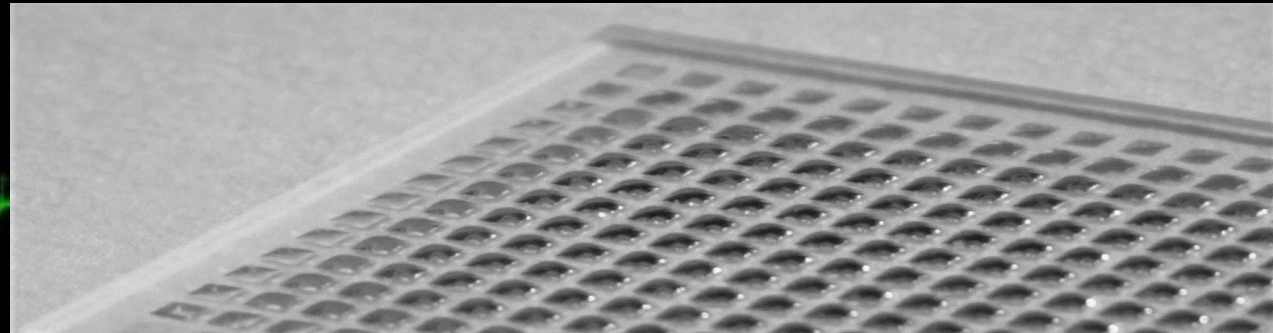
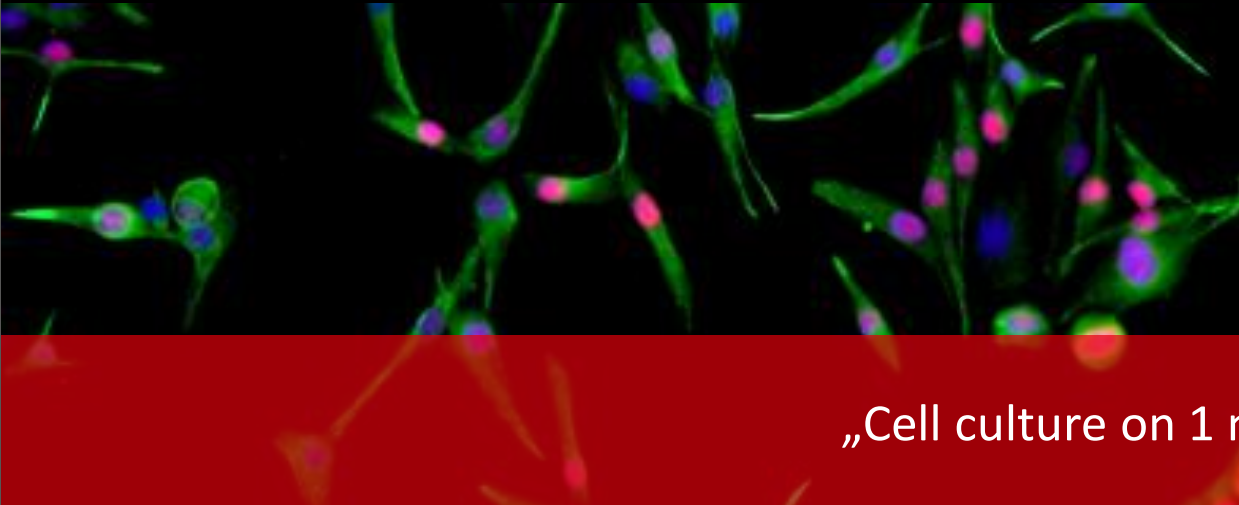


Droplet Microarray- a miniaturized array platform for cell culture



„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% CO₂ 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.

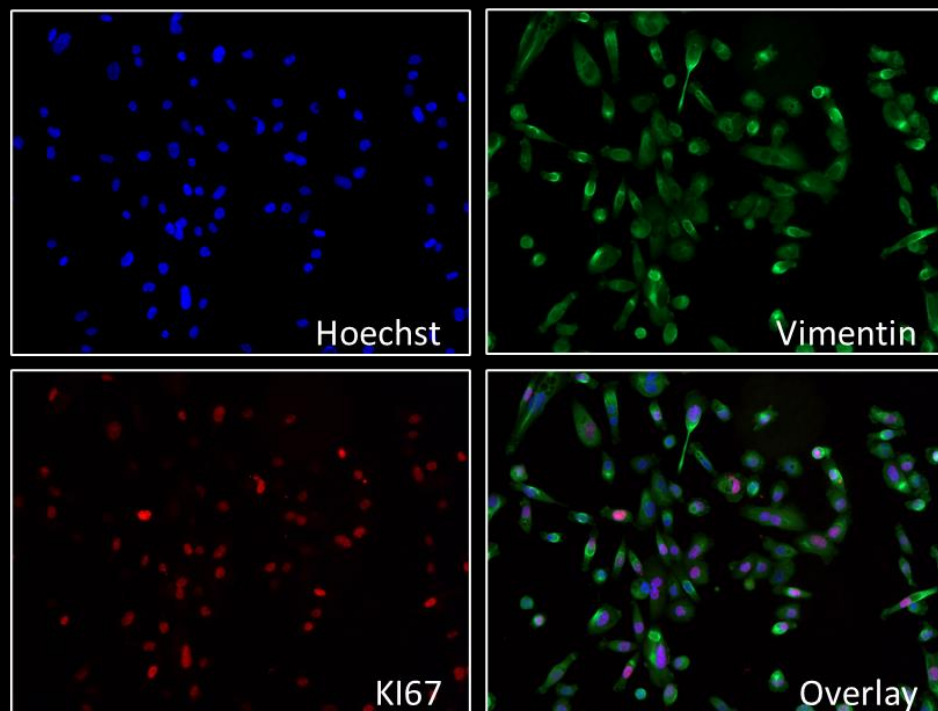
Staining of cells on Droplet Microarray (DMA) according to the protocol

“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

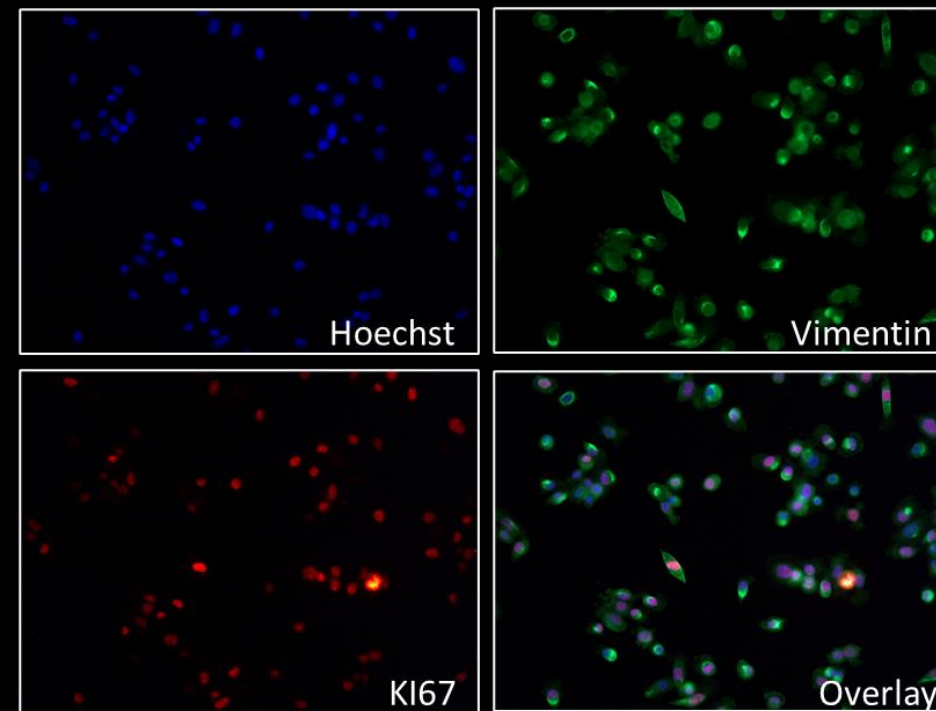
- Hoechst staining is used as nuclear marker of living or fixed cells and tissues
- Vimentin is used as marker of mesenchymal derived cells or cells undergoing an epithelial-to-mesenchymal transition (EMT) during both normal development and metastasis
- KI67 is a nuclear marker for cell proliferation 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

