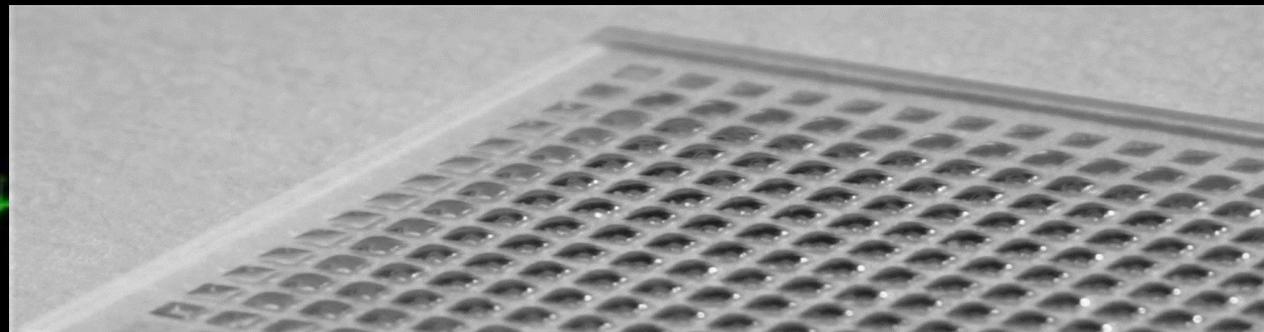
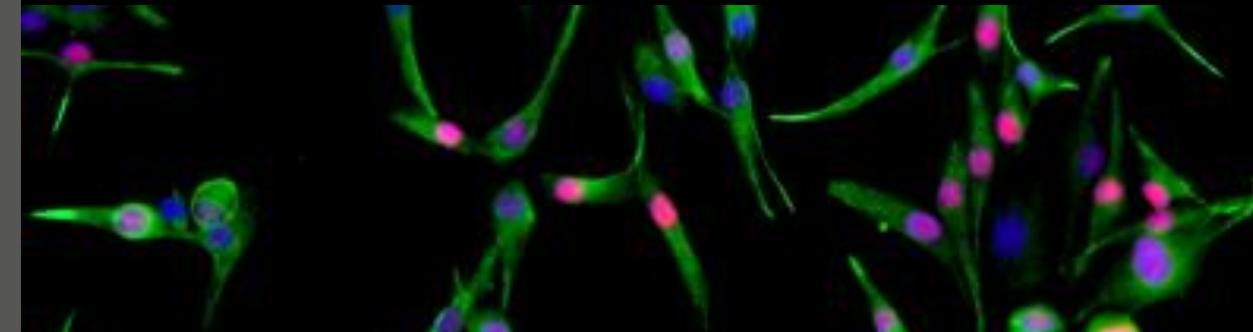


# Droplet Microarray- a miniaturized array platform for cell culture



„Cell culture on 1 mm spots in 150 nL.“

# Droplet Microarray- a miniaturized array platform for cell culture

Comparative KI67 and Vimentin immunofluorescence staining 24h, 48h and 72h after seeding on Droplet

Microarray or conventional cell culture material (microtiter plate) using the following cell lines:

- 1) PC3: human prostate carcinoma (slide 4-6)
- 2) HCT116: human colorectal adenocarcinoma (slide 7-9)
- 3) MCF-7: invasive breast ductal carcinoma (slide 10-12)
- 4) SK-MEL-28: human malignant melanoma (slide 13-15)
- 5) SKOV-3: human ovarian carcinoma (slide 16-18)
- 6) HeLa: human cervical carcinoma (slide 19-21)
- 7) MDA-MB-231: human ductal breast carcinoma (slide 22-24)
- 8) A549: human alveolar basal epithelial adenocarcinoma (slide 25-27)
- 9) HT-29: human colorectal adenocarcinoma (slide 28-30)

# Protocol

**Droplet Microarray:** 100 cells/spot were seeded in 150 nL DMEM +10% FCS on Droplet Microarrays with 672 spots (Aquarray, cat nr. 102) using the non-contact dispenser I-DOT One. Cells were incubated in humidity chambers at 37°C, 5% CO<sub>2</sub> for 24, 48 and 72 hrs.

**Coverslip:** Poly-lysine solution (Sigma P8920, 0.1%) was diluted in 1:10 in sterile water. 0.5 ml of diluted solution was added onto each cover slip and incubated at RT for 3-5 minutes. After removal lysine solution the cover slips were washed with 2ml of PBS.

Staining of cells on Droplet Microarray (DMA) according to the protocol

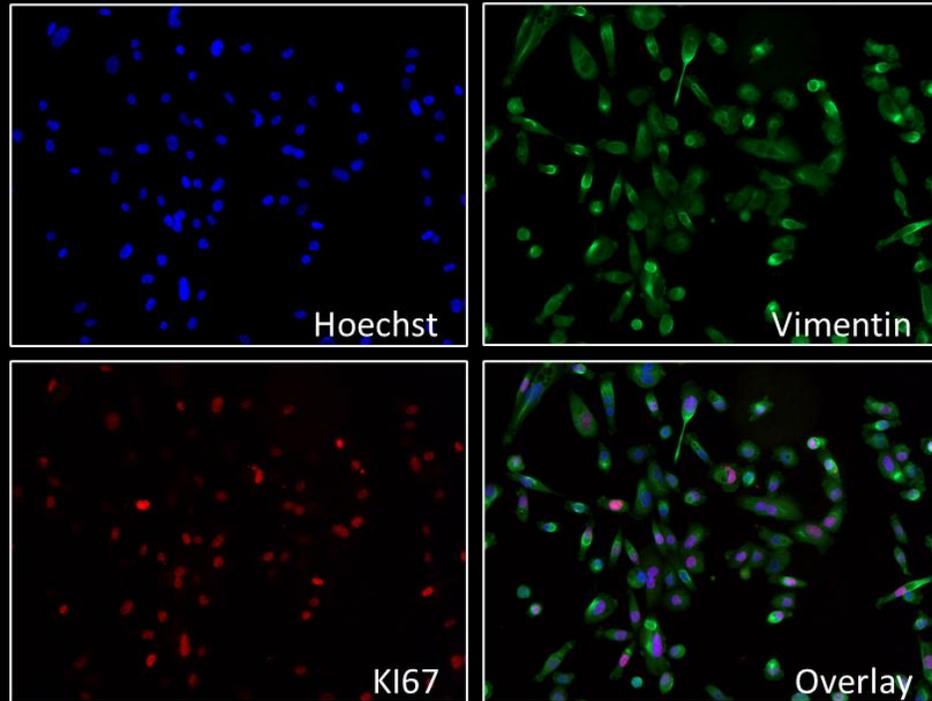
*“Immunofluorescence staining of DMA with KI67 and Vimentin”* (Link:

<https://www.aquarray.com/protocols>). Staining of coverslips was performed accordingly.

# Application of Hoechst, Vimentin and KI67 staining

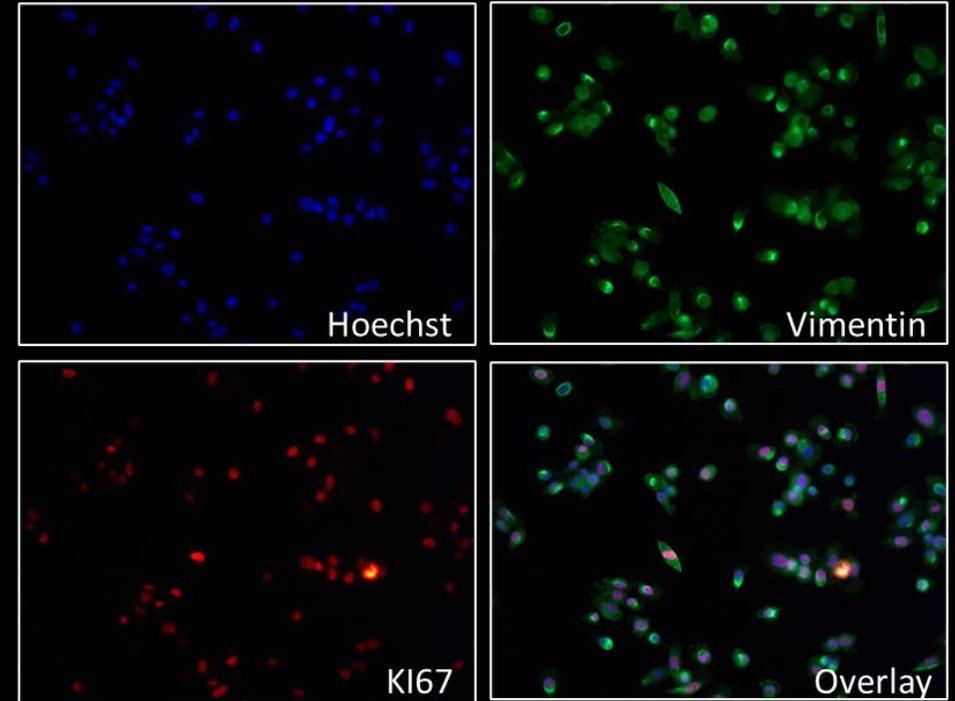
- Hoechst staining is used as nuclear marker of living or fixed cells and tissues
- Vimentin is used as marker of mesenchymal derived cells or cells undergoing an epithelial-to-mesenchymal transition (EMT) during both normal development and metastasis
- KI67 is a nuclear marker for cell proliferation and is widely used in routine pathological investigations and is an established prognostic and predictive indicator for the assessment of biopsies from tumor patients

### Droplet Microarray

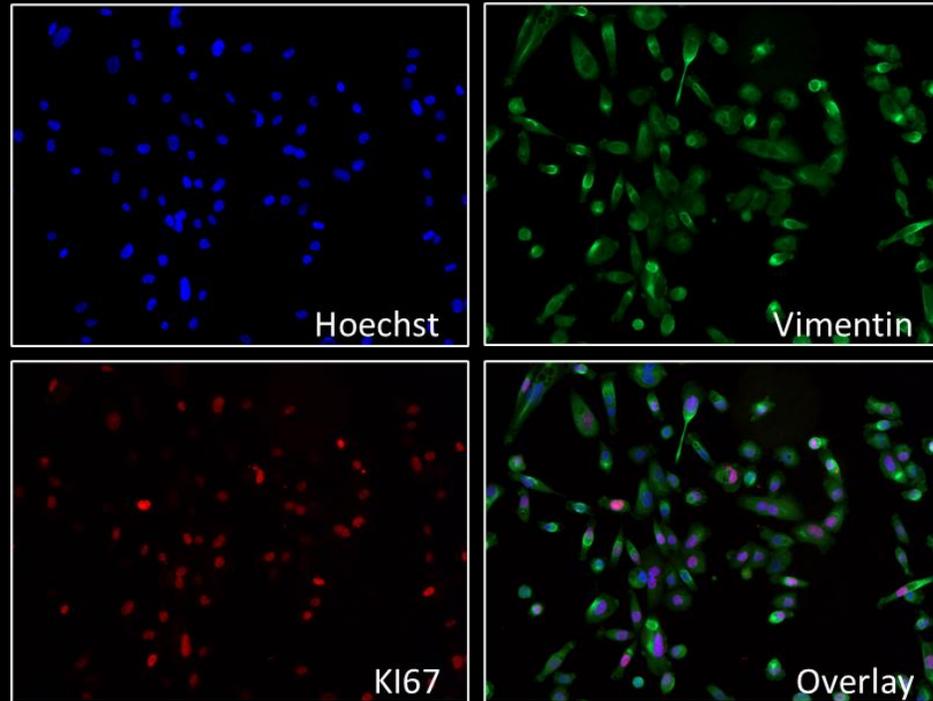


### PC3 24h

### poly-lysine coated coverslips

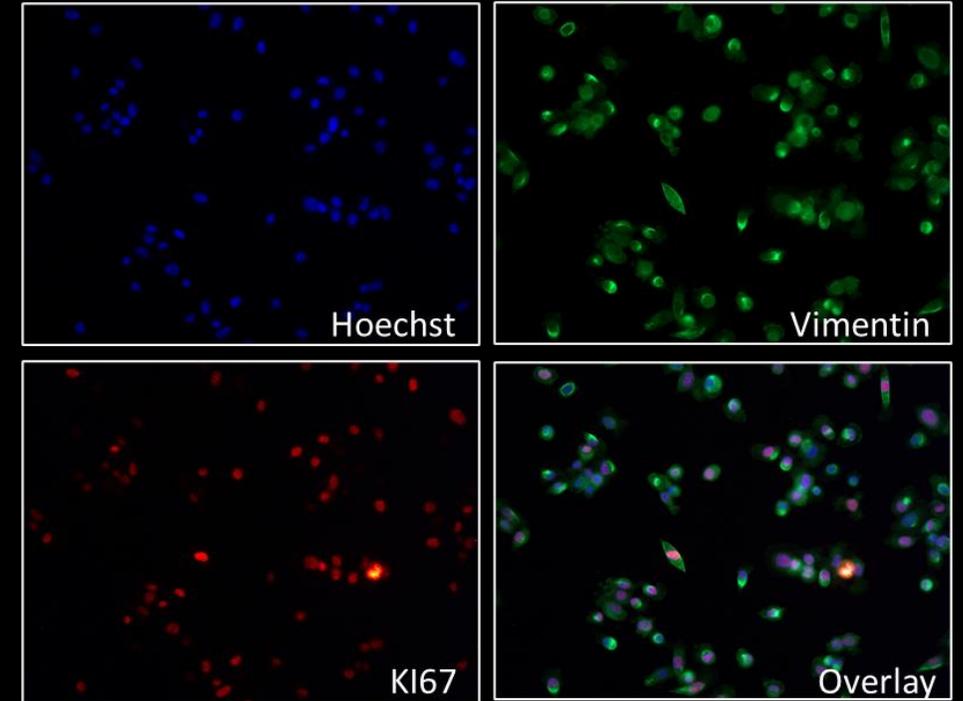


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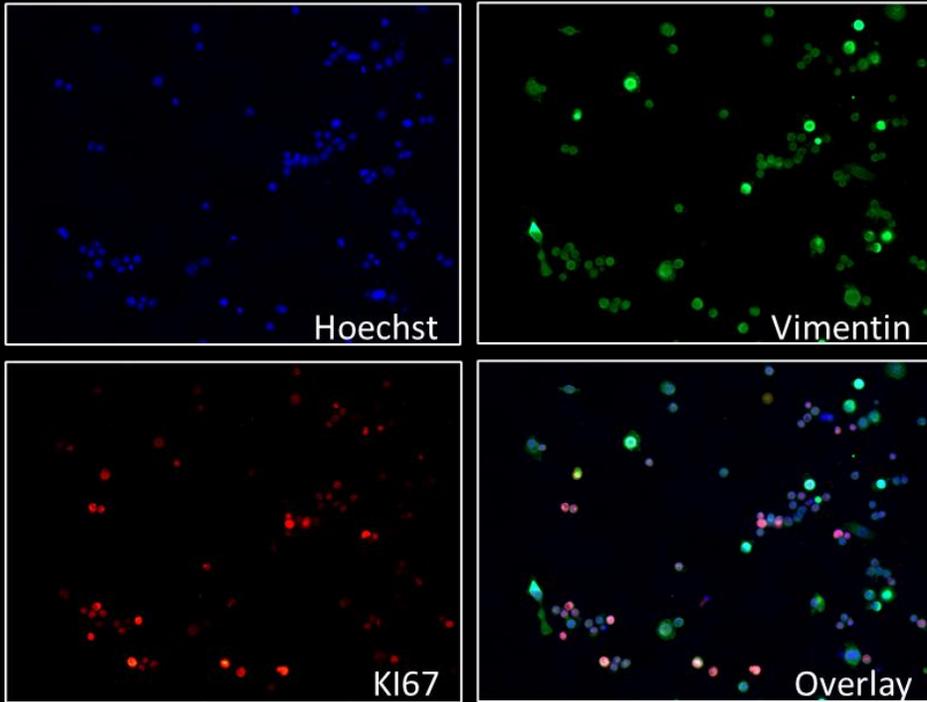


