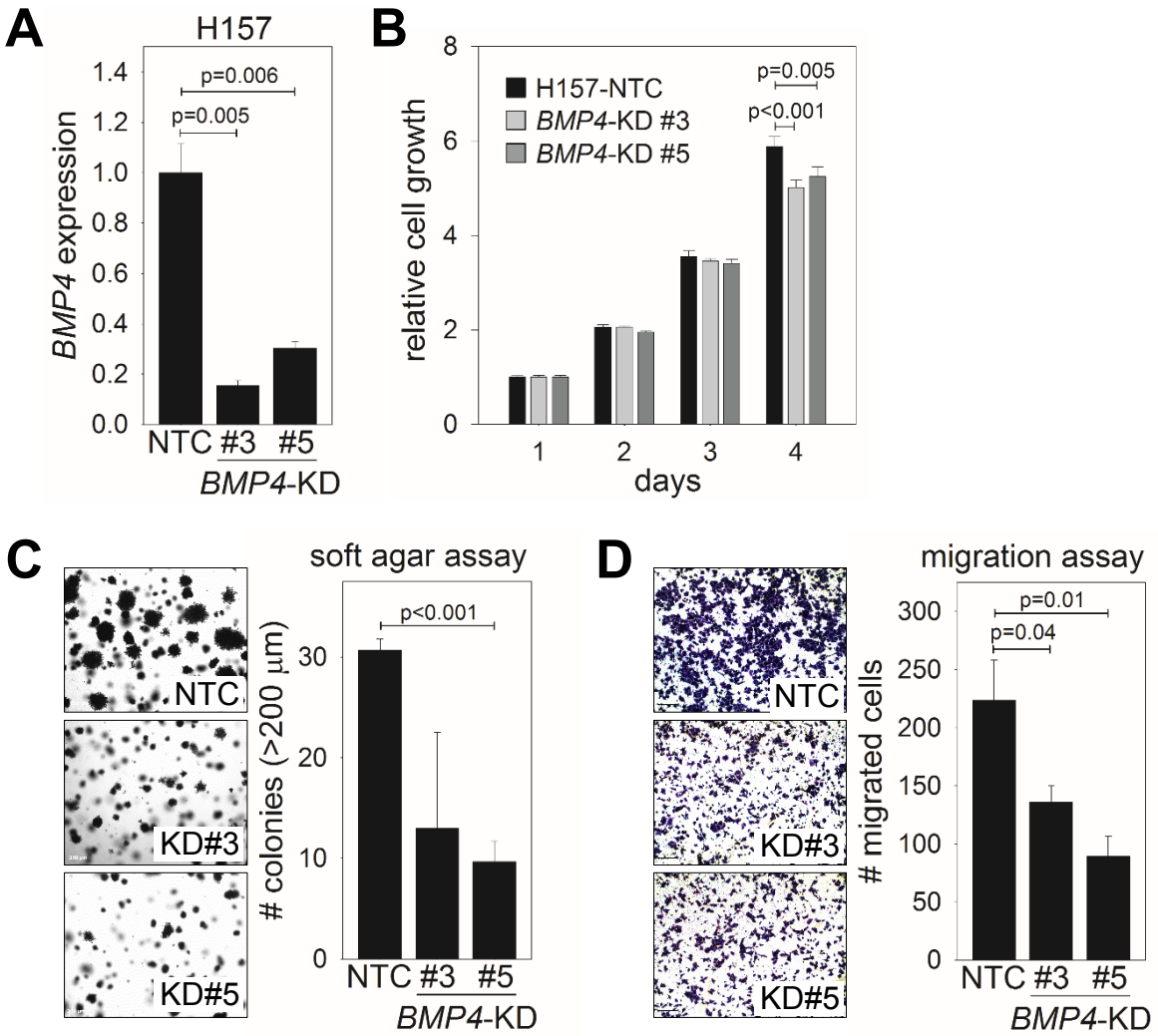
A
H157
BMP4 expression
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
p=0.006
p=0.005
NTC
#3
#5
BMP4-KD
B
relative cell growth
8
6
4
2
0
H157-NTC
BMP4-KD #3
BMP4-KD #5
p=0.005
p<0.001
1
2
3
4
days
C
soft agar assay
NTC
KD#3
KD#5
colonies (>200 µm)
30
20
10
0
p<0.001
NTC
#3
#5
BMP4-KD
D
migration assay
NTC
KD#3
KD#5
migrated cells
300
250
200
150
100
50
0
p=0.01
p=0.04
NTC
#3
#5
BMP4-KD

Figure S5