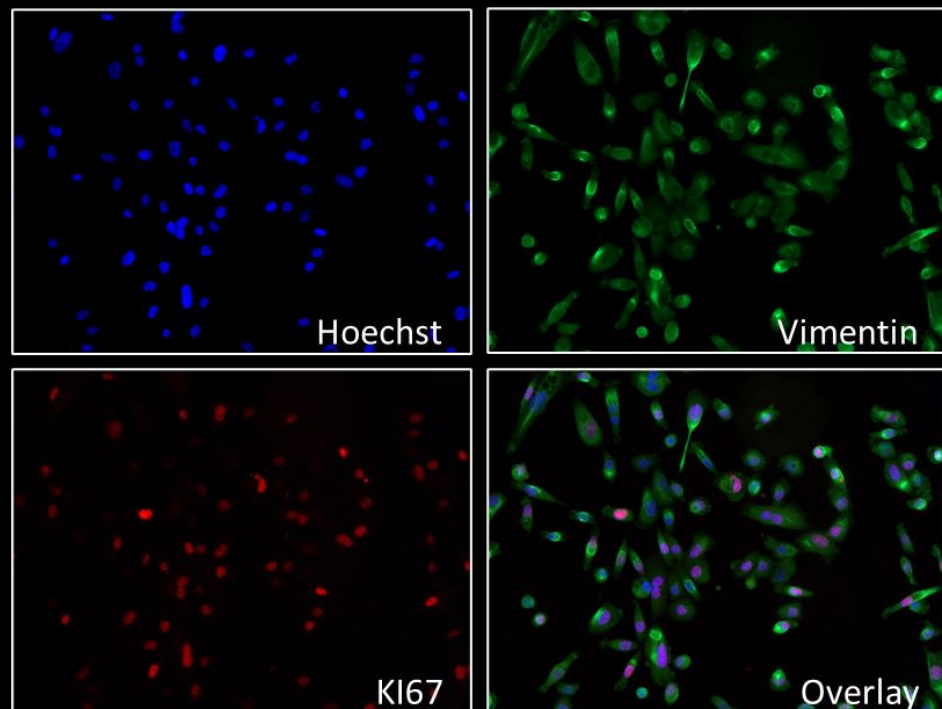


PC3 24h

poly-lysine coated coverslips

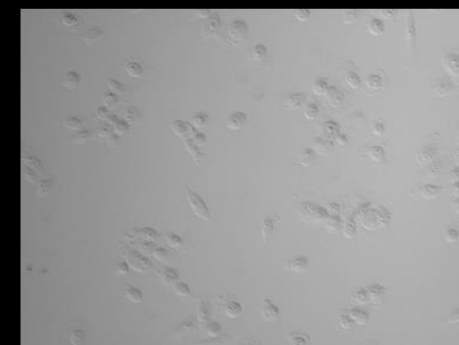
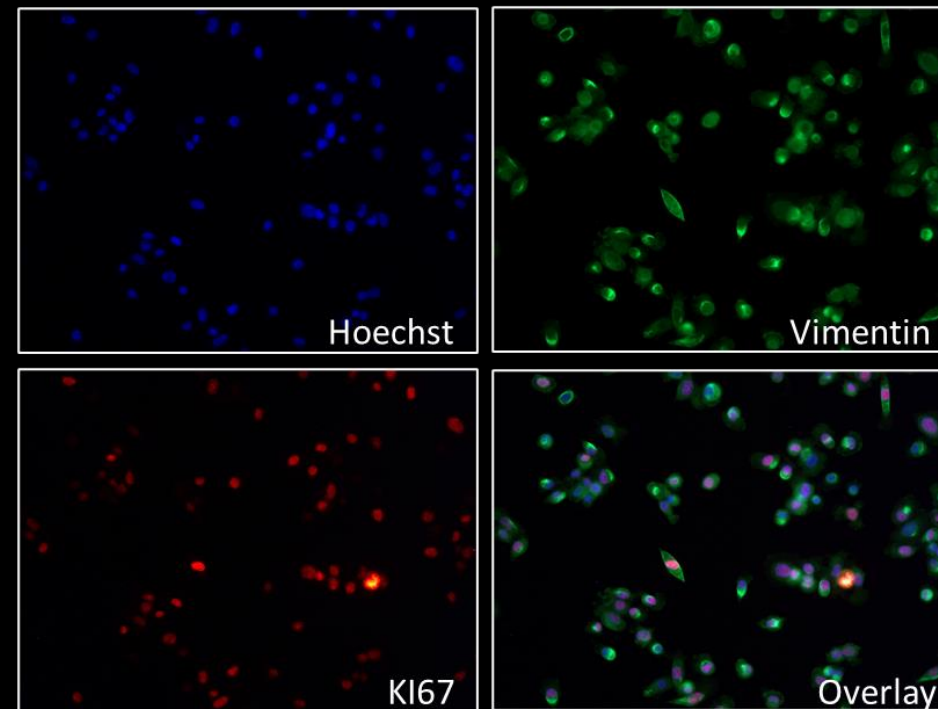