### PC3 24h

### poly-lysine coated coverslips

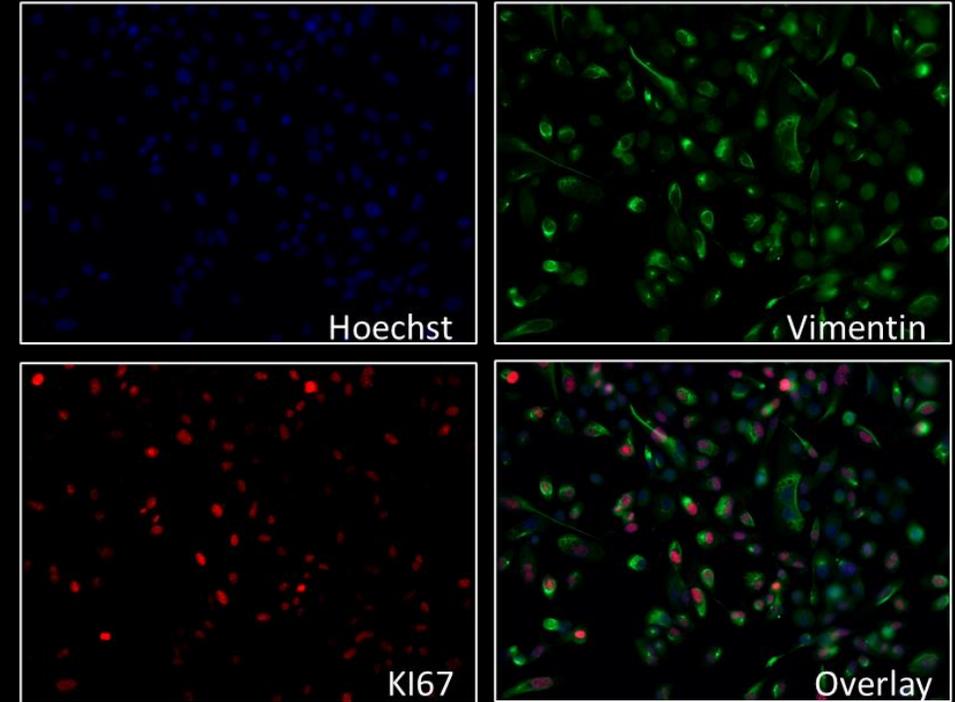


### Droplet Microarray

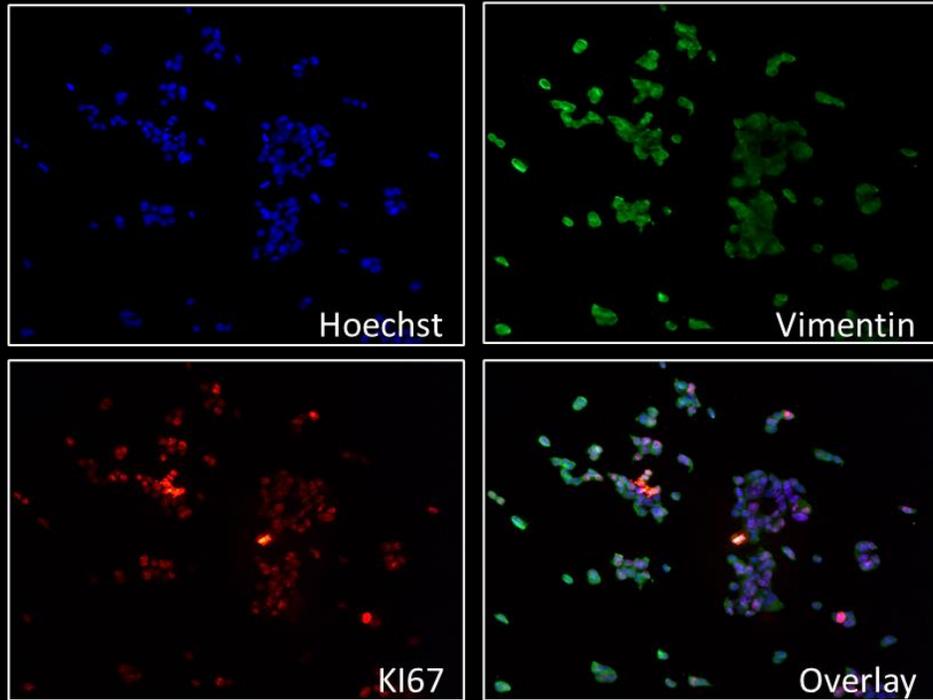


### PC3 72h

### poly-lysine coated coverslips

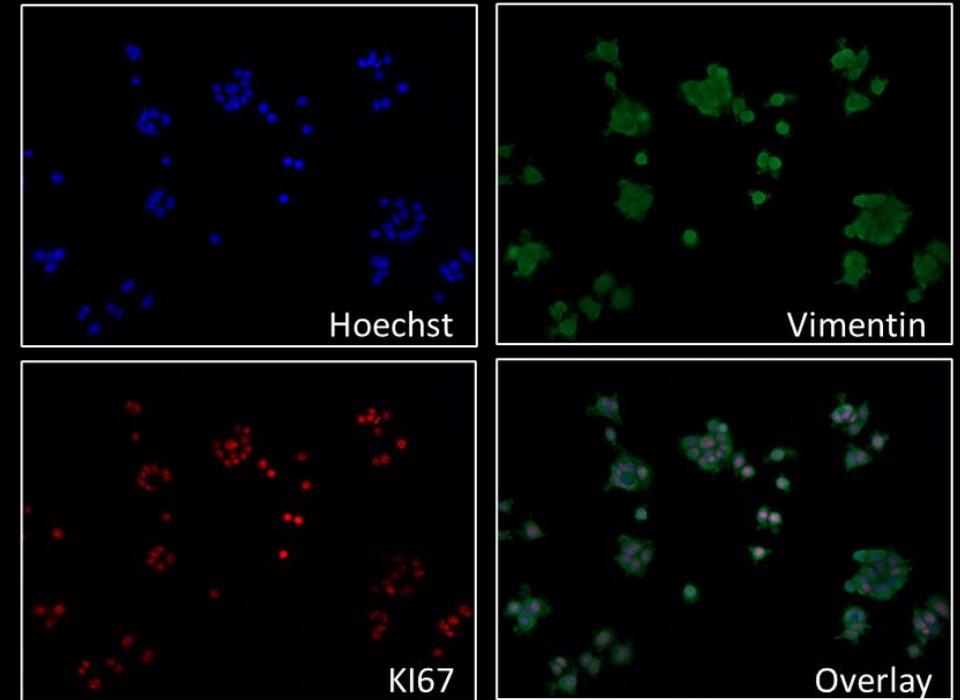


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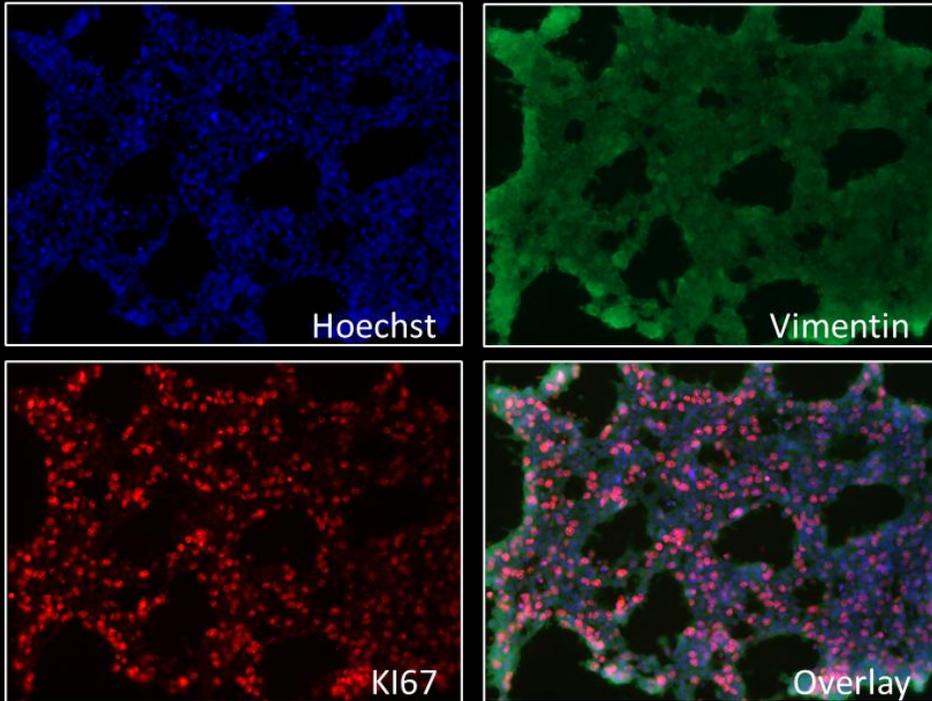


### HCT116 24h

### poly-lysine coated coverslips

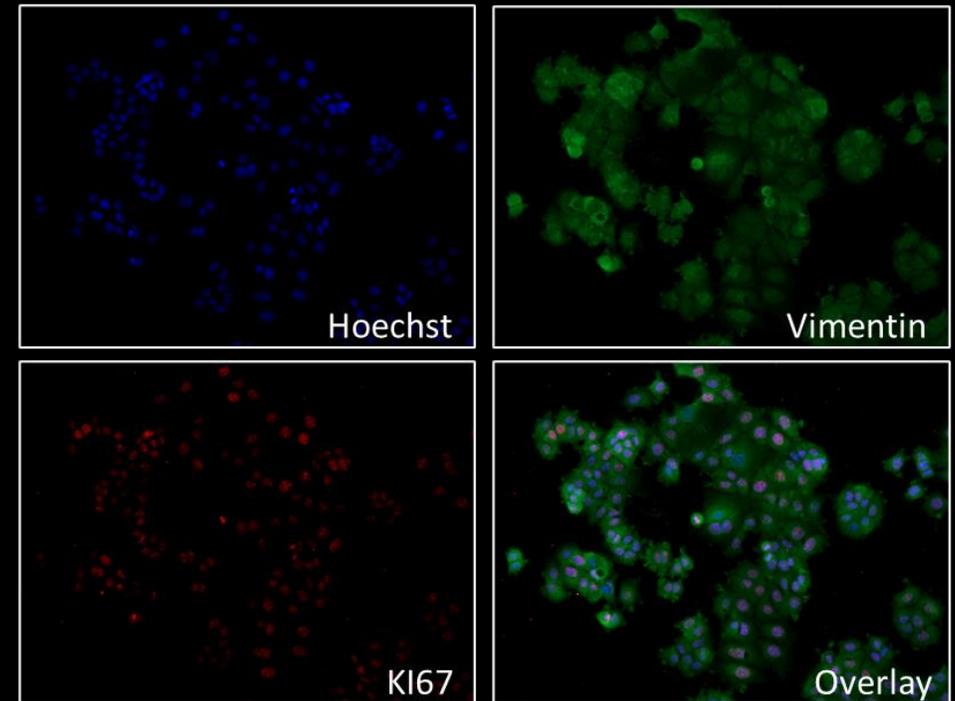


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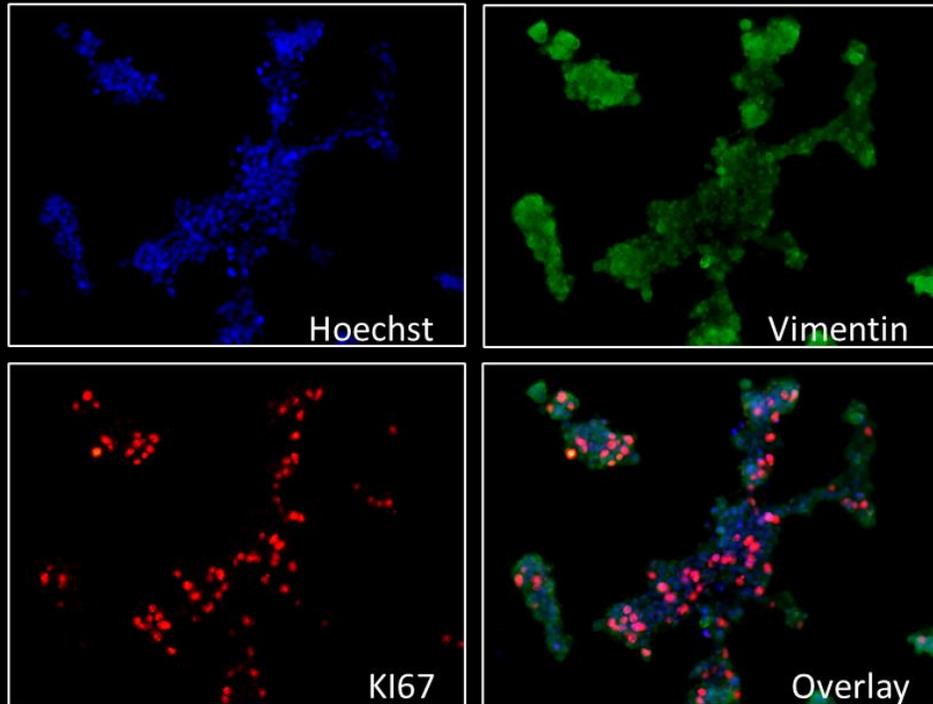


### HCT116 48h

### poly-lysine coated coverslips

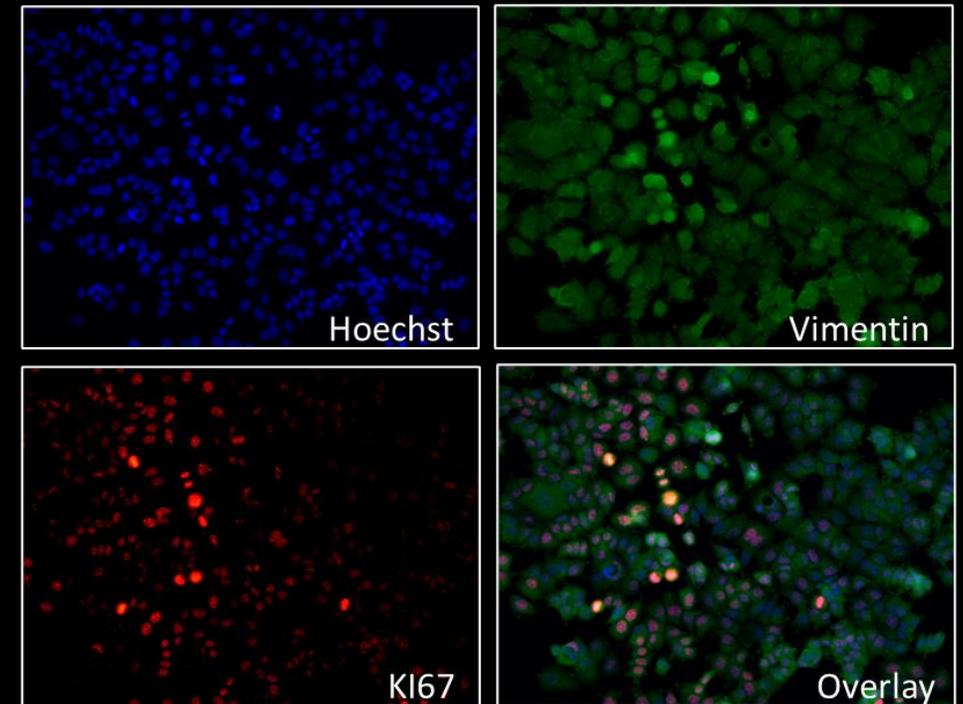


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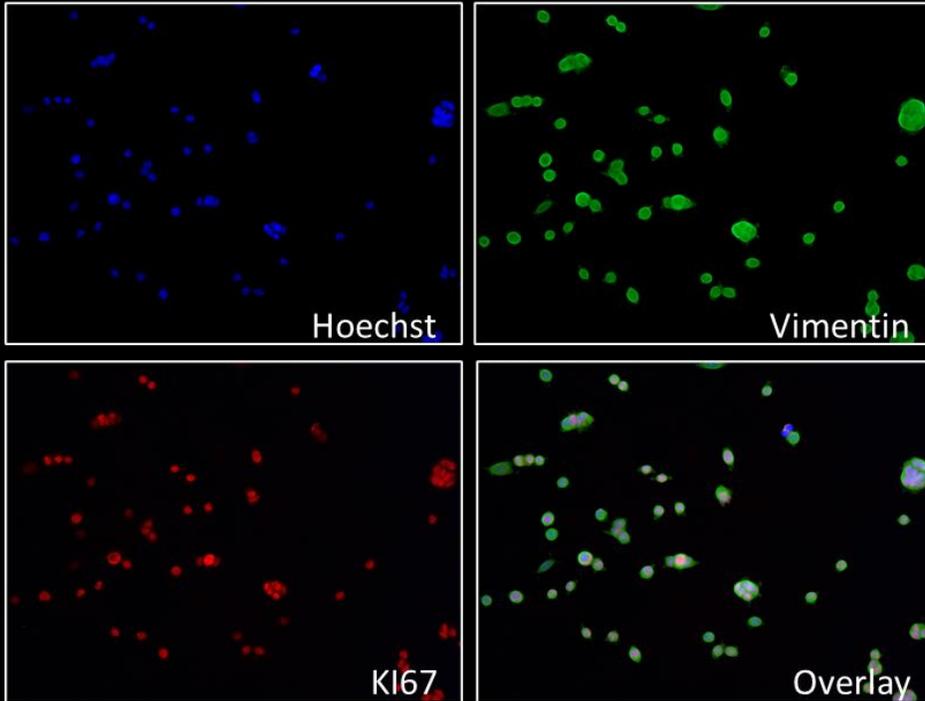


