Figure S1.

A

Epithin/PRSS14

out

in

Strep tag

VP16

GAL4

44

1

Epi-GV-strep

B

MOCK

GFP Expression

Anti-strep binding

Epi-GV-strep

GFP Expression

Anti-strep binding
Figure S2.

A

|                | Control siRNA | Epi-1 siRNA | Epi-2 siRNA |
|----------------|---------------|-------------|-------------|
| - PMA          | - PMA        | - PMA       |

Original Image  | Binary Image (EICD positive region)

B

Original Image  | Binary Image (EICD positive region)

Mean Fluorescence > Threshold

Mean Fluorescence < Threshold

C

Original Image  | Binary Image (EICD positive region)

D

|                  | PMA    | Control | Epi-1 | Epi-2 |
|------------------|--------|---------|-------|-------|
| siRNA            |        |         |       |       |
|                  | -      | -       | -     | -     |
|                  | +      | +       | -     | -     |

Normalized EICD nuclear Localization (x105, A.U.)

- ****

****
Figure S3.

A

| siRNA | control | Epi-1 | Epi-2 |
|-------|---------|-------|-------|
| PMA   | -       | +     | +     |

IB: mAb5 (Epi-S)  
IB: anti-N  
EICD (overexposure)

B

| siRNA | control | Epi-1 | Epi-2 |
|-------|---------|-------|-------|
| PMA   | -       | +     | +     |

media  
whole cell lysate  
cytosolic  
nuclear

IB: mAb5  
IB: anti-tubulin  
IB: anti-N  
EICD  
IB: anti-GAPDH  
IB: anti-Histone H3  
* IB: Histone H3
Figure S4.
Figure S5.

A

![Graph showing normalized EICD nuclear localization](image)

B

|    | cytosolic | nuclear |
|----|-----------|---------|
| PMA | - | + | - | + | - | + | - | + | - | + |
| 427 |  |  |  |  |  |  |  |  |  |  |
| SP2bKD-10 |  |  |  |  |  |  |  |  |  |  |
| SP2bKD-16 |  |  |  |  |  |  |  |  |  |  |

| Antibody | Description |
|----------|-------------|
| IB: mAb5 (Epi-S) | NTF |
| IB: anti-N | EICD |
| IB: anti-GAPDH | EICD (overexposure) |
| IB: anti-Histone H3 | |

*Normalized EICD nuclear Localization (x10³ A.U.)*
Figure S6.

A

B

C

D

Recovered area (fold change)

Recovered area (fold change)

427 SP2bKD-10

427 SP2bKD-10

EICD -- +

Epi-2

Epi-1

Control

Recovered area (fold change)

# of invasive cells (fold change)

PMA

PMA

siRNA

siRNA

Control

Epi-1

Epi-2

- + - + - +

- + - + - +

* * * ***

* * * ***

* ***

# of invasive cells (fold change)

* * * ***

* ***

*
Figure S7.

A

B

4T1KD cell  GFP-positive nodules from #4 mouse

- EICD 2 15 17 7 12 19

IB: anti-GFP

IB: anti-tubulin
Leukocyte migration
Response to lipopolysaccharide
Cell chemotaxis
Positive regulation of cell migration
Positive regulation of cellular component movement
Inflammatory response
Positive regulation of response to external stimulus
Positive regulation of MAPK cascade
Morphogenesis of a branching structure
Angiogenesis

Figure S8.
### Figure S9.

|   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| A | Reference | Acryl30 | Angiopoietin1 | Angiopoietin2 | Angiopoietin-like3 | TNFSF13B | C1qR1 | CCL2 | CCL3 | CCL5 | A Reference |
| B | CCL6 | CCL11 | CCL12 | CCL17 | CCL19 | CCL20 | CCL21 | CCL22 | CD14 | TNFRSF5 |
| C | CD160 | Chemerin | C1qR1 | Complement Factor Bb | C5a | Complement Factor D | C-Reactive Protein | CX3CL1 | CXCL1 | CXCL2 |
| D | CXCL9 | CXCL10 | CXCL11 | CXCL13 | CXCL16 | Cystatin C | DKK1 | DPPIV | EGF | Endoglin | Endostatin | Fetuin A |
| E | FGF acidic | FGF21 | Flt-3-Ligand | Gastrin | GDF3 | GDF15 | CSF2 | HG | ICAM1 | IP-10 | IFN-γ | IGFBP1 | IGFBP2 |
| F | IGFBP3 | IGFBP5 | IGFBP6 | IL-1α | IL-1β | IL-1ra | IL-2 | IL-3 | IL-4 | IL-5 | IL-6 | IL-7 |
| G | IL-10 | IL-11 | IL-12 p40 | IL-13 | IL-15 | IL-17A | IL-22 | IL-23 | IL-27 p28 | IL-28A/B | IL-33 | LIF |
| H | Leptin | LIF | Lp(a) | LIX | CSF1 | MMP2 | MMP3 | MMP9 | Myeloperoxidase | Osteopontin | TNFRSR11B | PD-ECGF |
| I | PDGF-BB | Pentraxin2 | Pentraxin3 | Perilin | Pref-1 | Pref-2 | Proprotein Convertase9 | RAGE | RBP4 | Reg3G | Resulin |
| J | Reference | E-Selectin | P-Selectin | Serpin E1 | Serpin F1 | Thrombopoietin | TIM-1 | TNFα | VCAM-1 | VEGF-A | WISP1 | Neg Control |
Figure S10.