Droplet Microarray

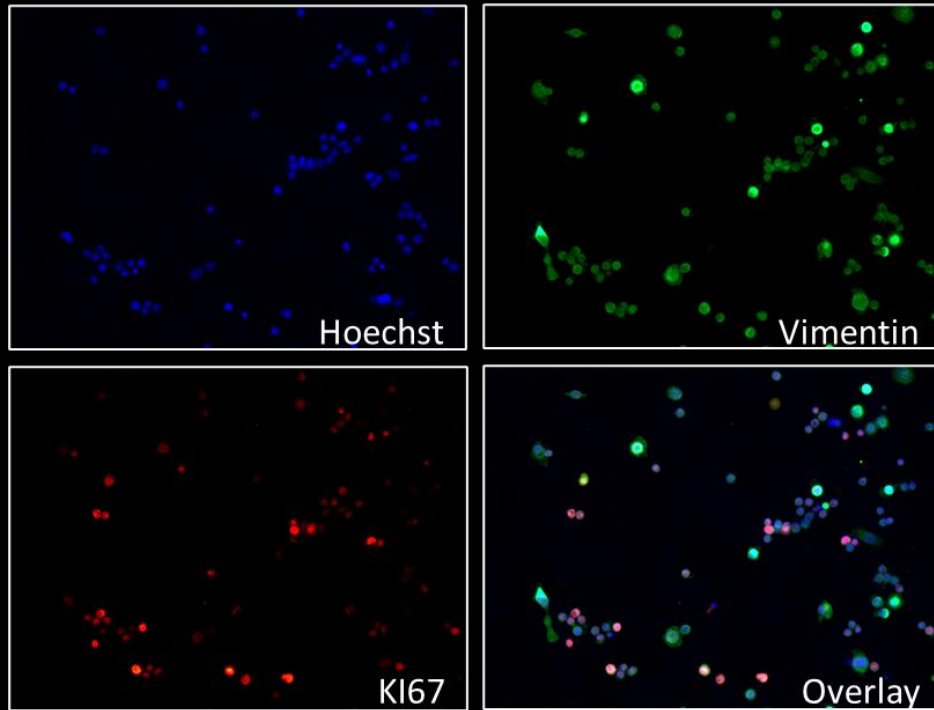


PC3 24h

poly-lysine coated coverslips

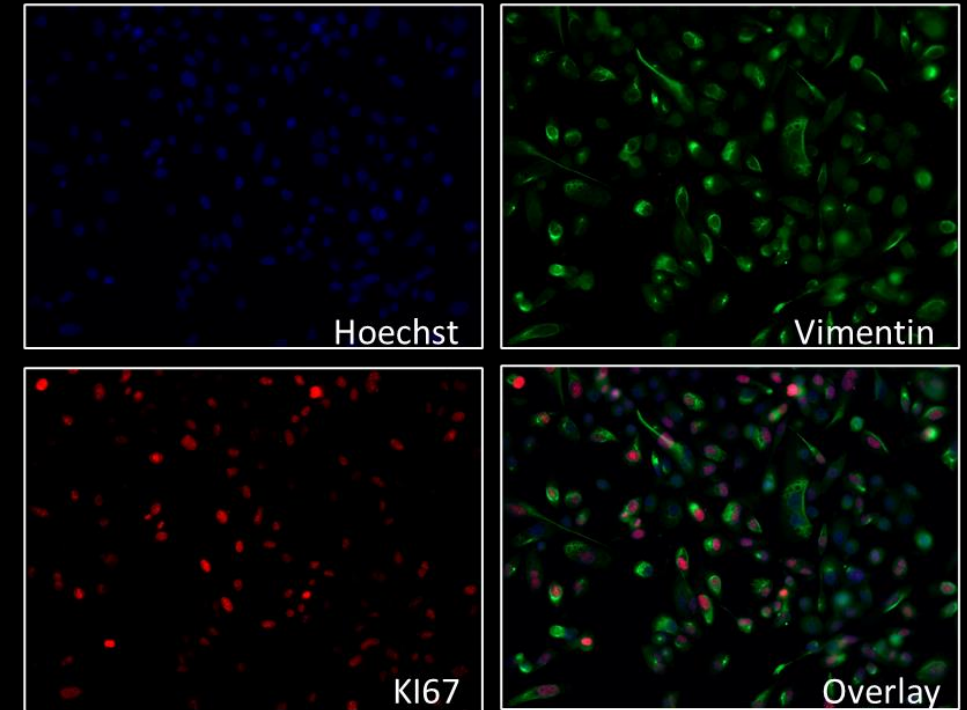


Droplet Microarray

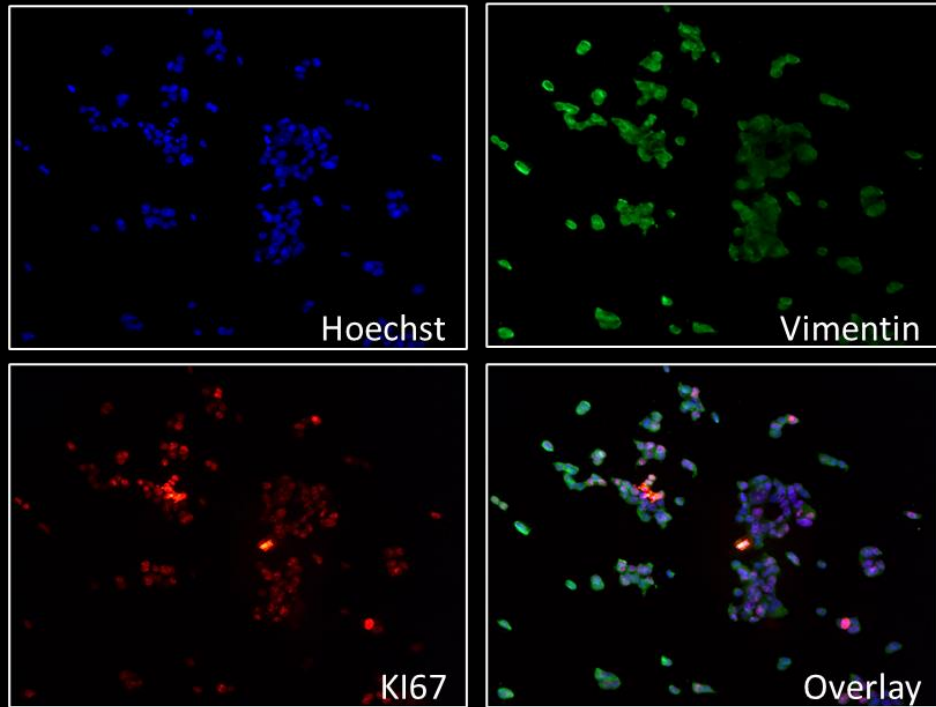


PC3 72h

poly-lysine coated coverslips

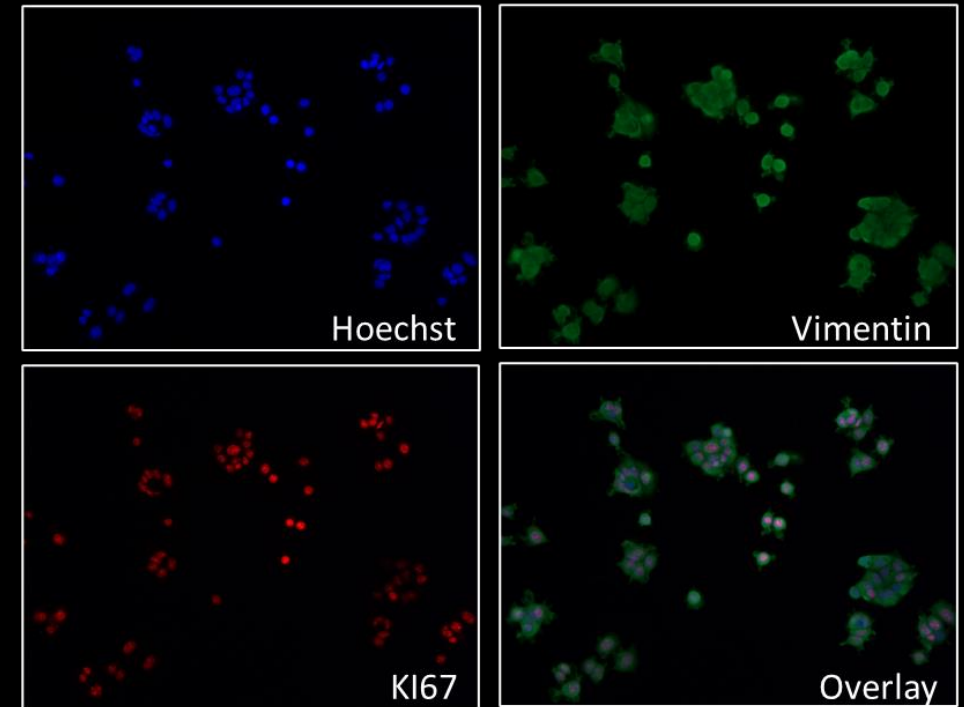


Droplet Microarray

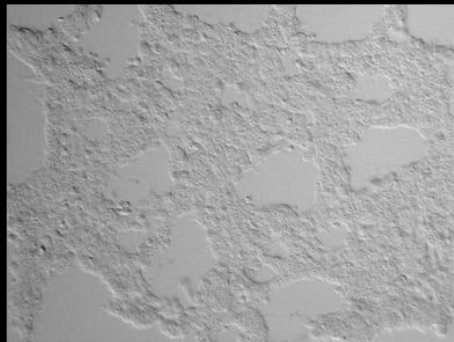
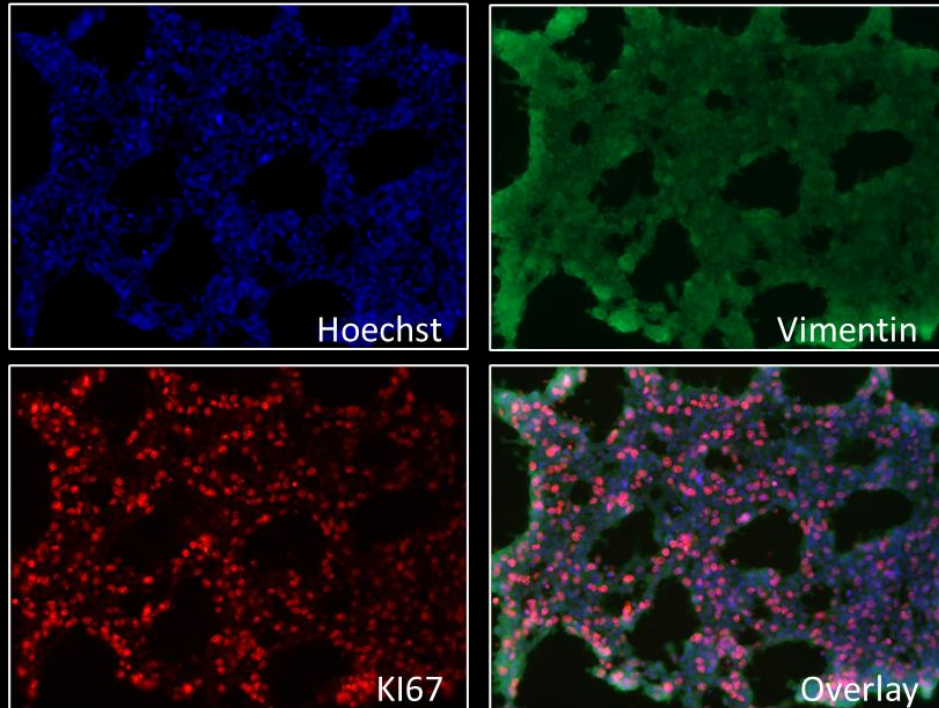