### HCT116 72h

### poly-lysine coated coverslips

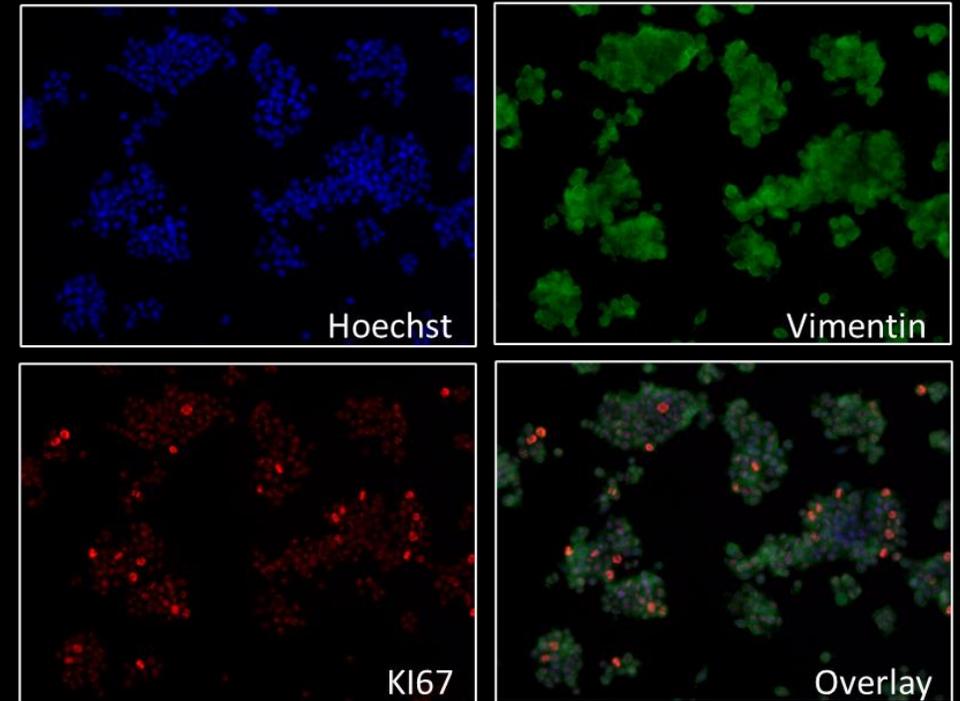


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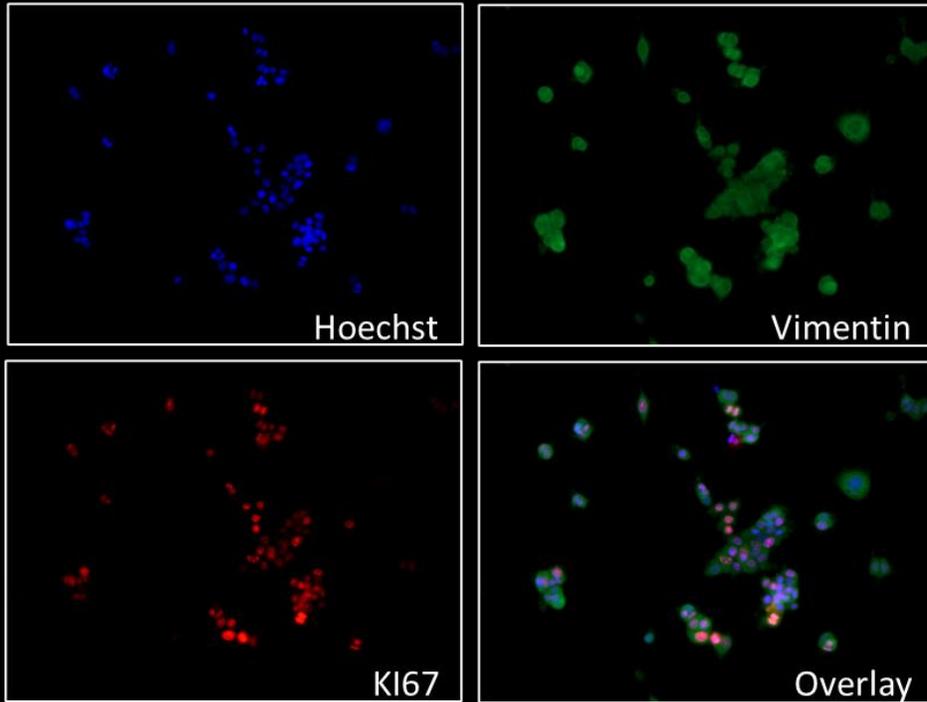


### MCF7 24h

### poly-lysine coated coverslips

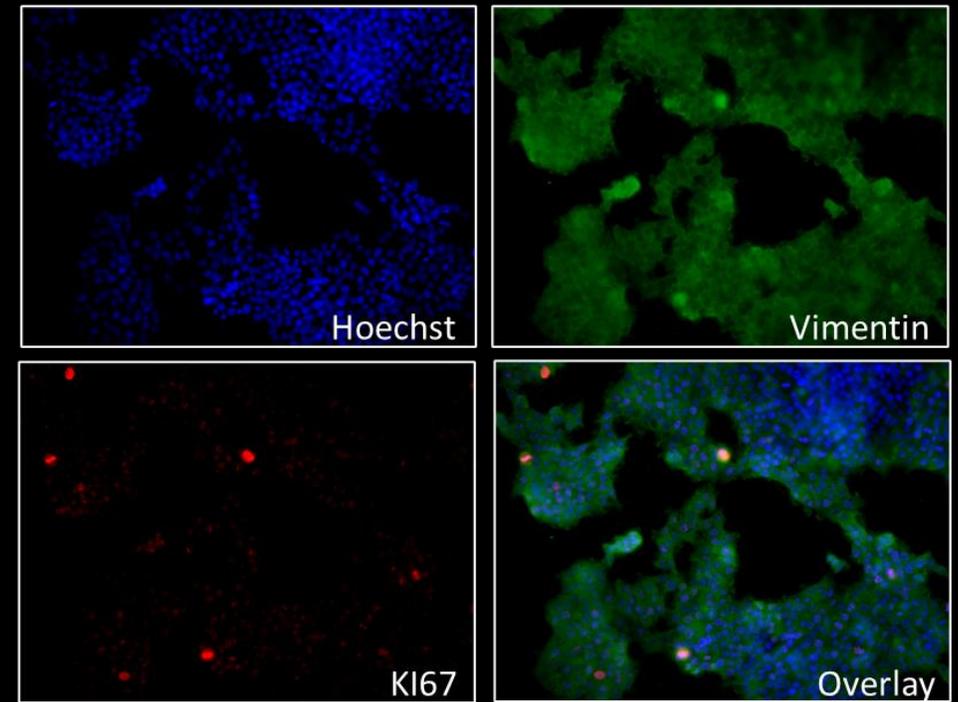


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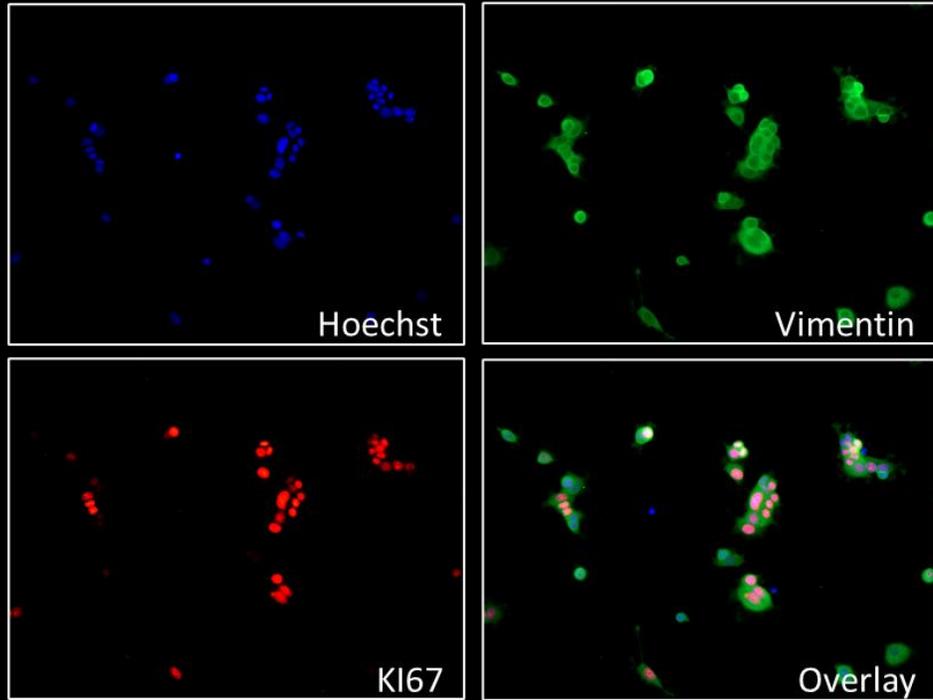


### MCF7 48h

### poly-lysine coated coverslips

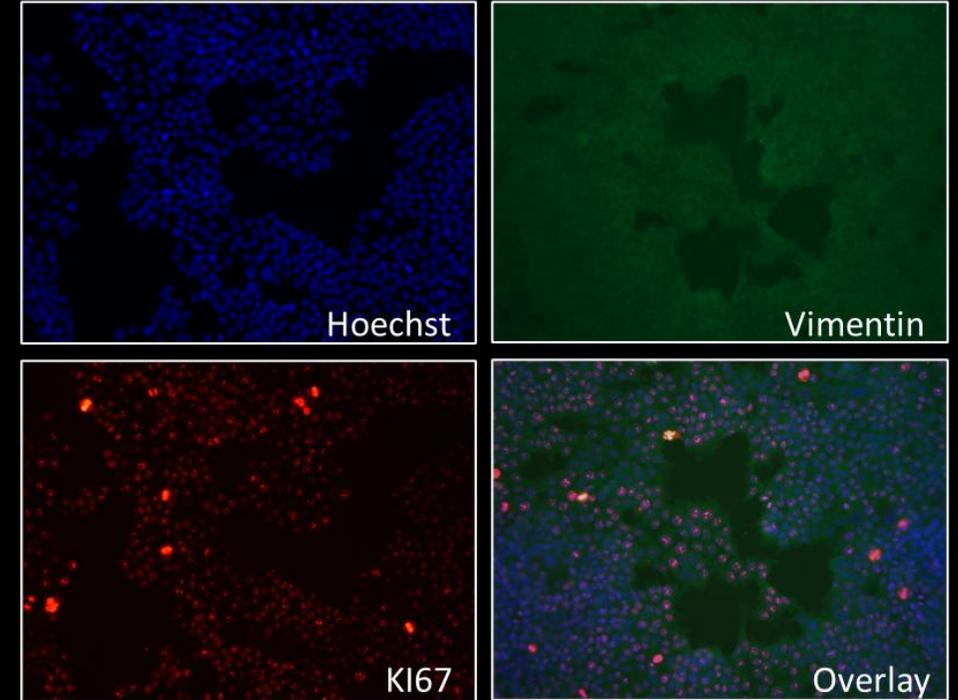


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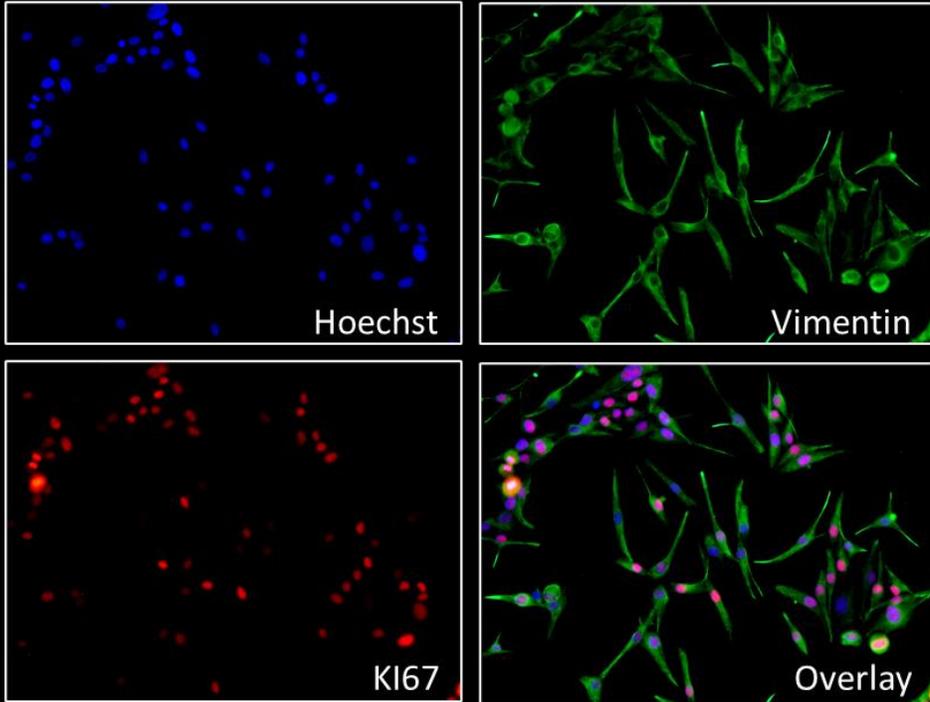