HCT116 24h

poly-lysine coated coverslips

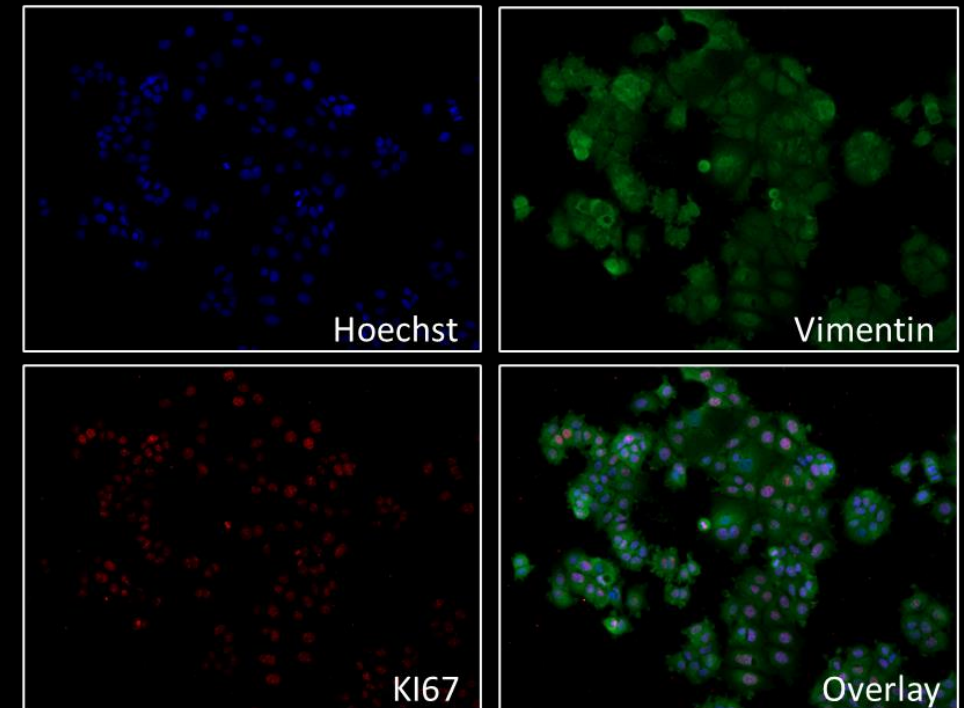


Droplet Microarray

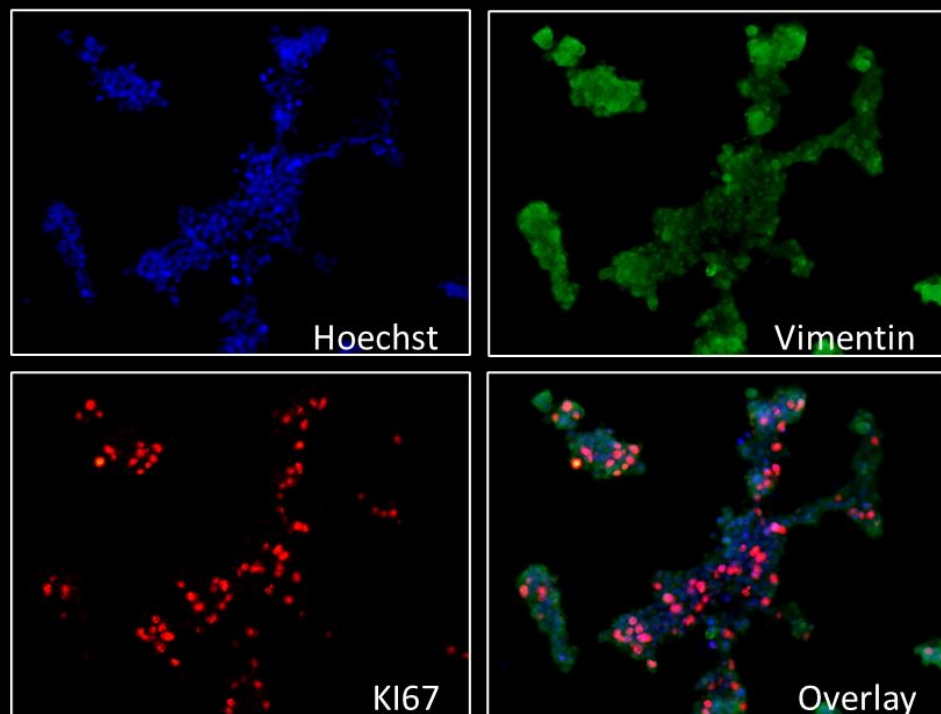


HCT116 48h

poly-lysine coated coverslips

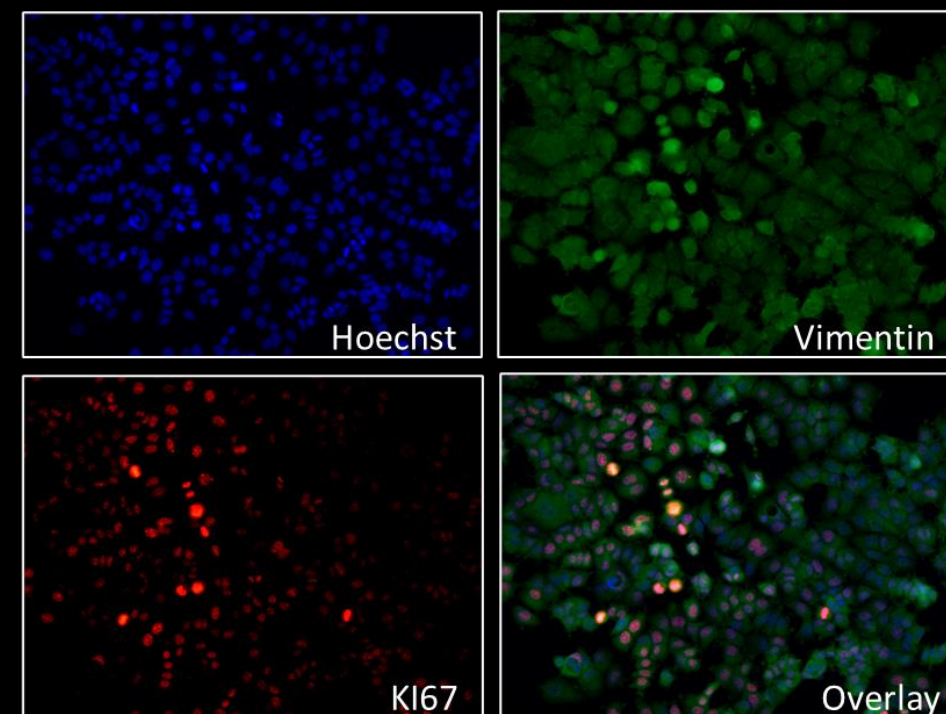


Droplet Microarray

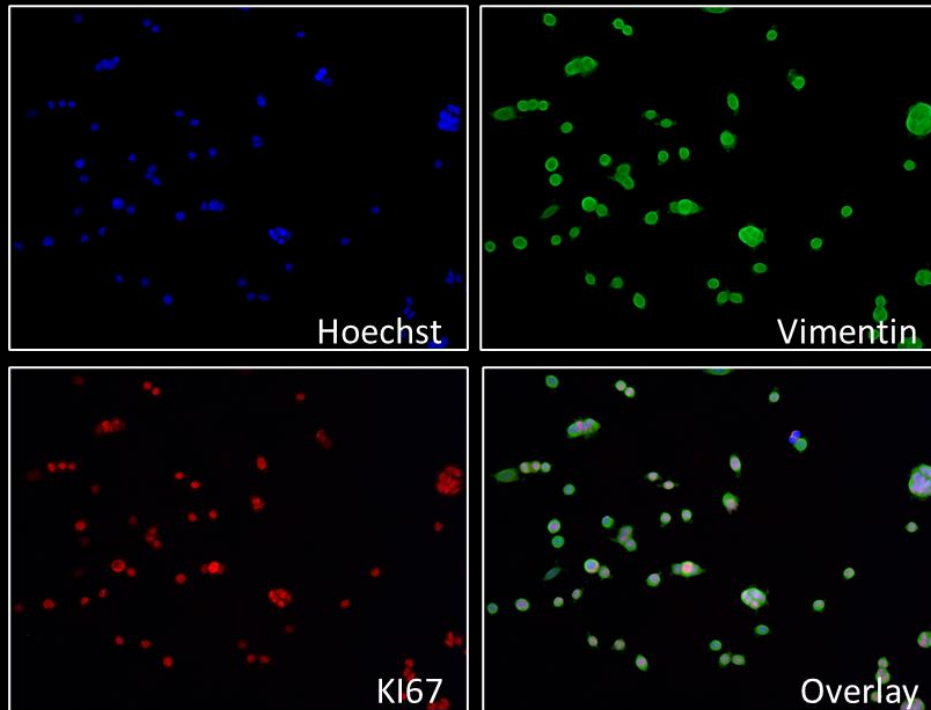


HCT116 72h

poly-lysine coated coverslips

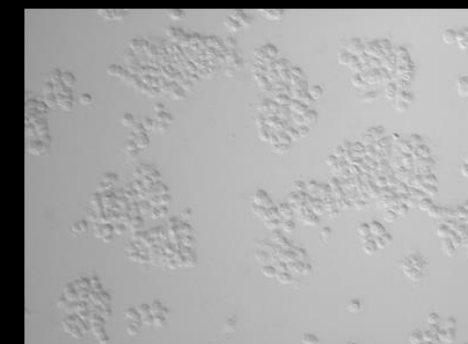
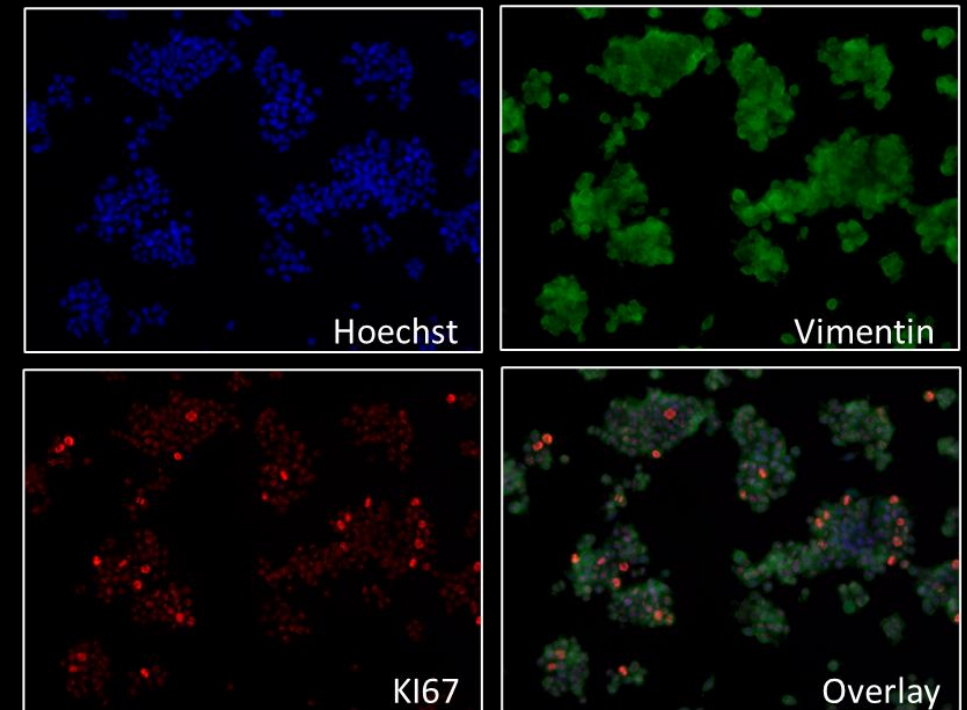


Droplet Microarray

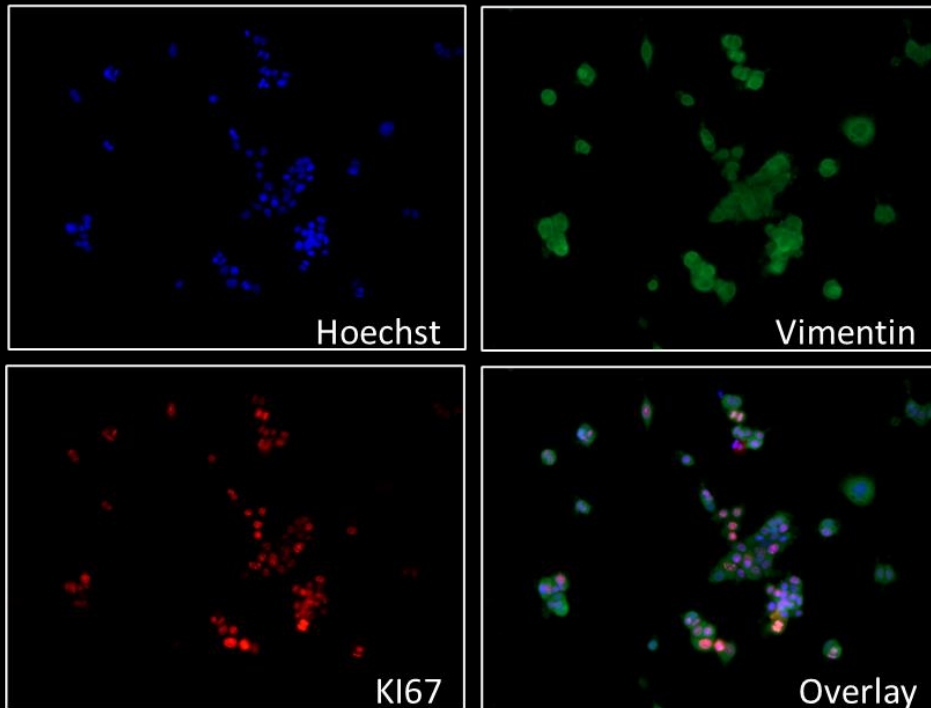


MCF7 24h

poly-lysine coated coverslips

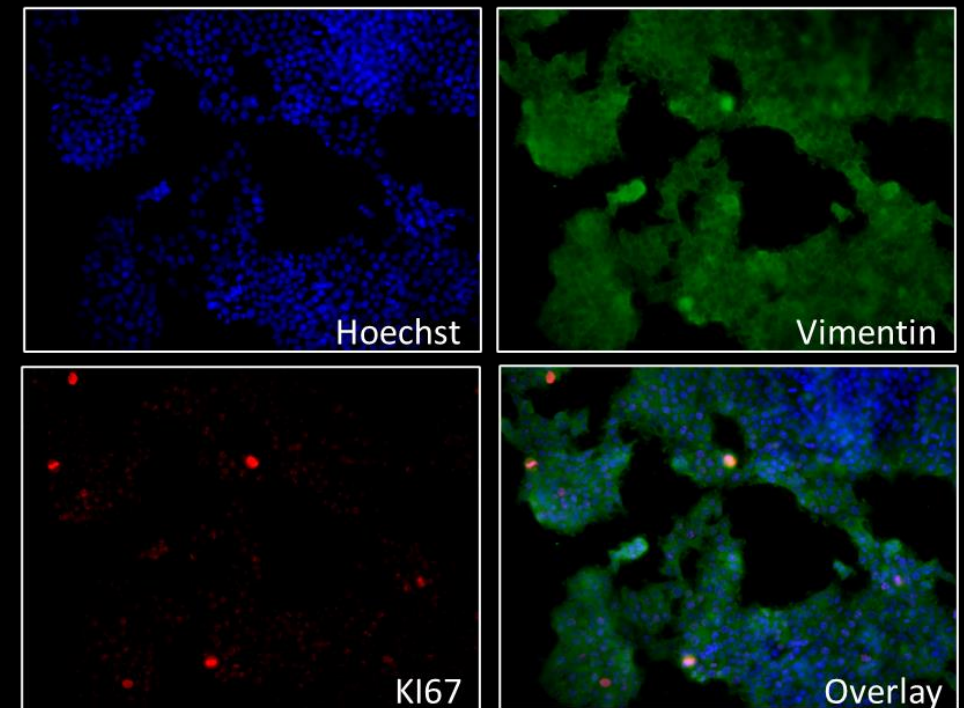


Droplet Microarray

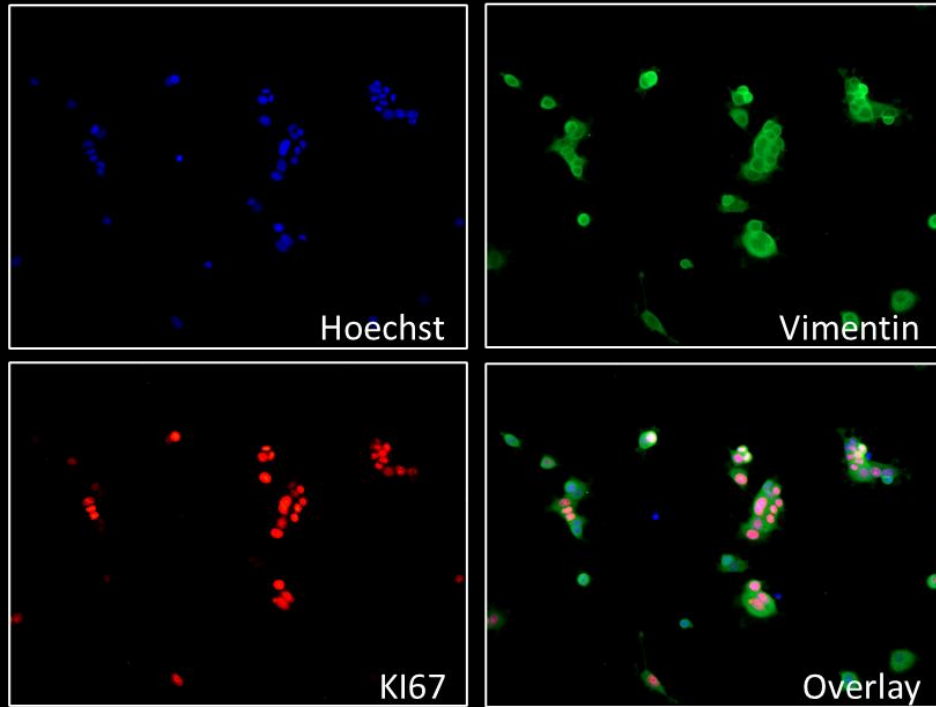


MCF7 48h

poly-lysine coated coverslips

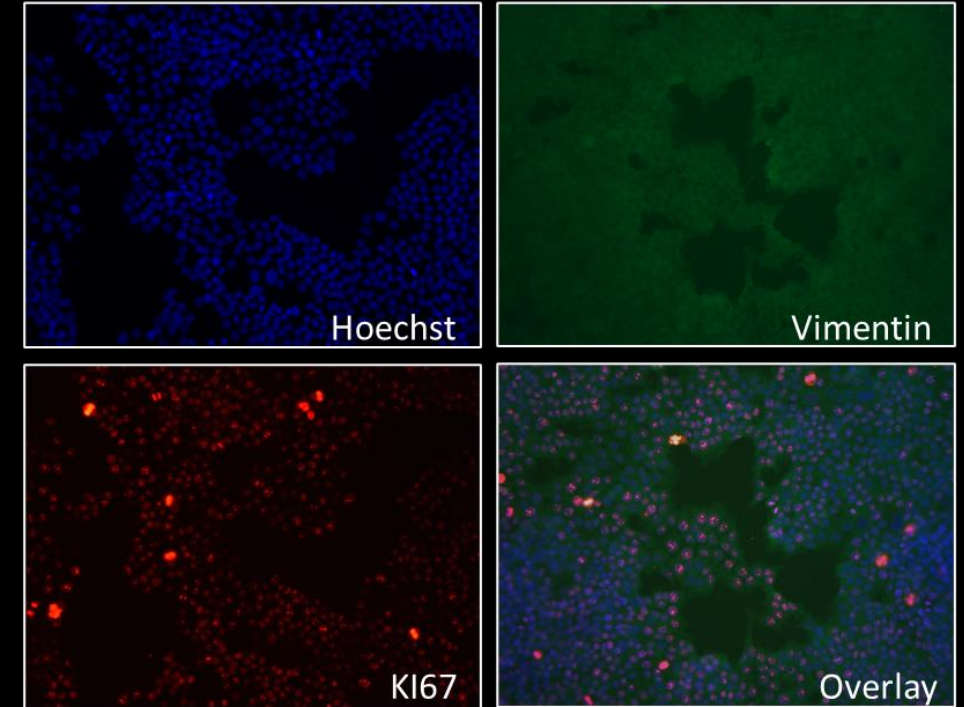


Droplet Microarray