### MCF7 72h

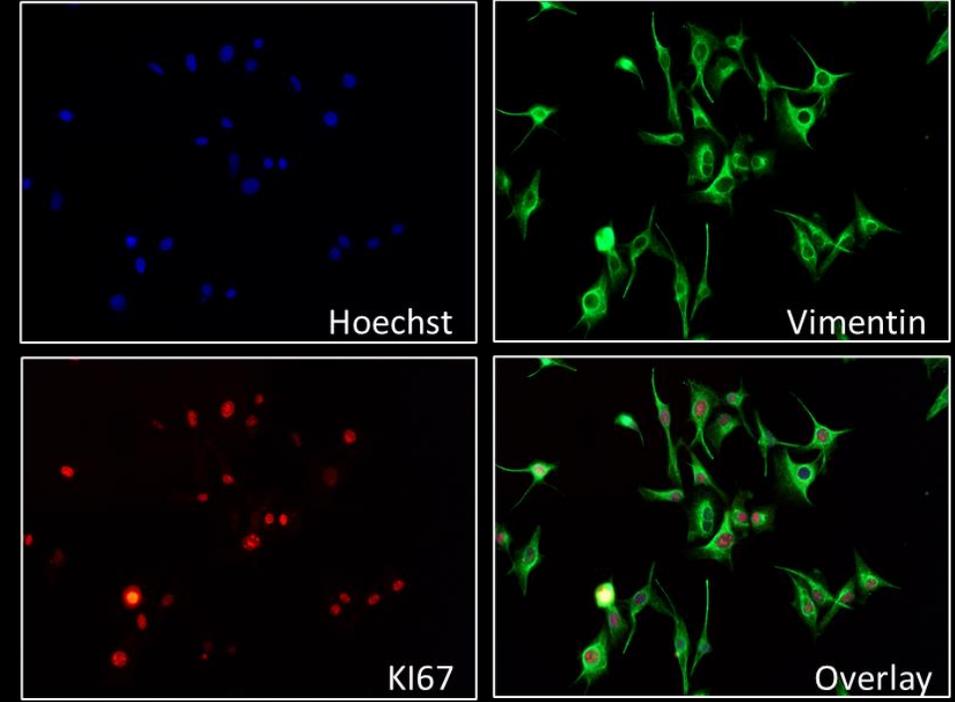
### poly-lysine coated coverslips



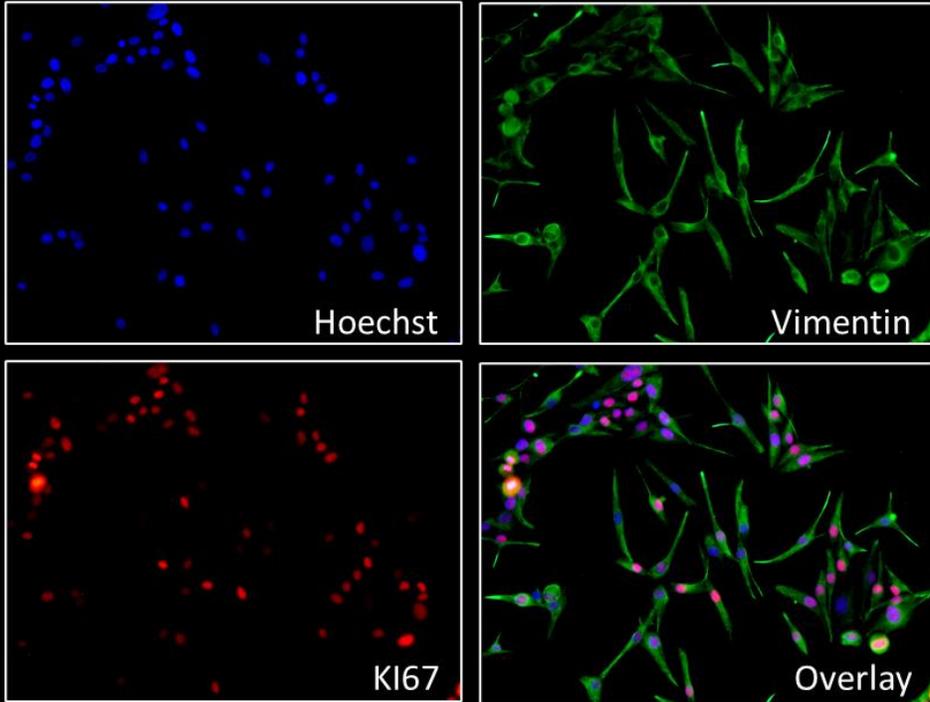
### Droplet Microarray



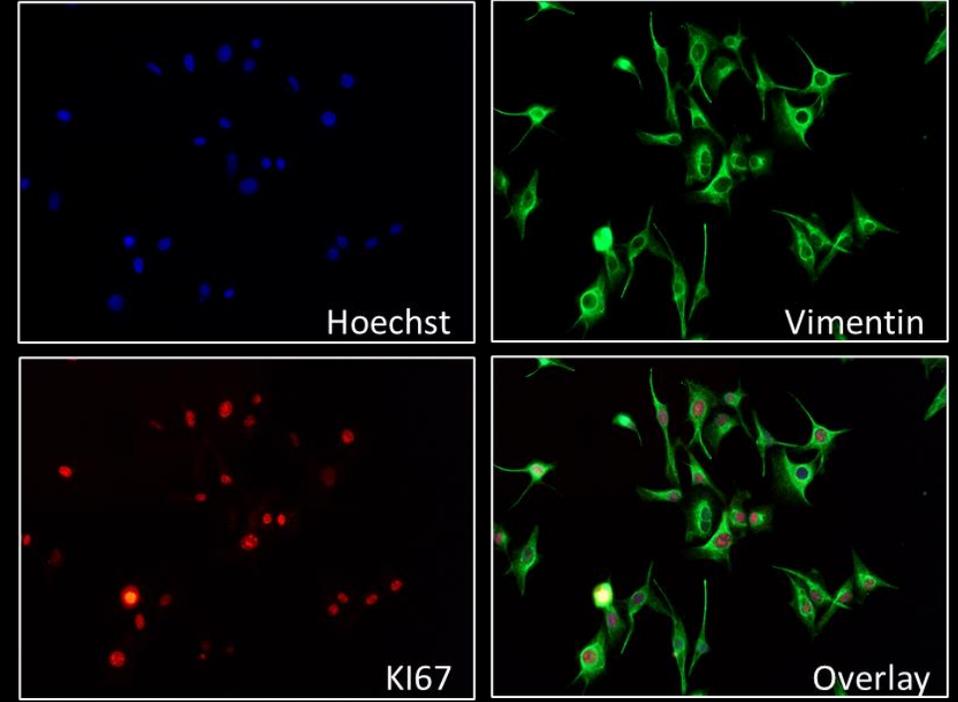
### SK-MEL 28 24h



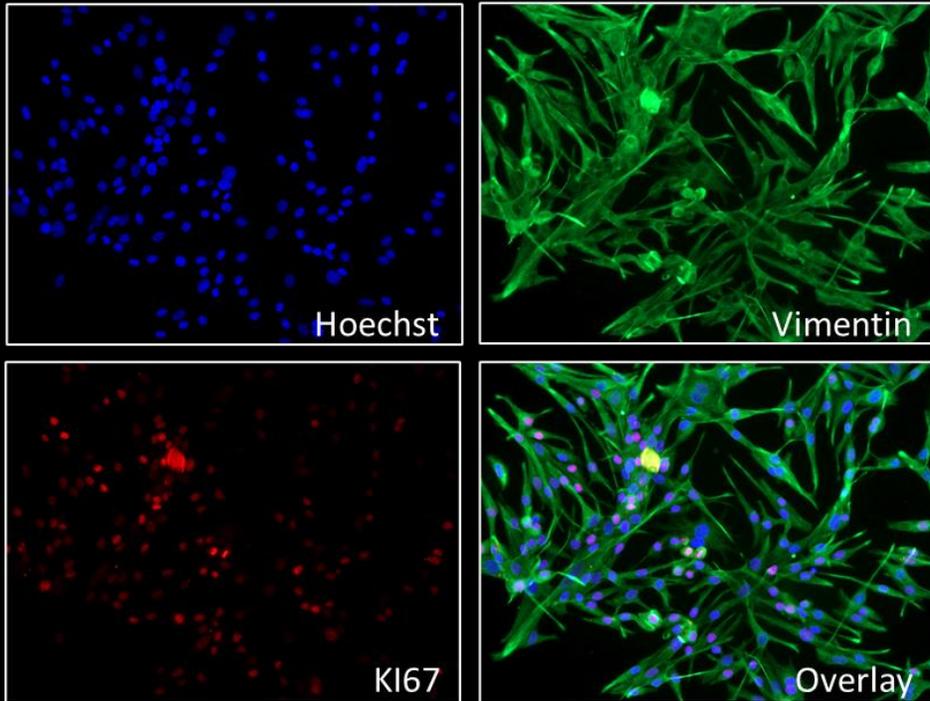
### Droplet Microarray



### SK-MEL 28 24h

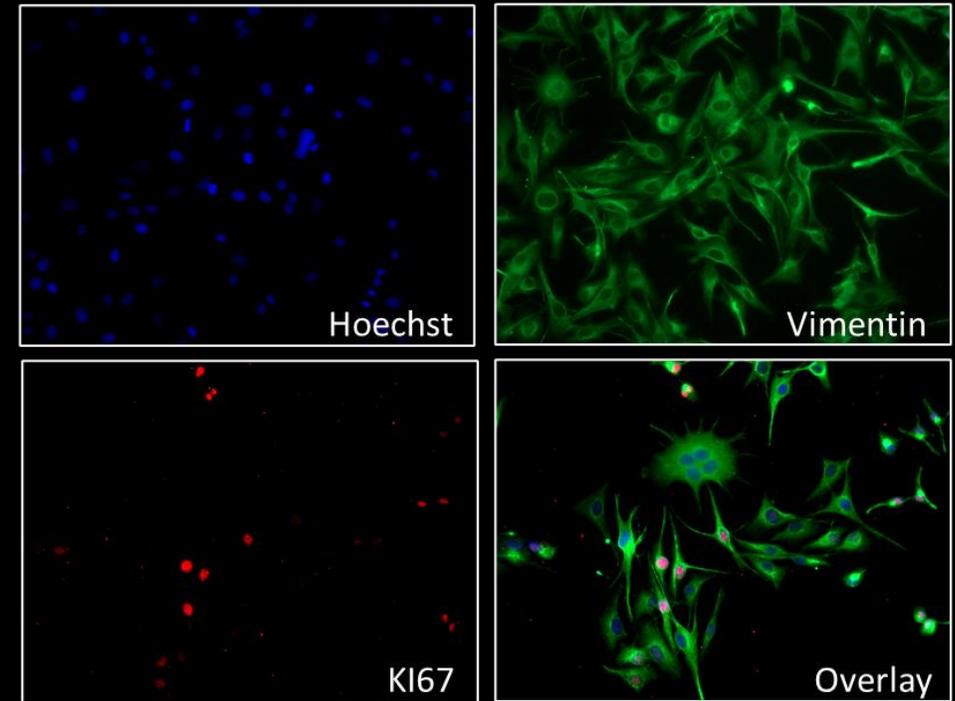


### Droplet Microarray

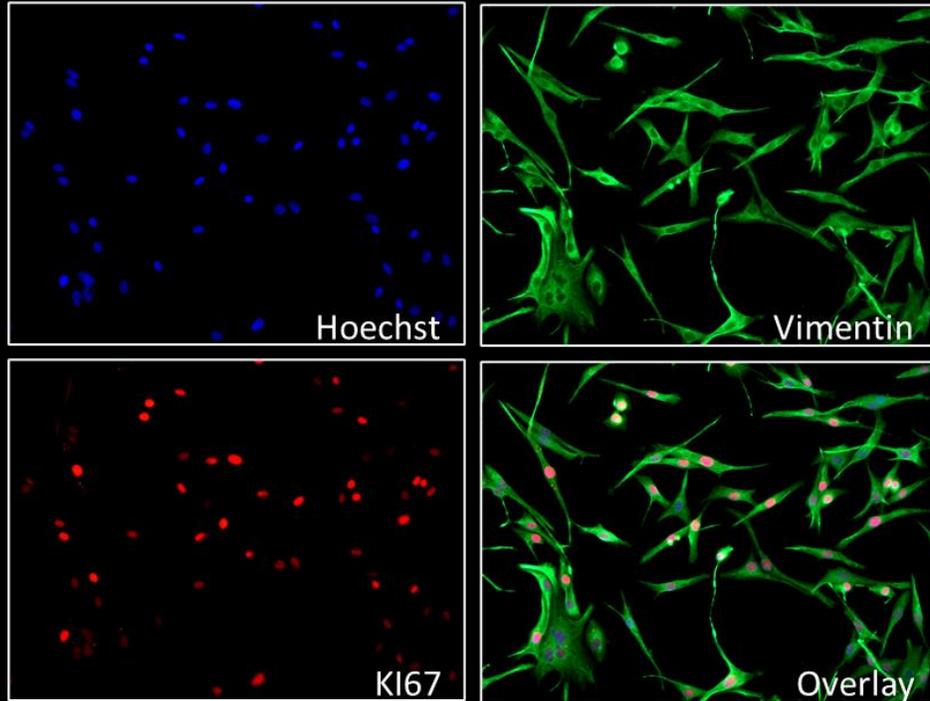


### SK-MEL 28 48h

### poly-lysine coated coverslips

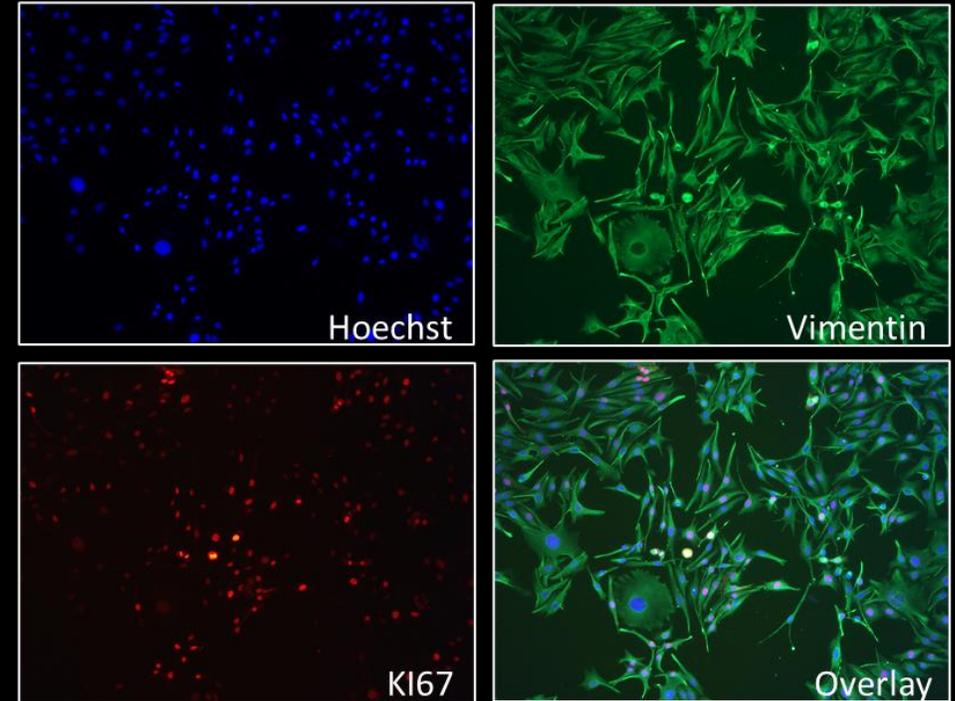


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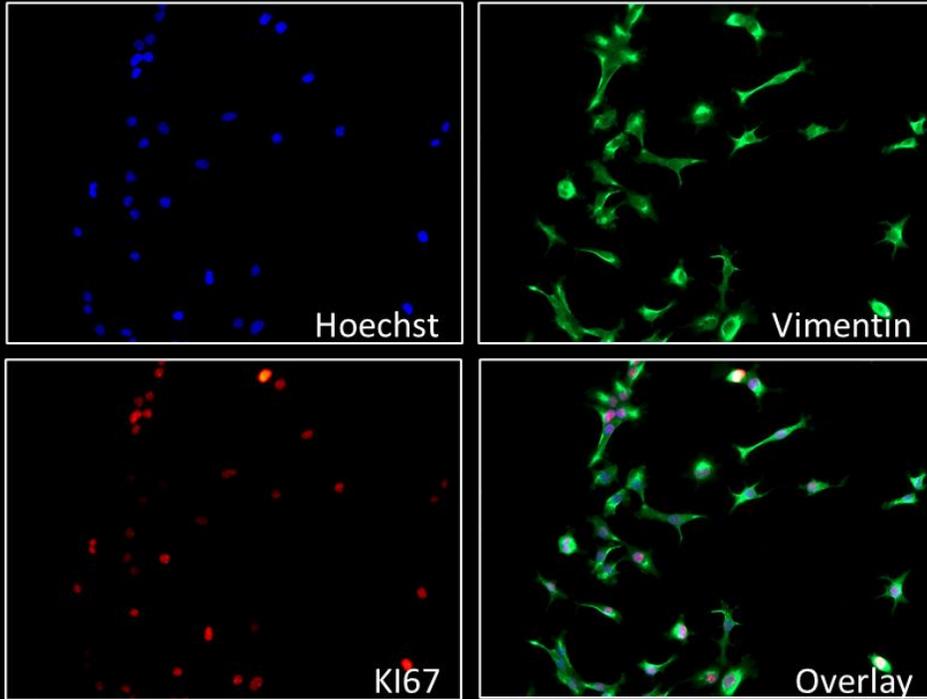


### SK-MEL 28 72h

### poly-lysine coated coverslips

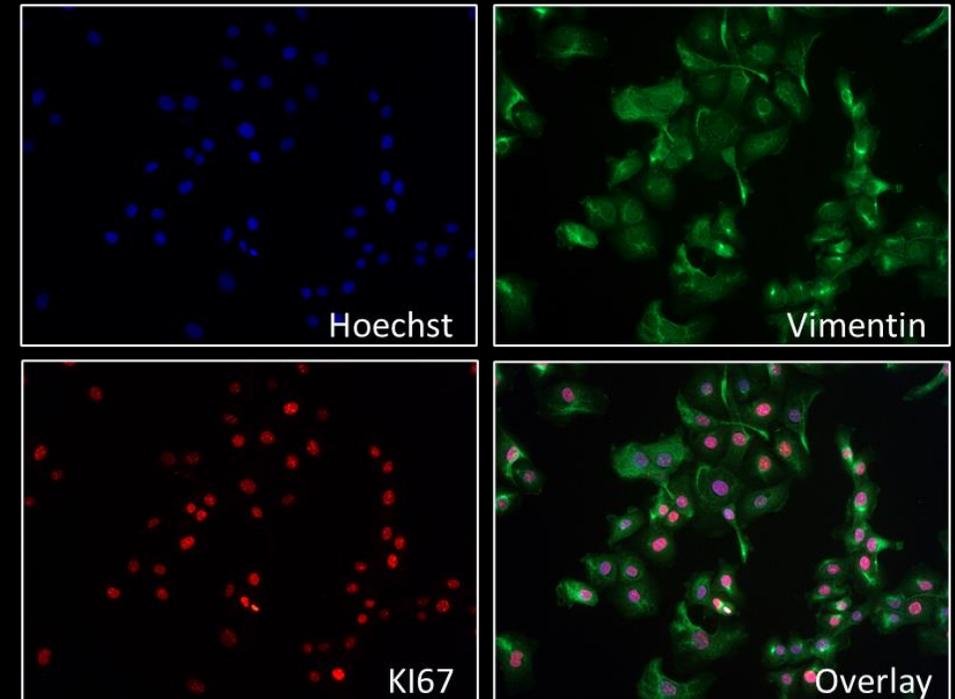


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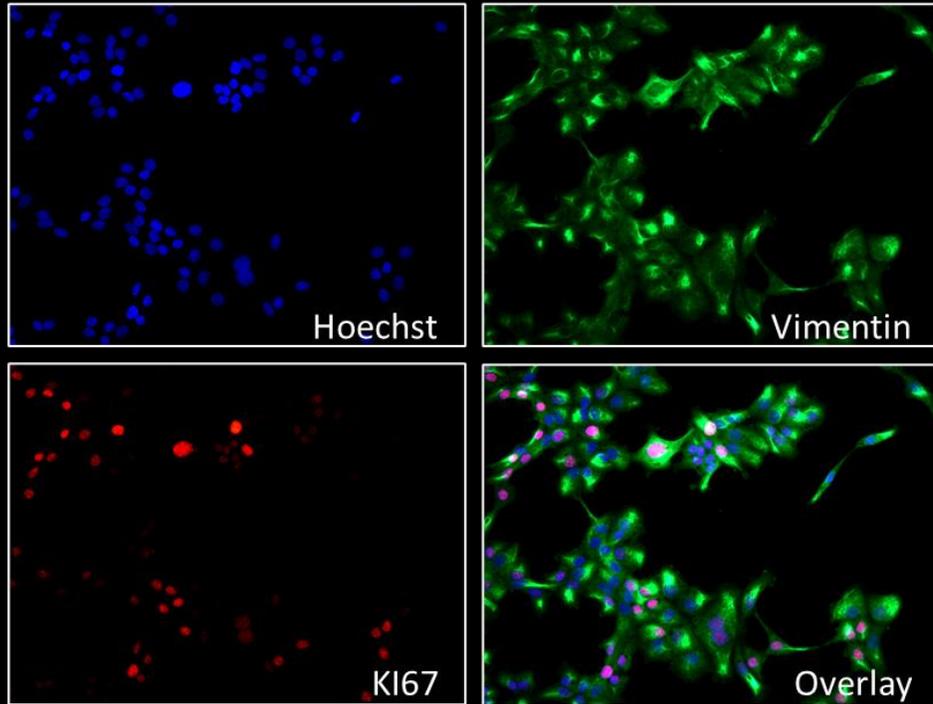