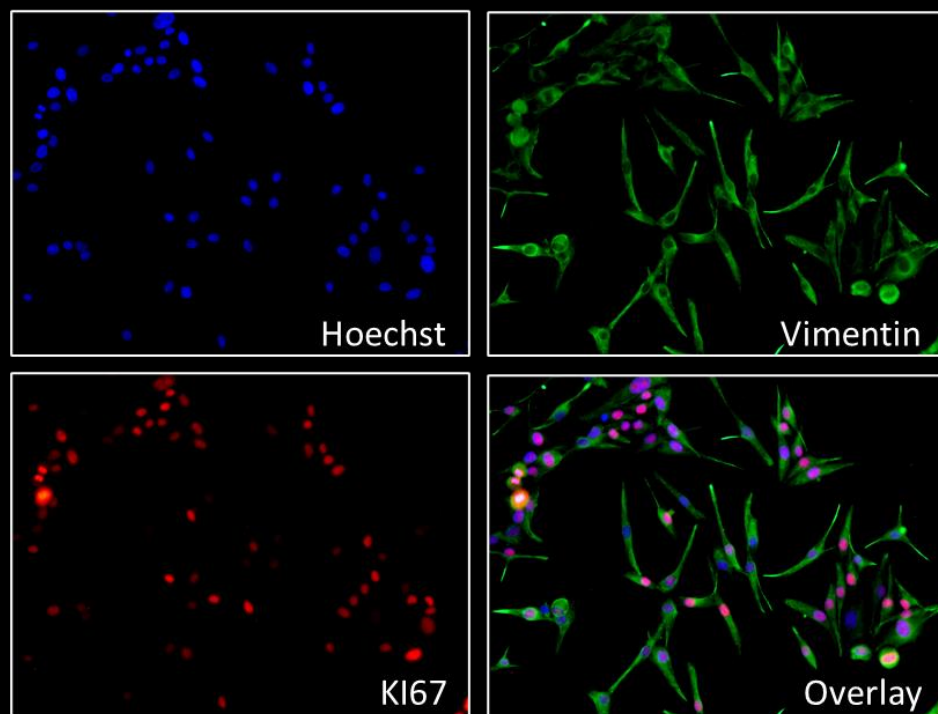


MCF7 72h

poly-lysine coated coverslips

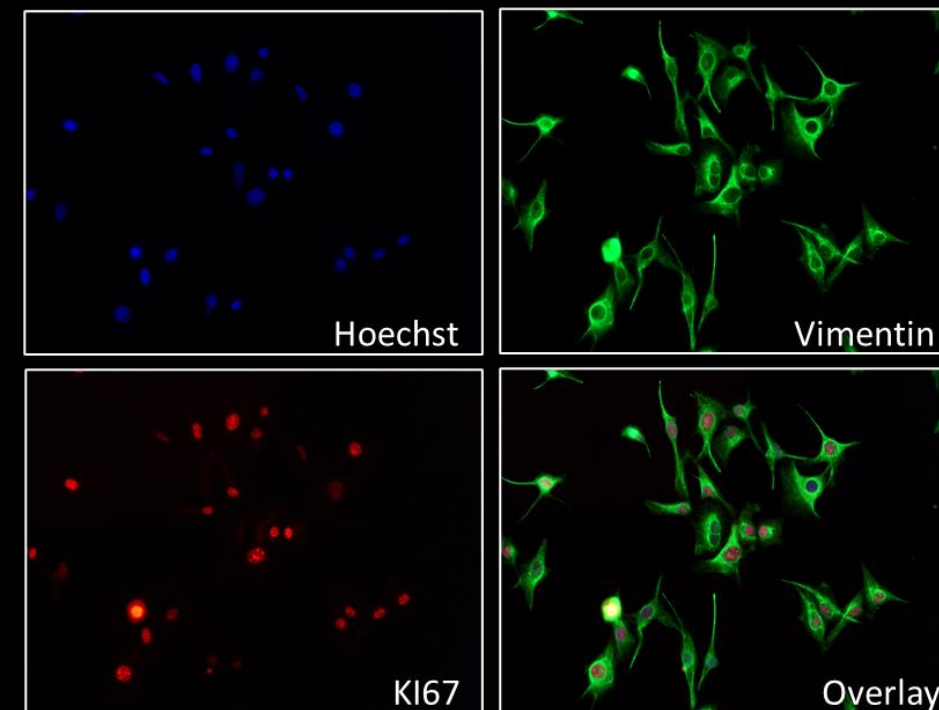


Droplet Microarray

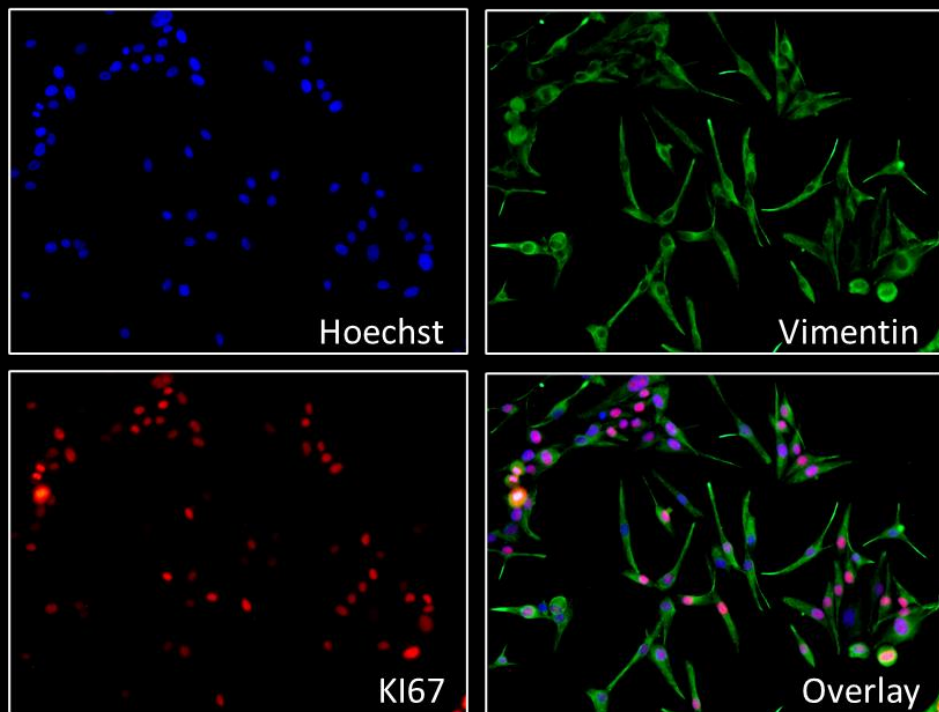


SK-MEL 28 24h

poly-lysine coated coverslips

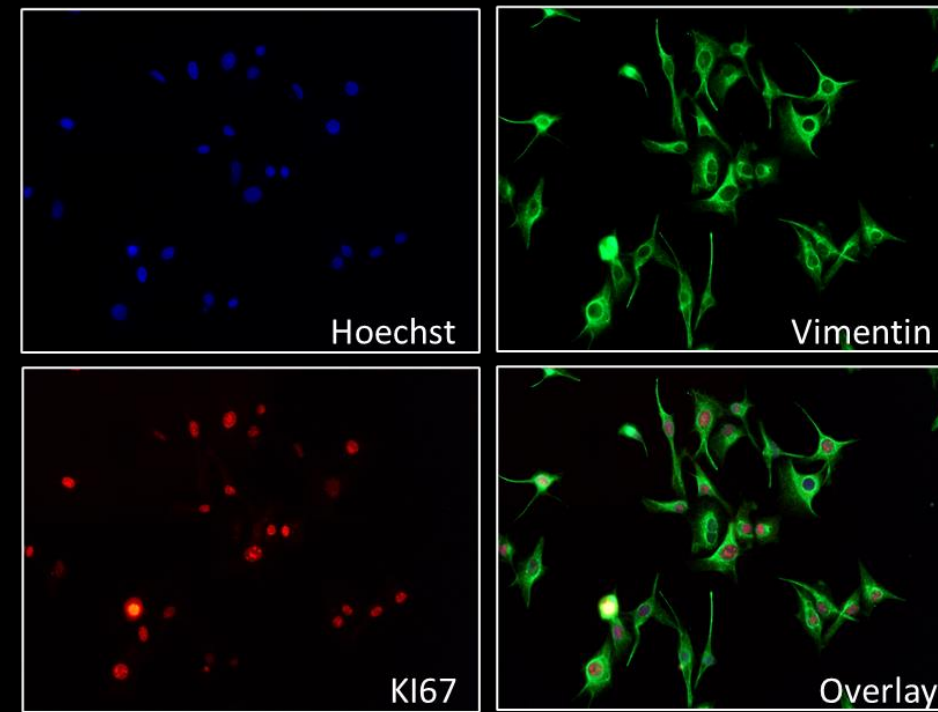


Droplet Microarray

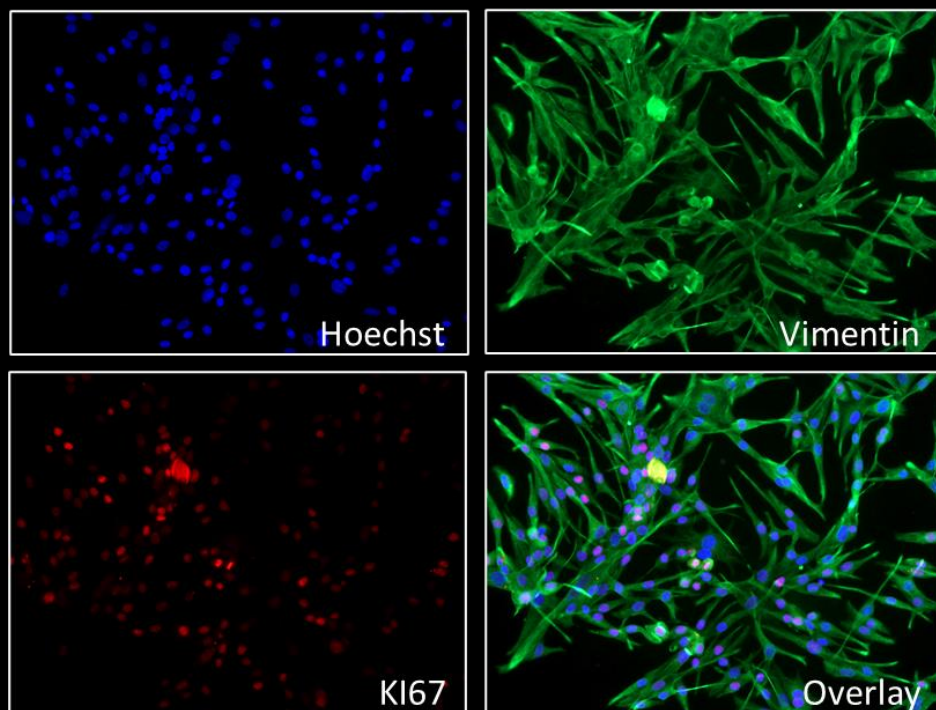


SK-MEL 28 24h

poly-lysine coated coverslips

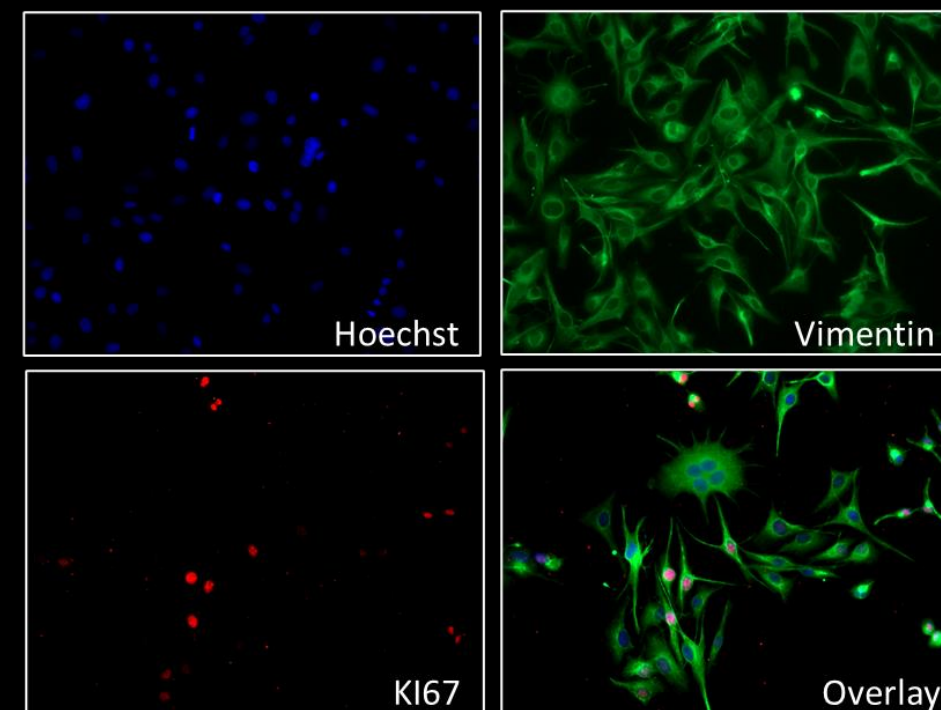


Droplet Microarray

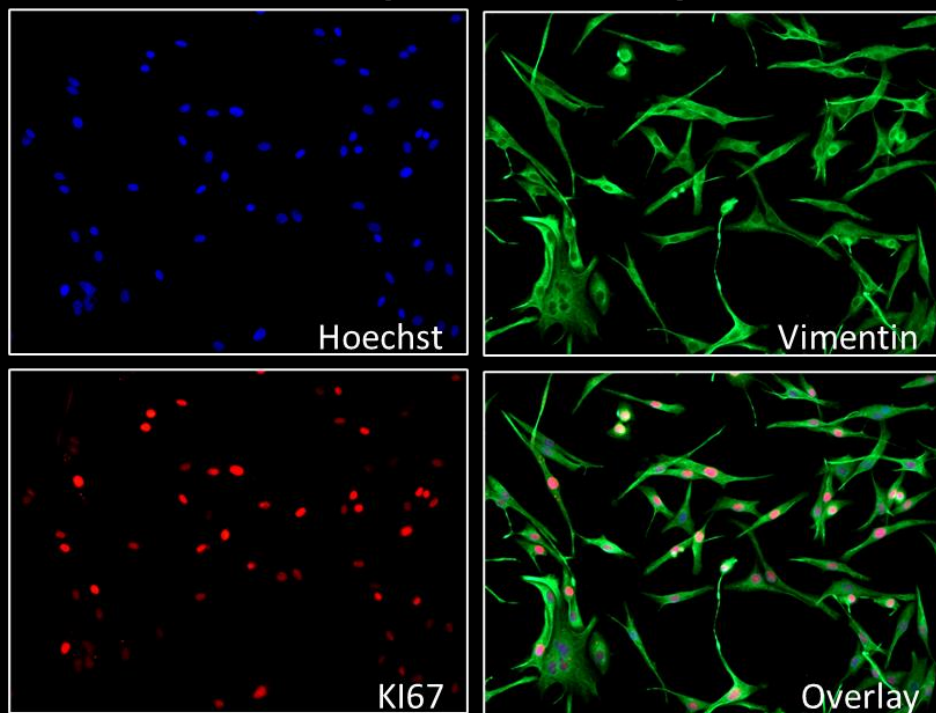


SK-MEL 28 48h

poly-lysine coated coverslips

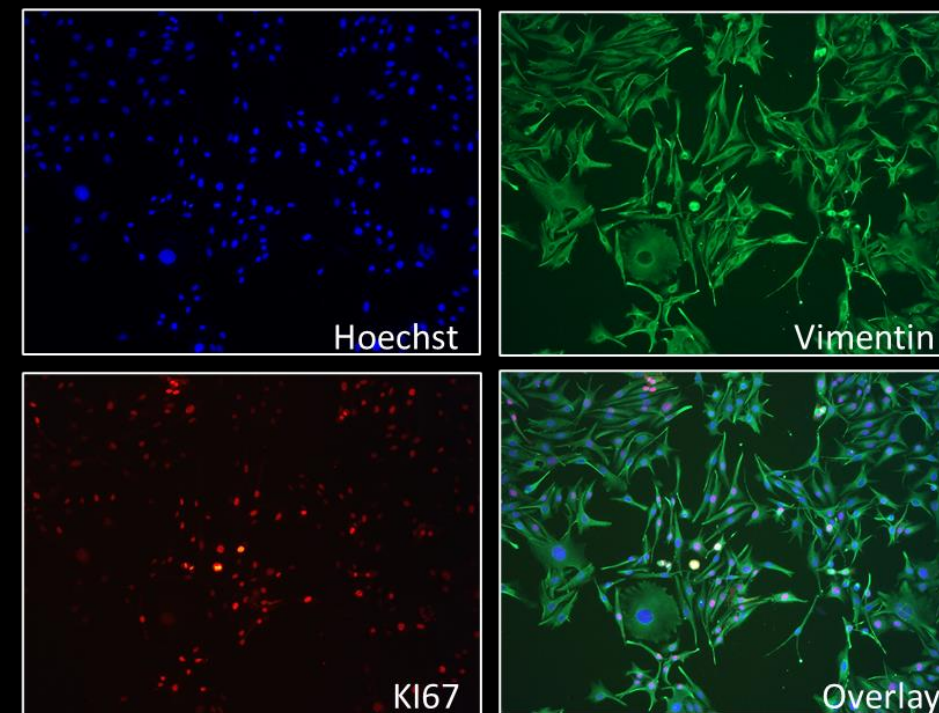


Droplet Microarray