### SKOV-3 24h

### poly-lysine coated coverslips

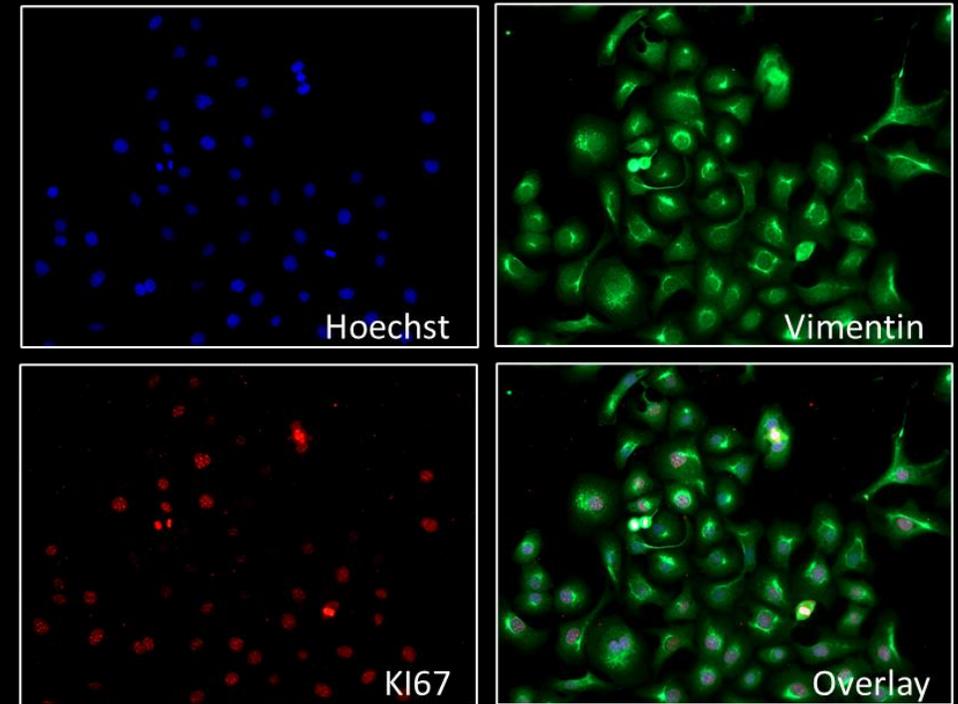


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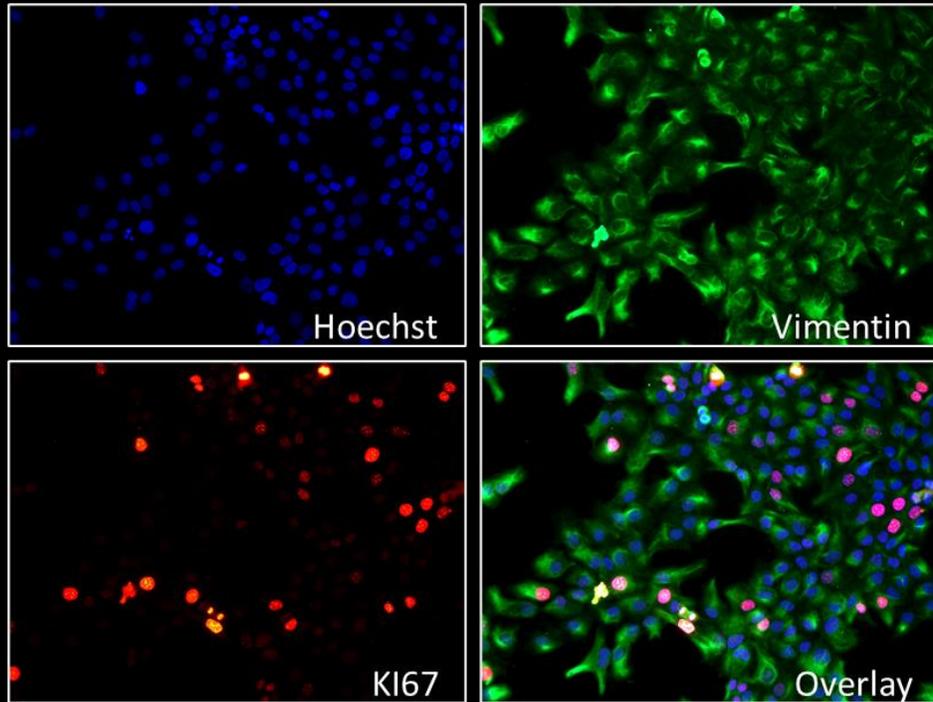


### SKOV-3 48h

### poly-lysine coated coverslips

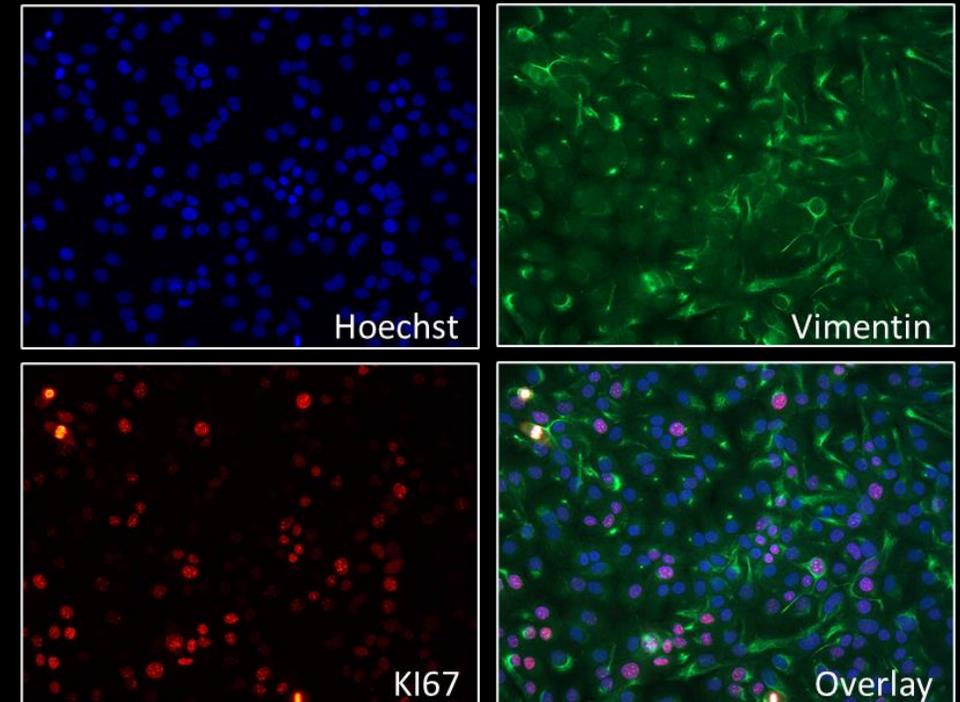


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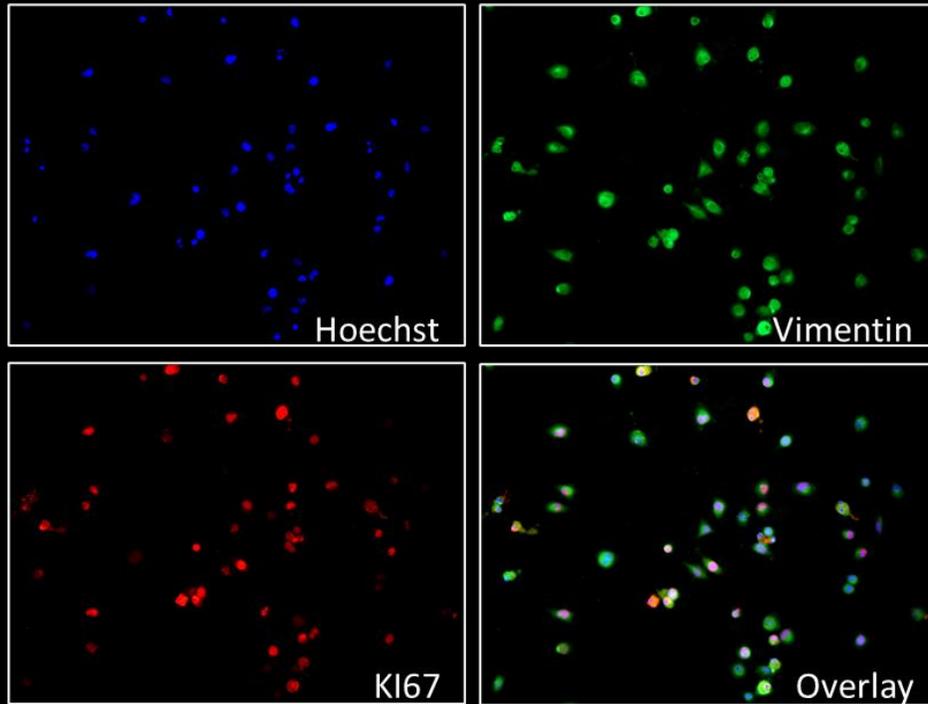


### SKOV-3 72h

### poly-lysine coated coverslips

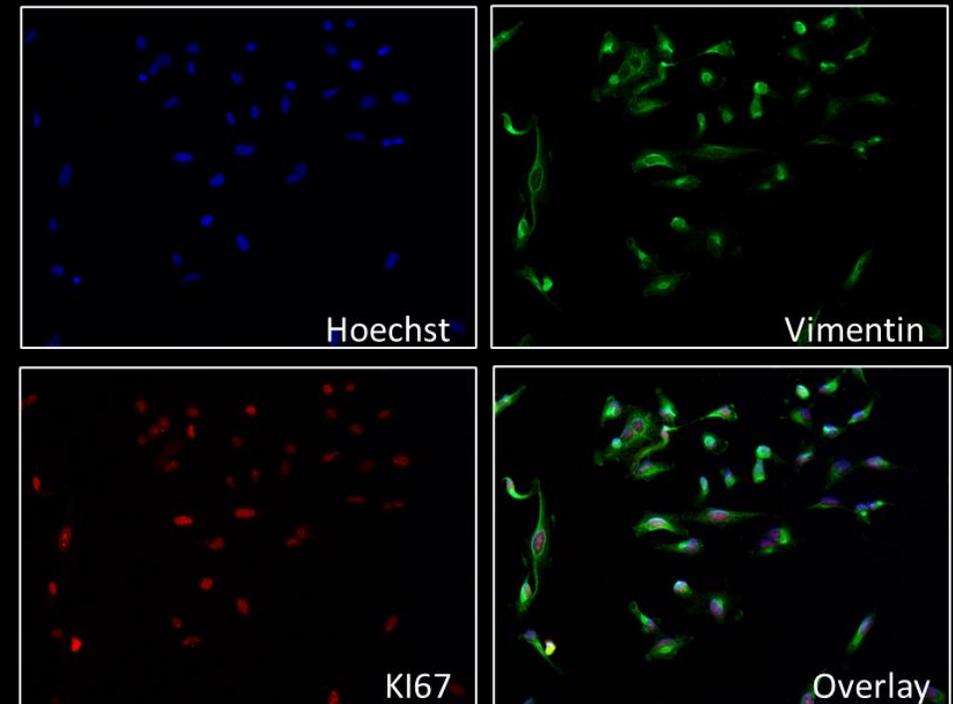


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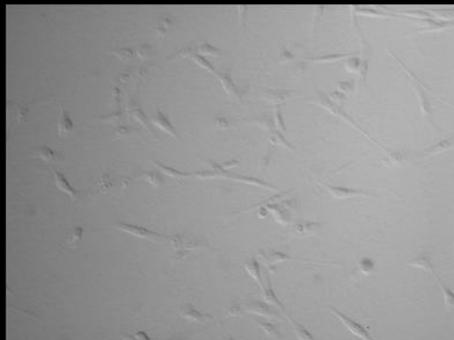
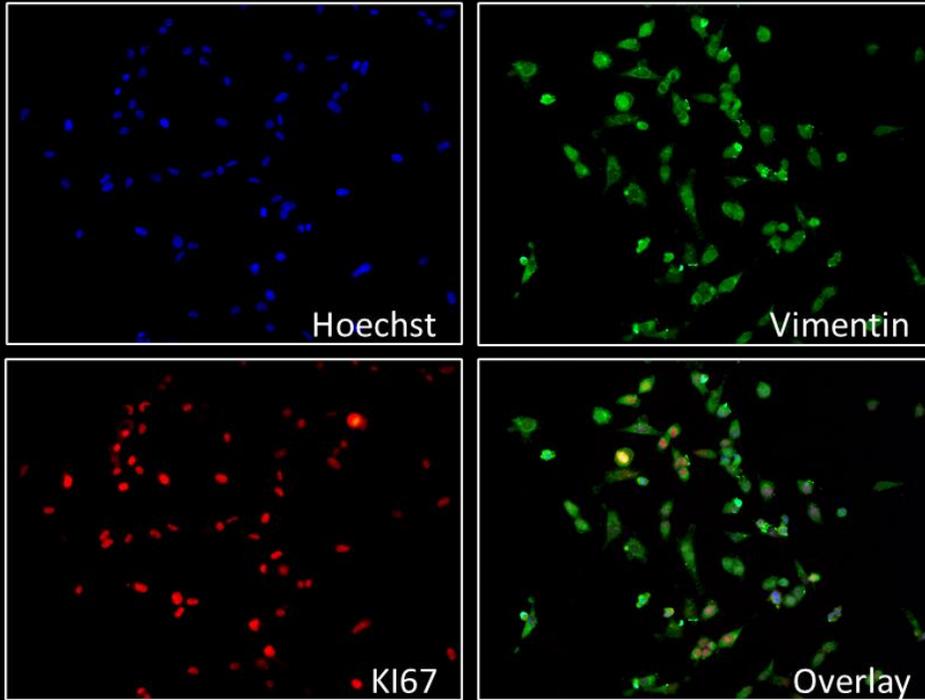


### Hela 24h

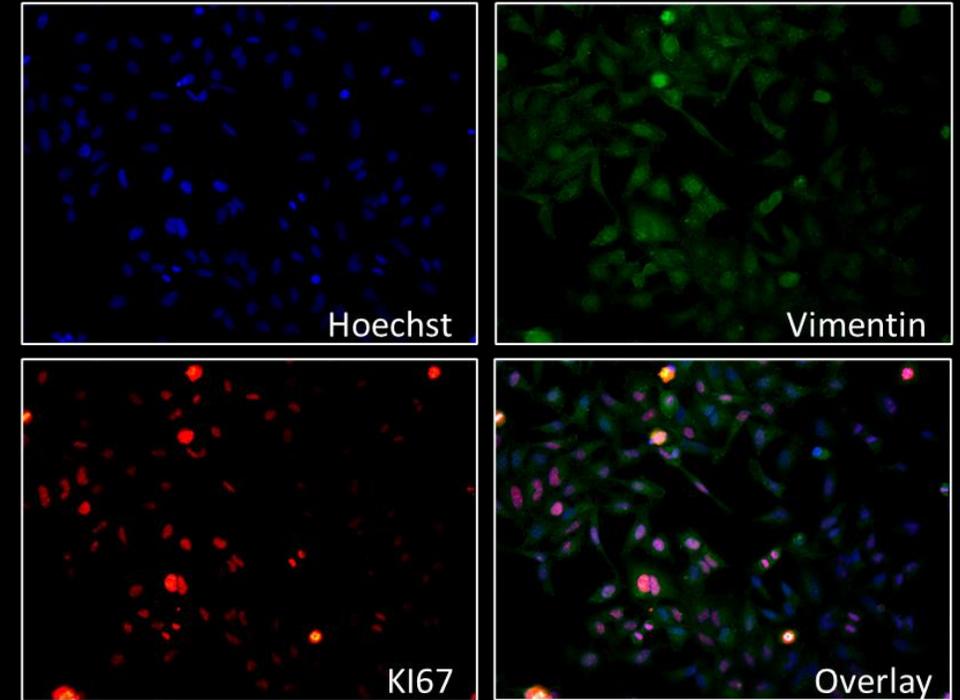
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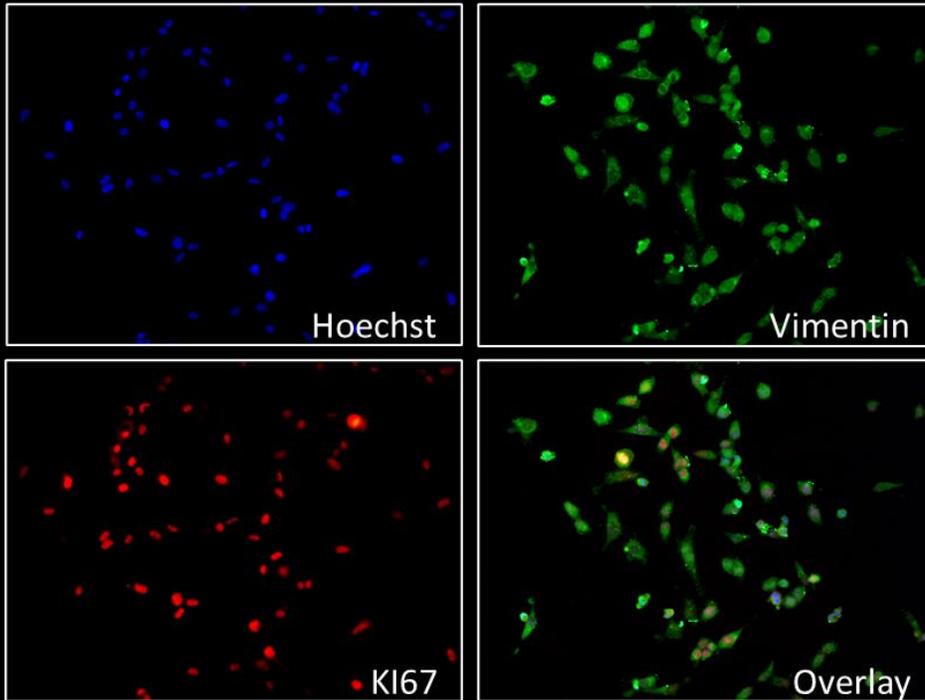
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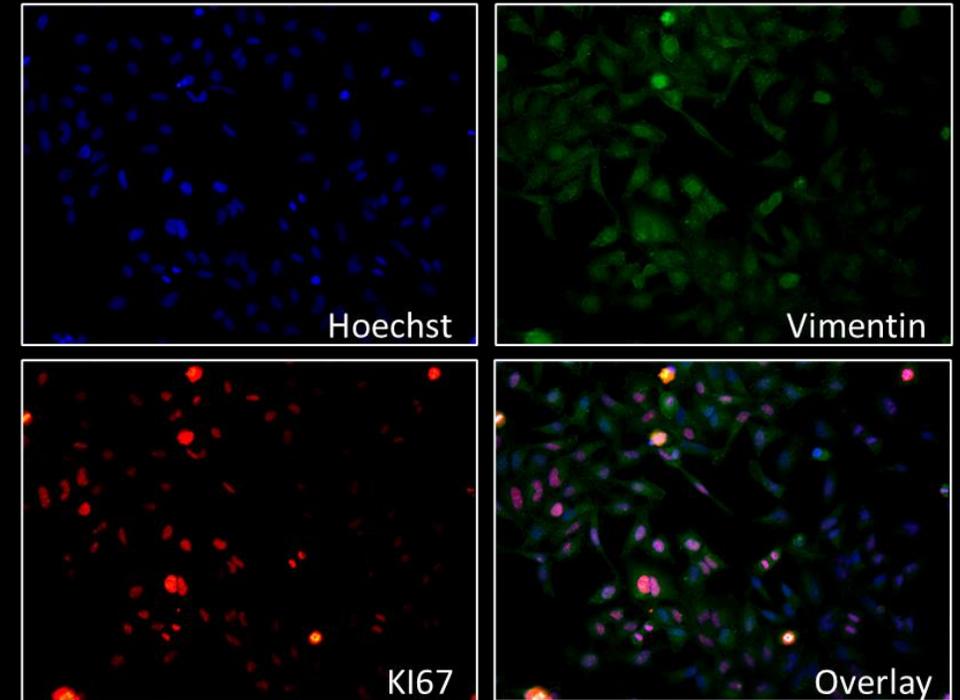
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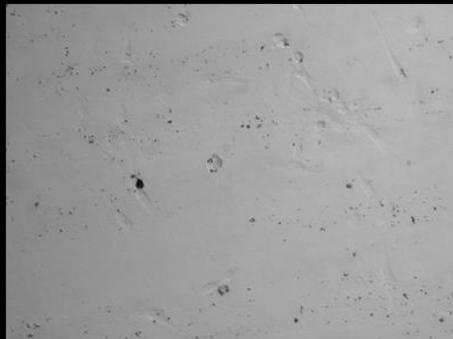
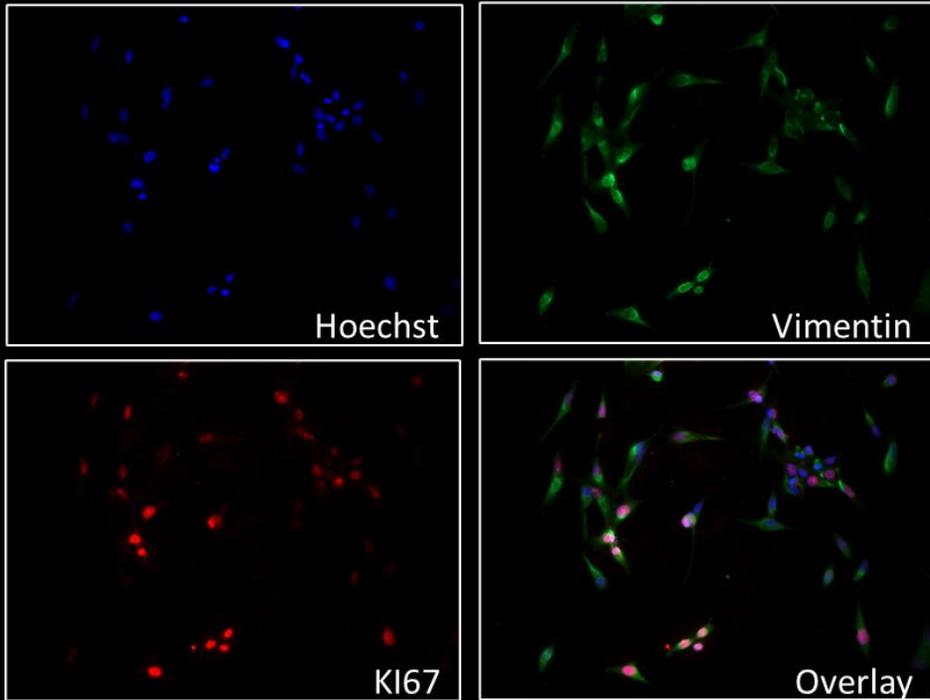
### Droplet Microarray



### poly-lysine coated coverslips

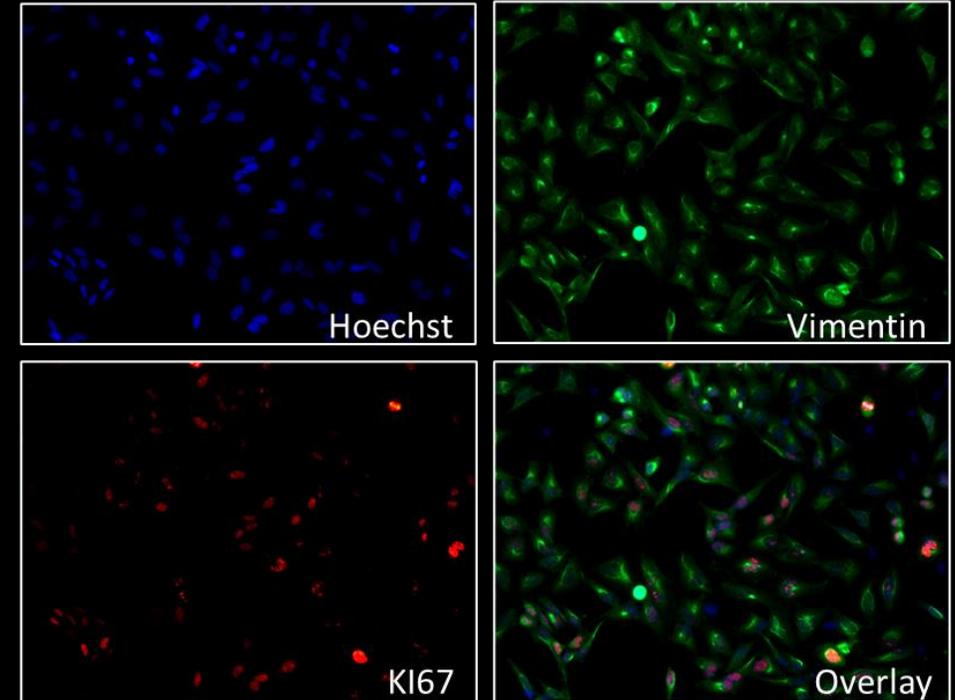


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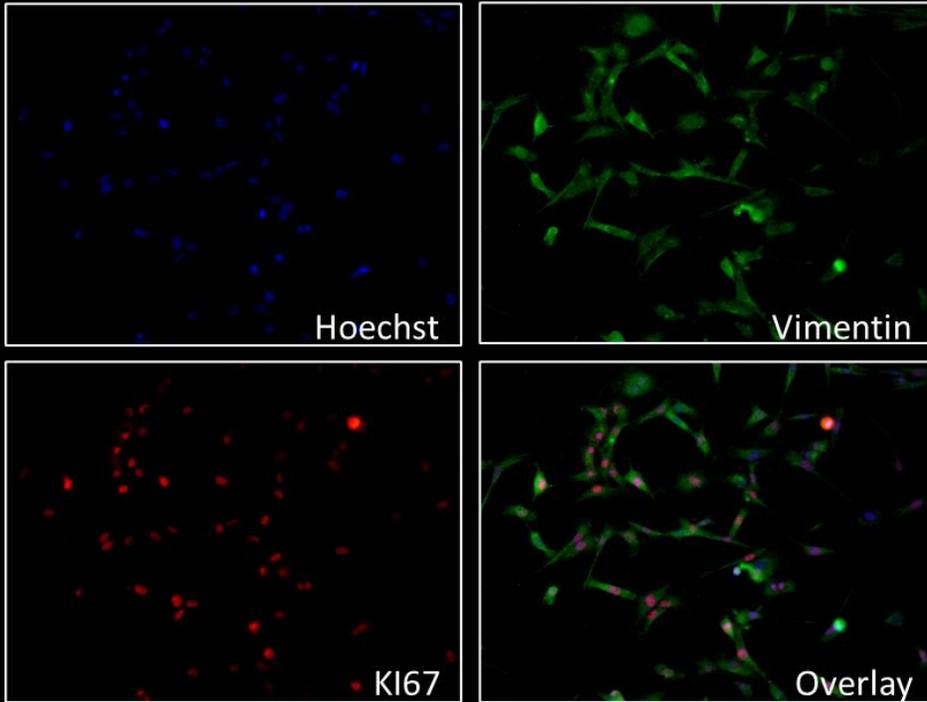


### Hela 72h

### poly-lysine coated coverslips

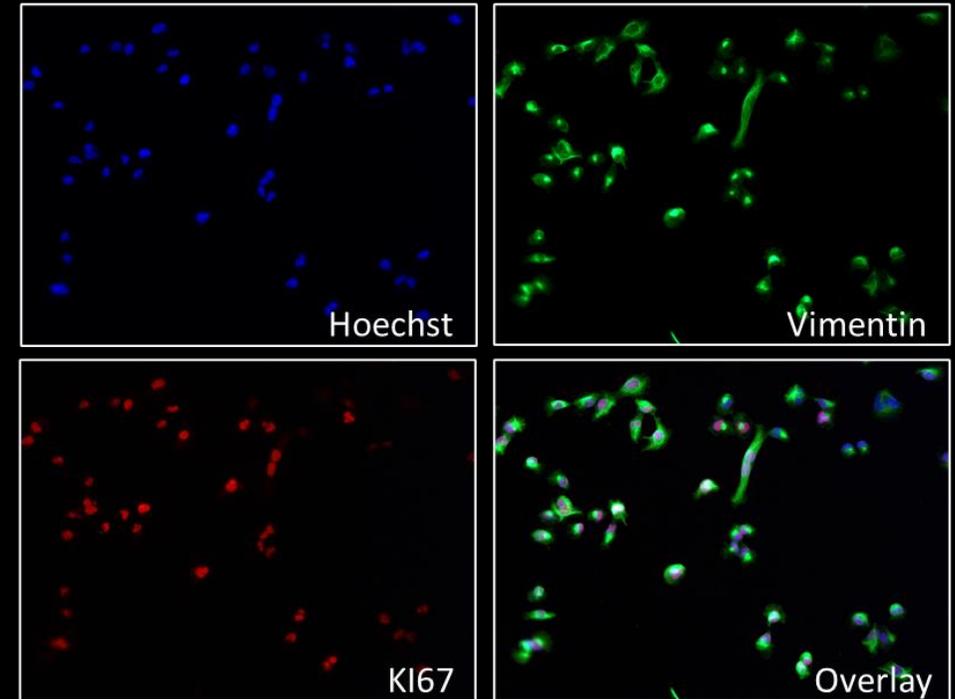


### Droplet Microarray

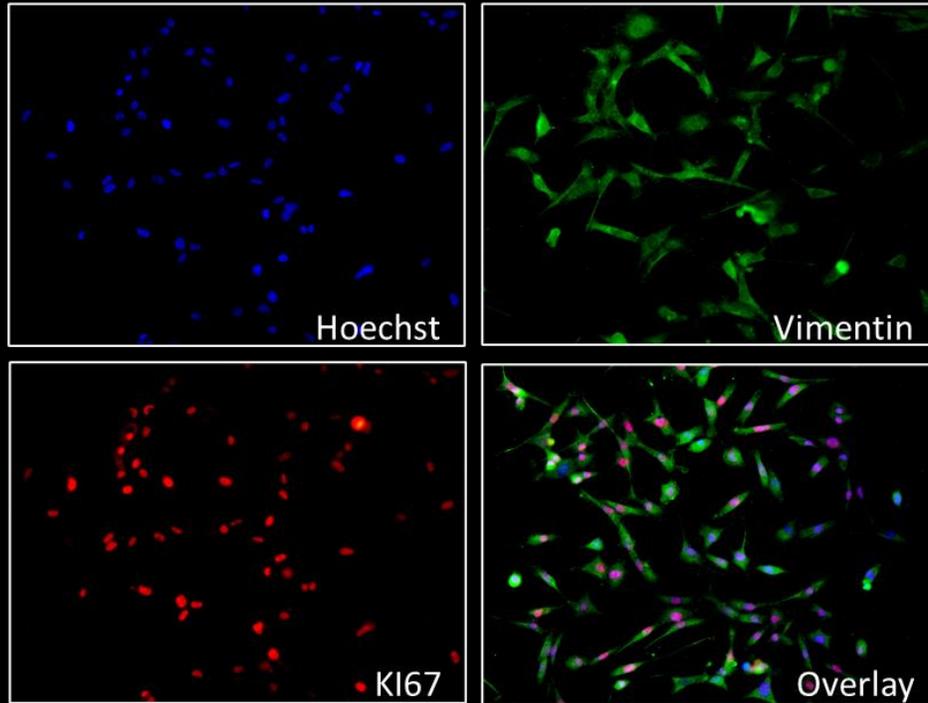


### MDA-MB231 24h

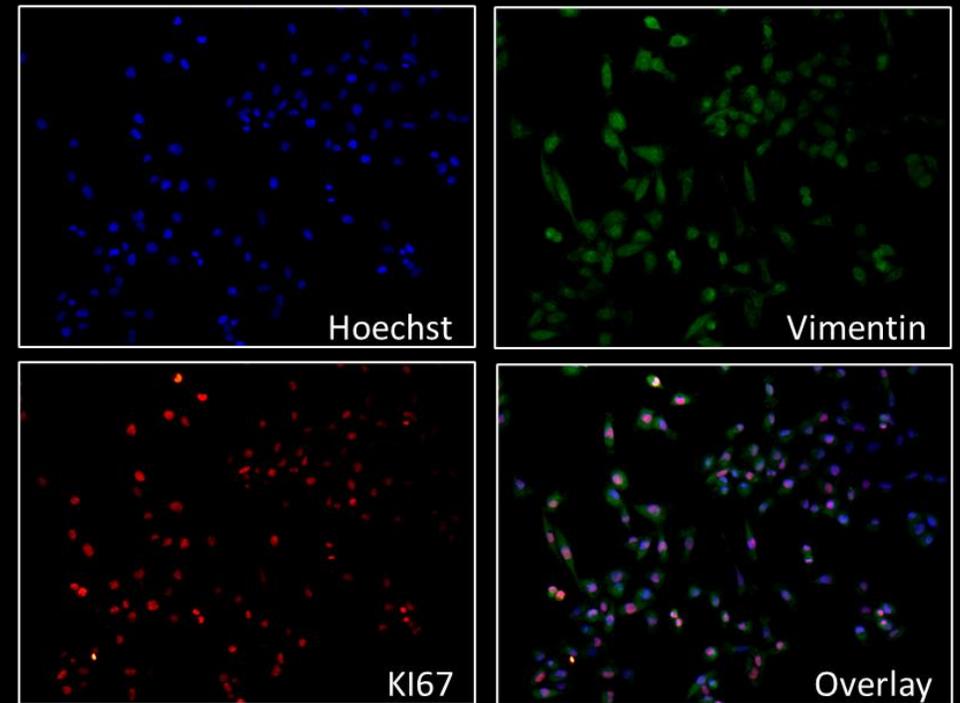
### poly-lysine coated coverslips



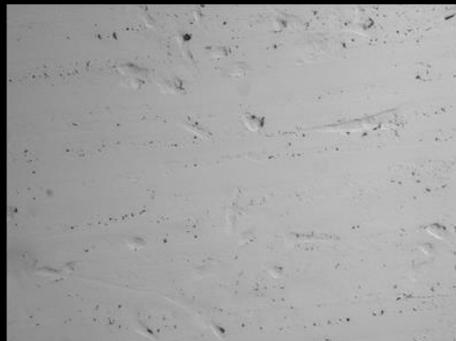
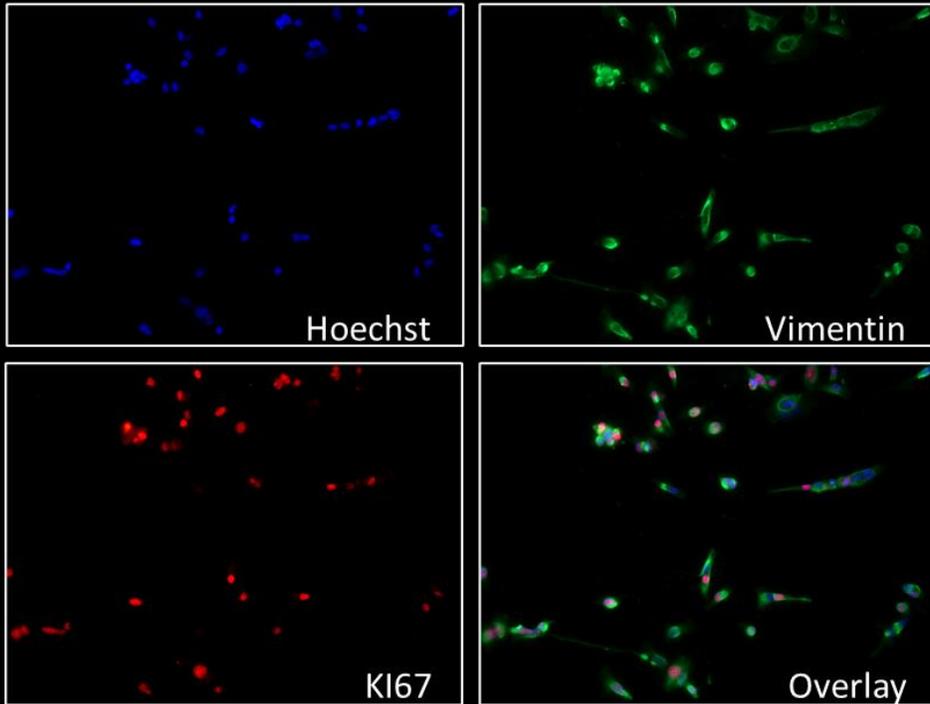
### Droplet Microarray



### MDA-MB231 48h

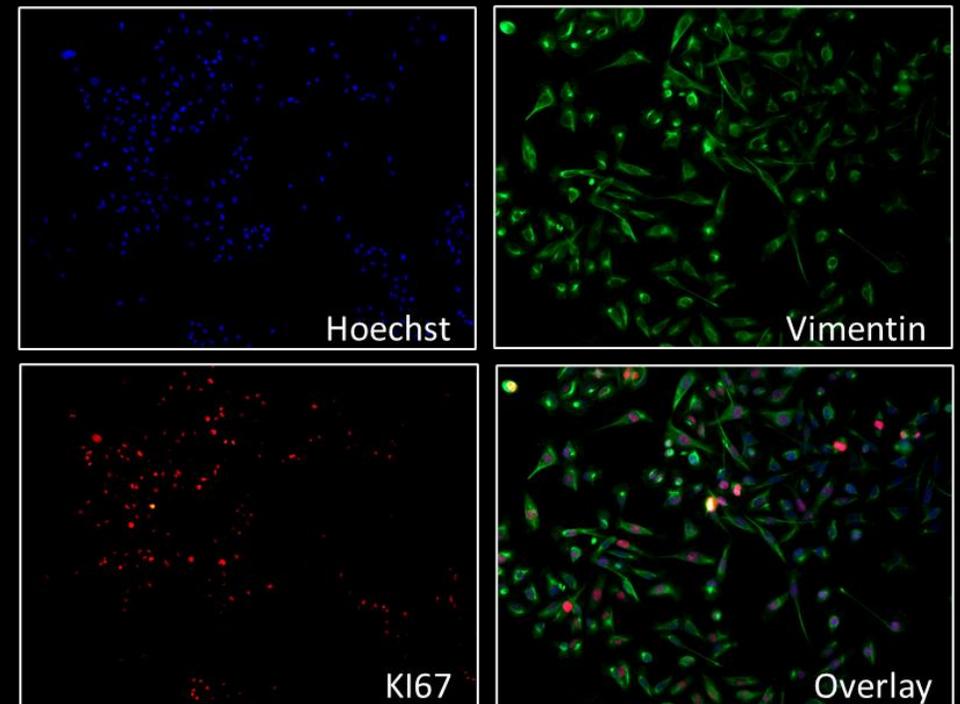


### Droplet Microarray

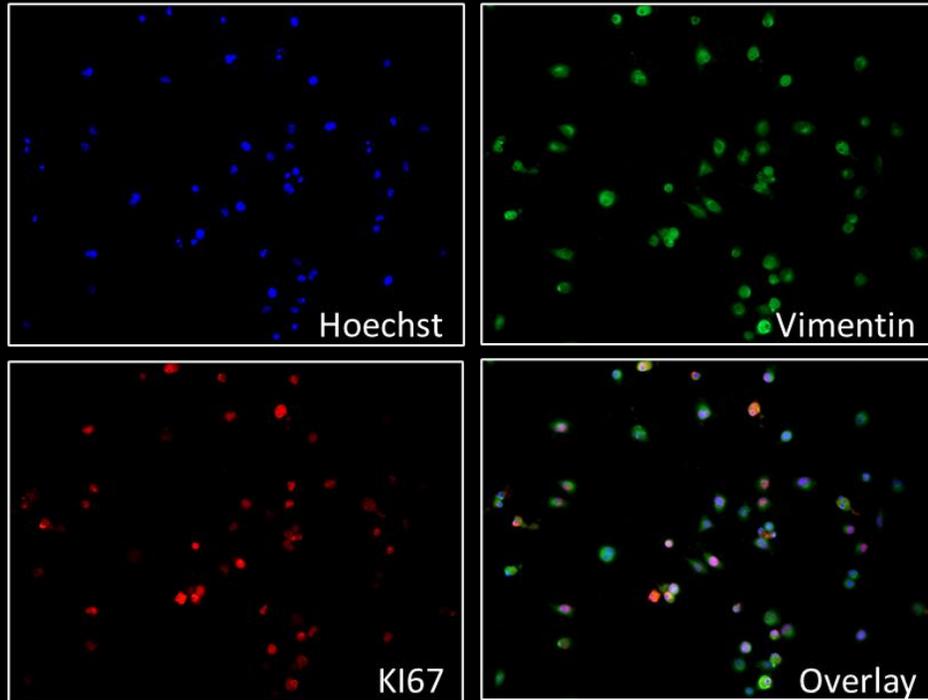


### MDA-MB231 72h

### poly-lysine coated coverslips

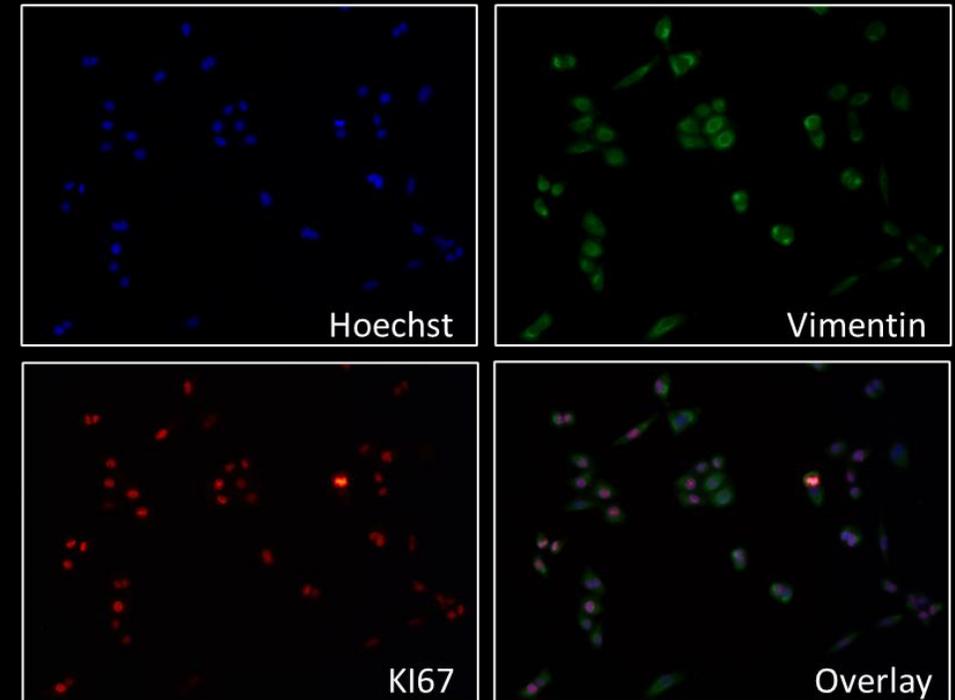


### Droplet Microarray

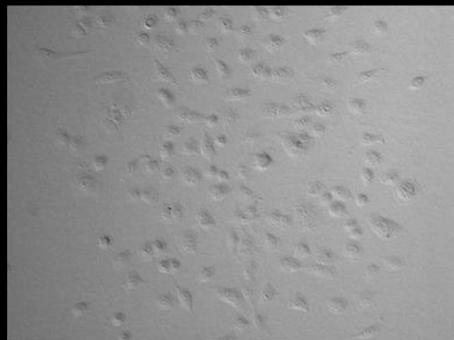
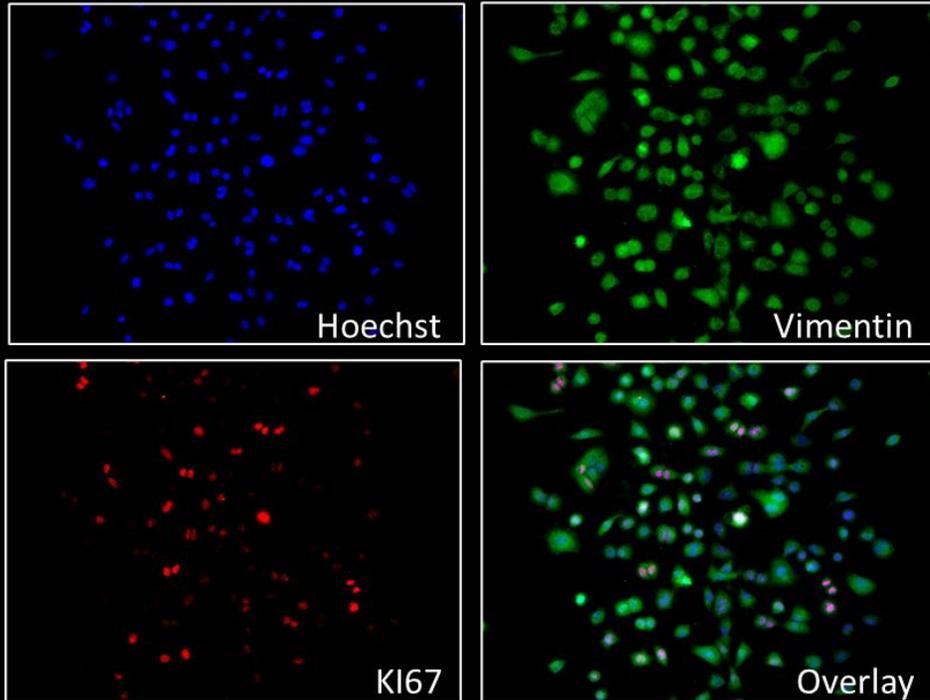


### A549 24h

### poly-lysine coated coverslips

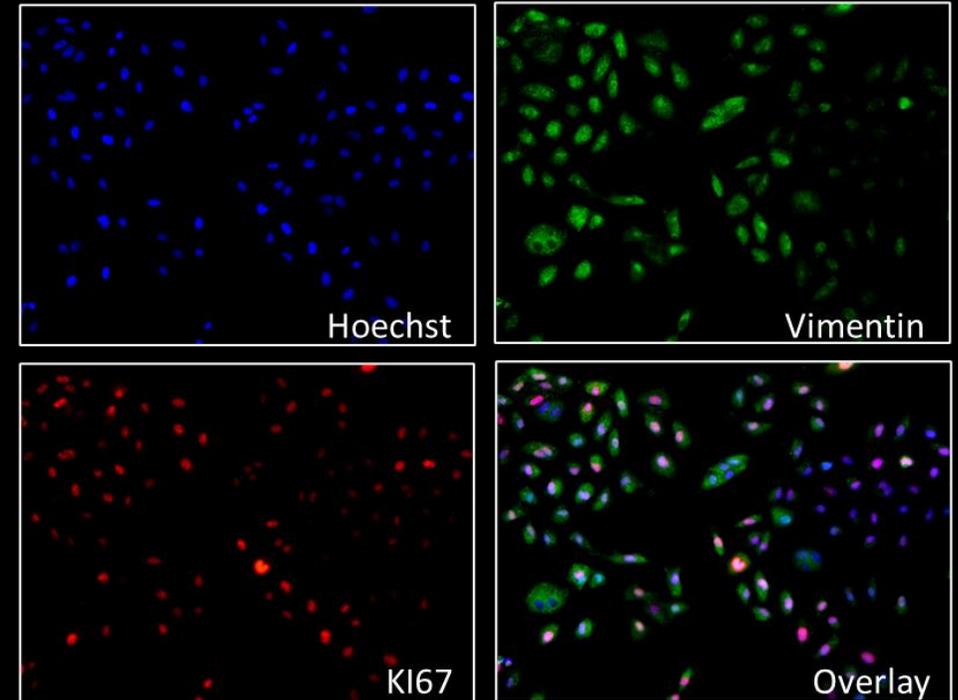


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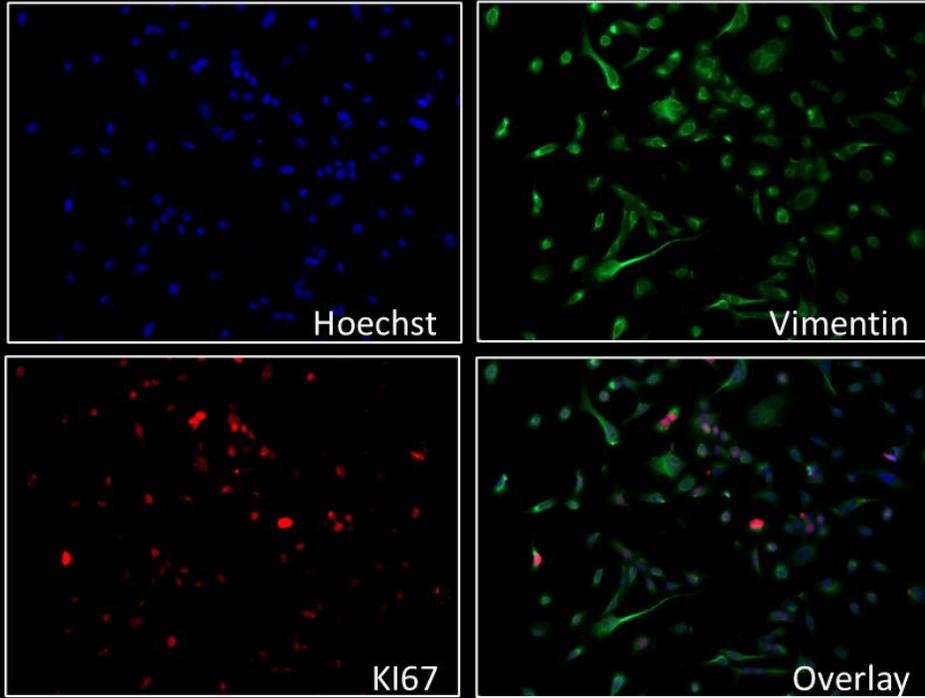


### A549 48h

### poly-lysine coated coverslips

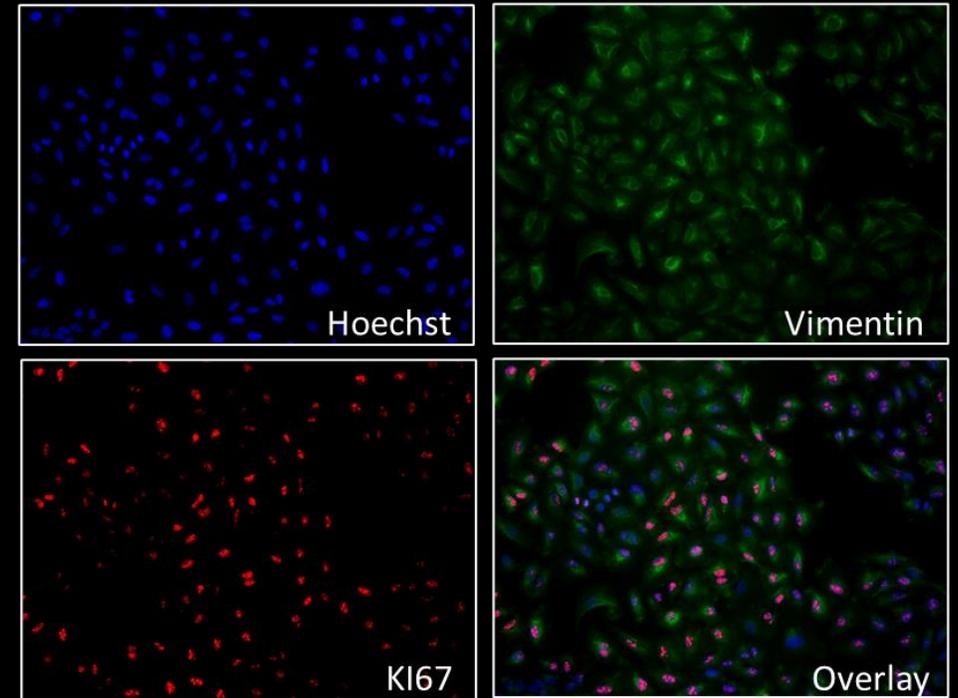


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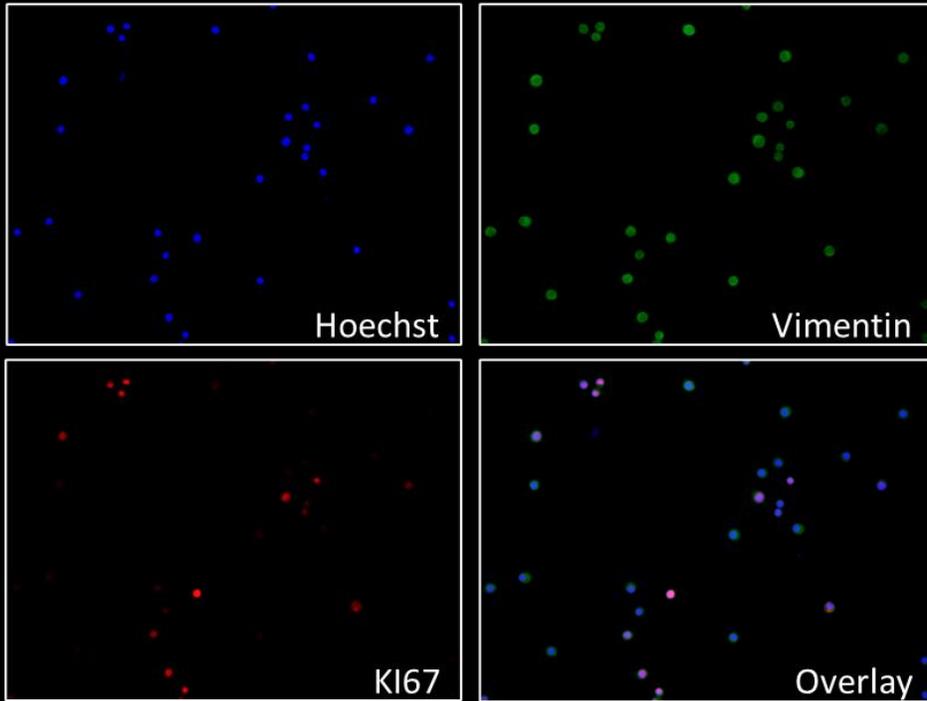


### A549 72h

### poly-lysine coated coverslips

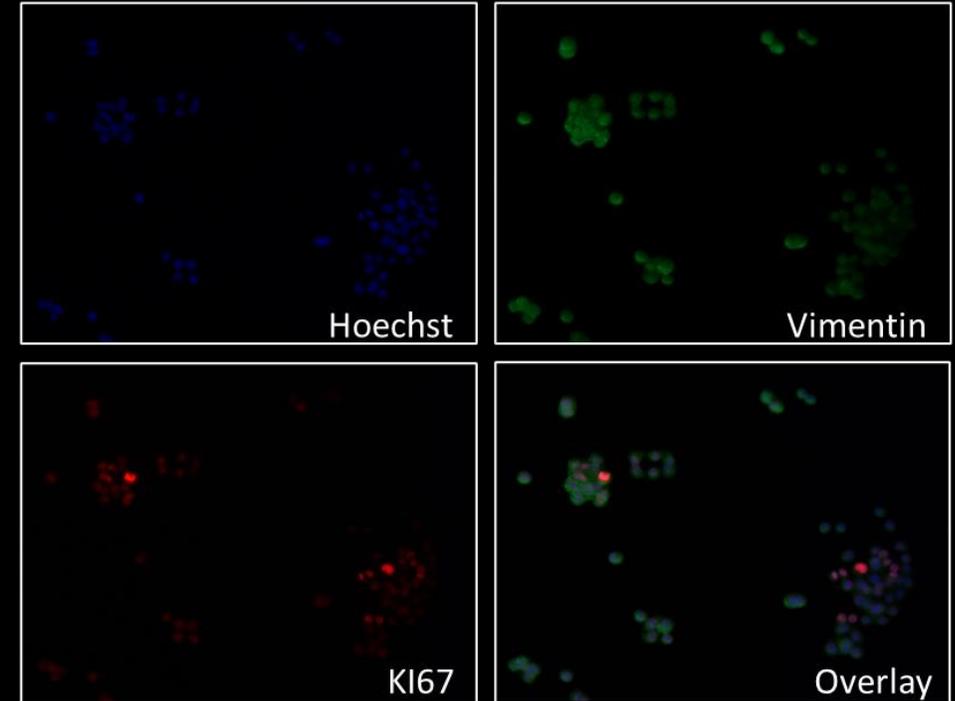


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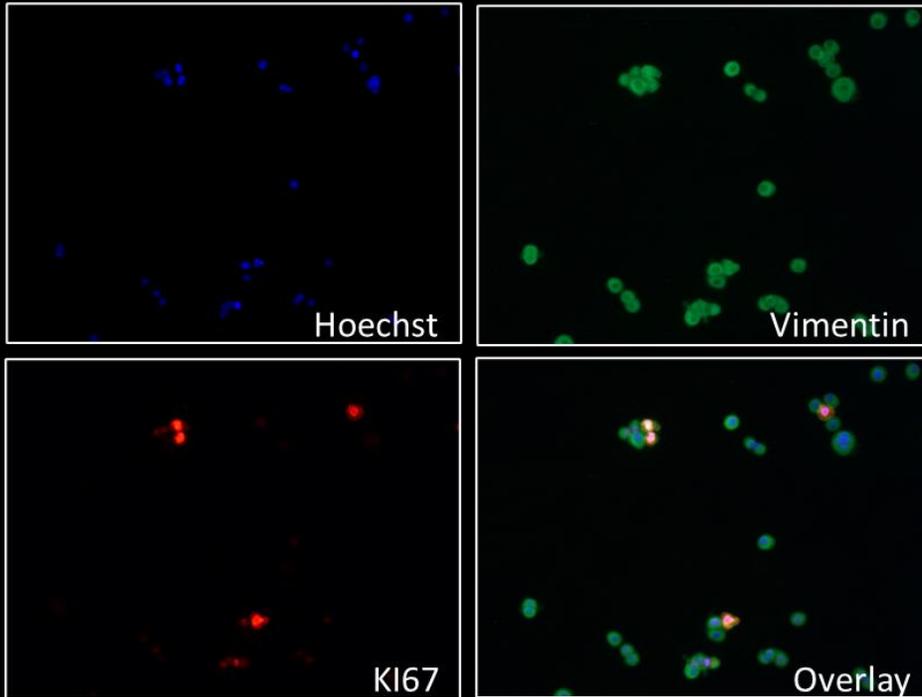


### HT29 24h

### poly-lysine coated coverslips

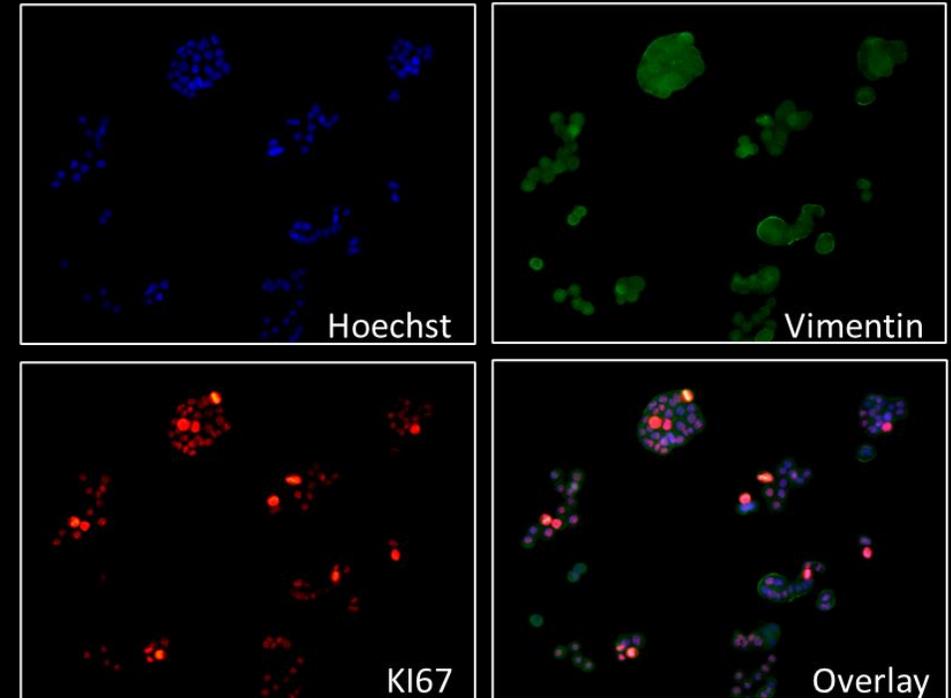


**Droplet Microarray**

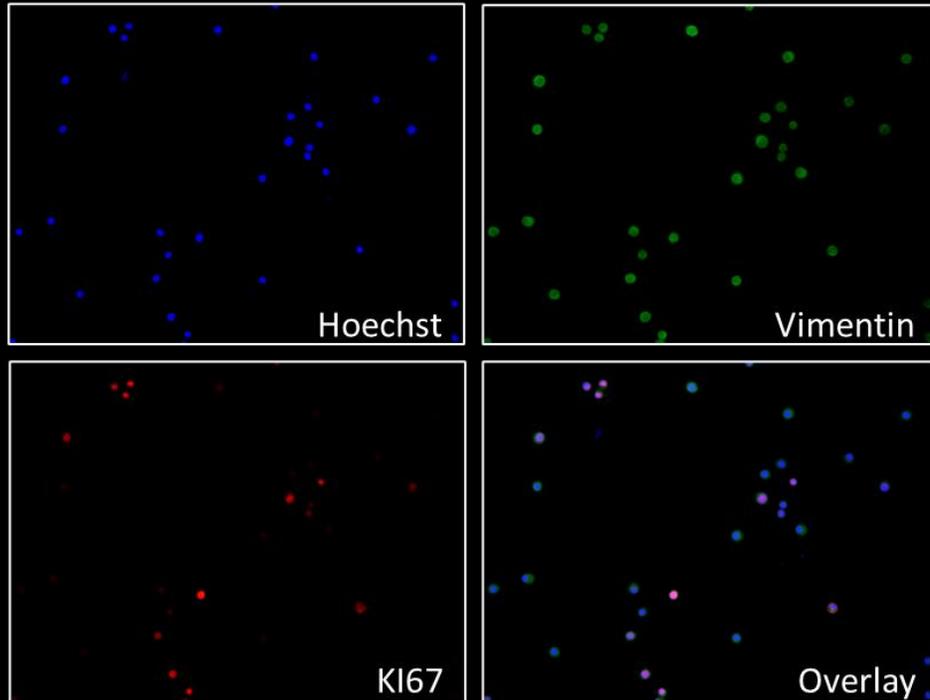


**HT29 48h**

**poly-lysine coated coverslips**

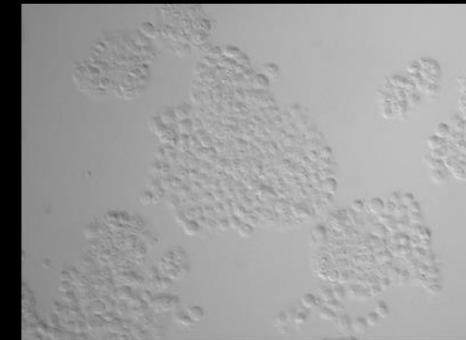
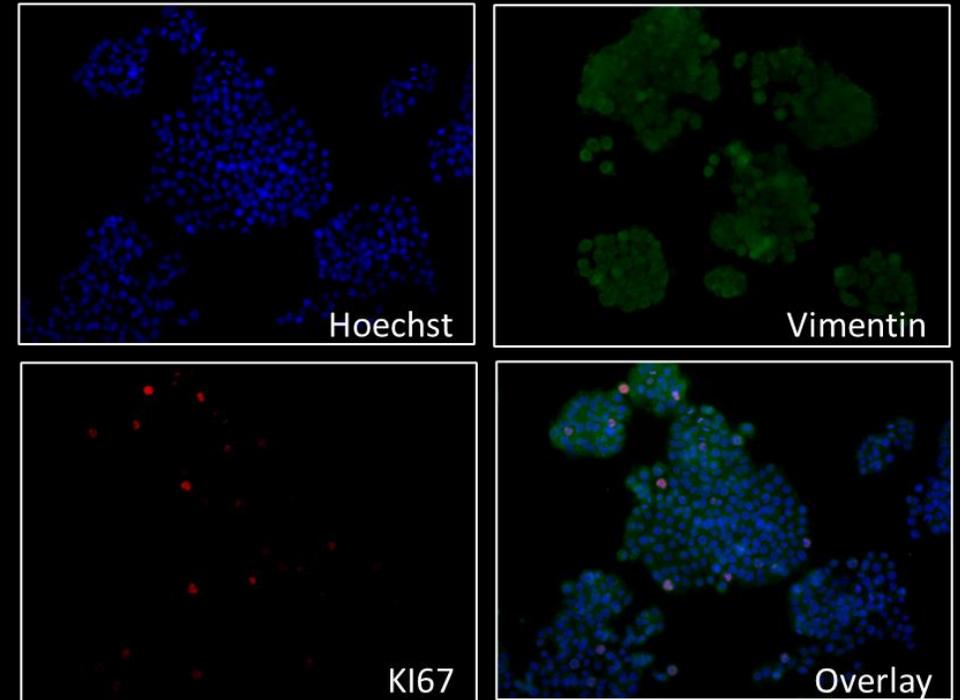


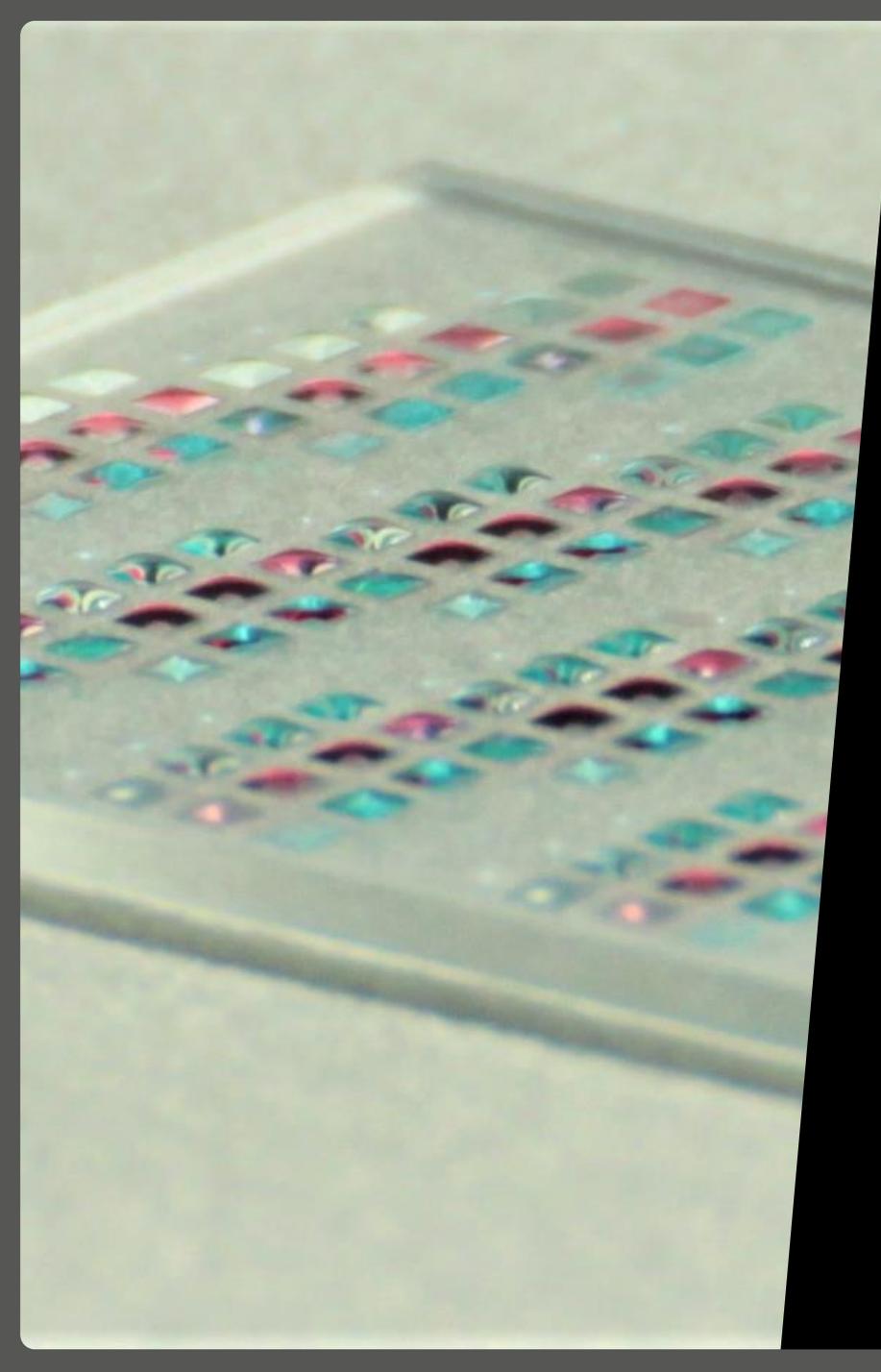
### Droplet Microarray



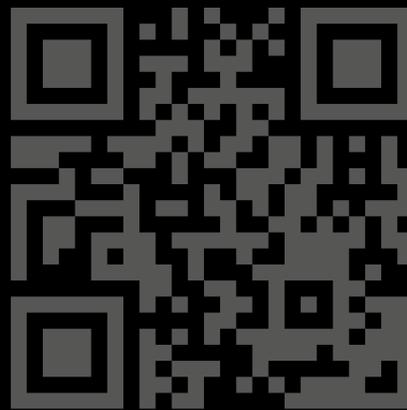
### HT29 72h

### poly-lysine coated coverslips





# AQUARRAY



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This project has received funding from the European Union's  
Horizon 2020 research and innovation programme under grant  
agreement No 880019