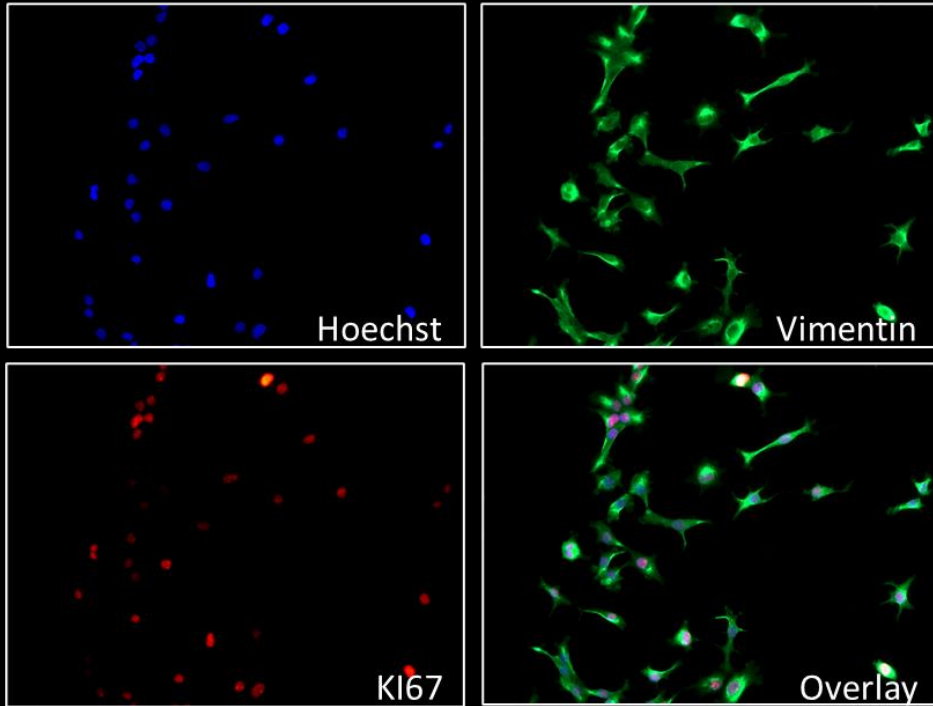


SK-MEL 28 72h

poly-lysine coated coverslips

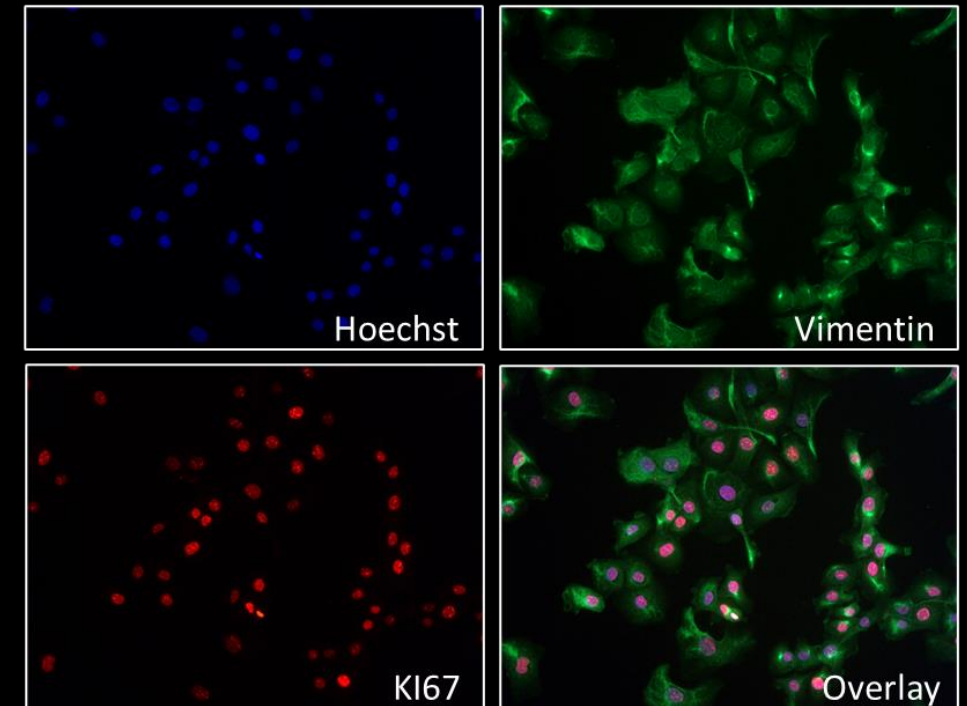


Droplet Microarray

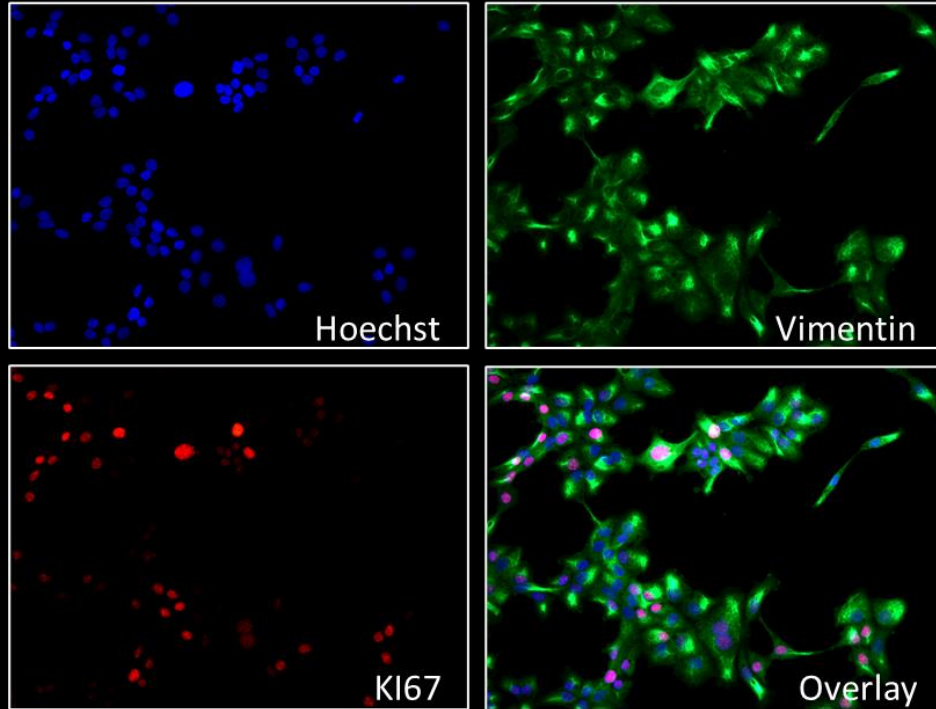


SKOV-3 24h

poly-lysine coated coverslips

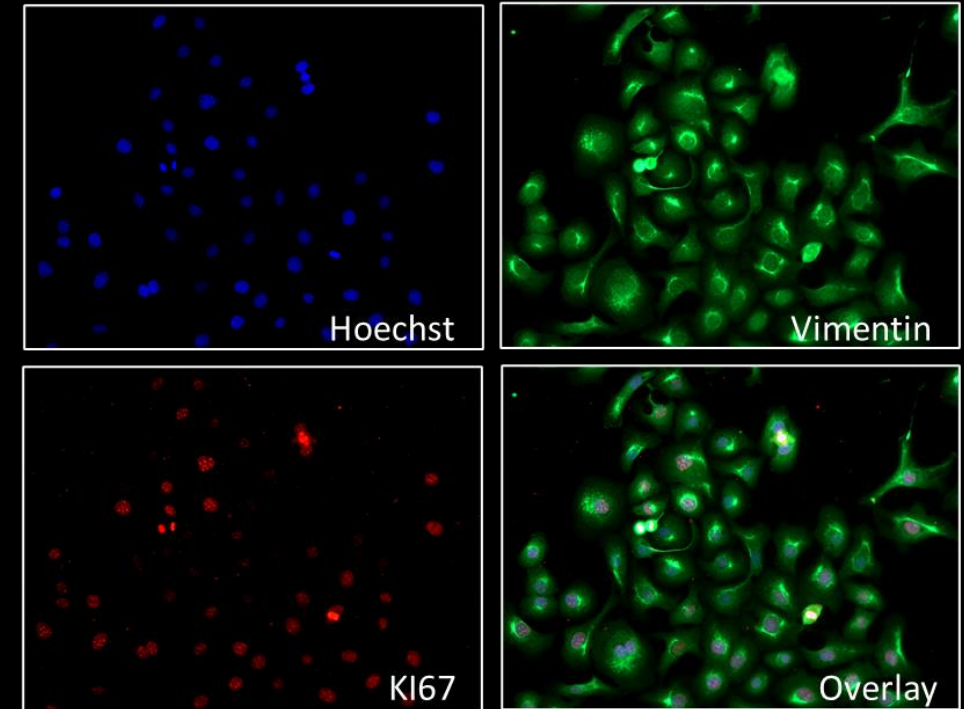


Droplet Microarray

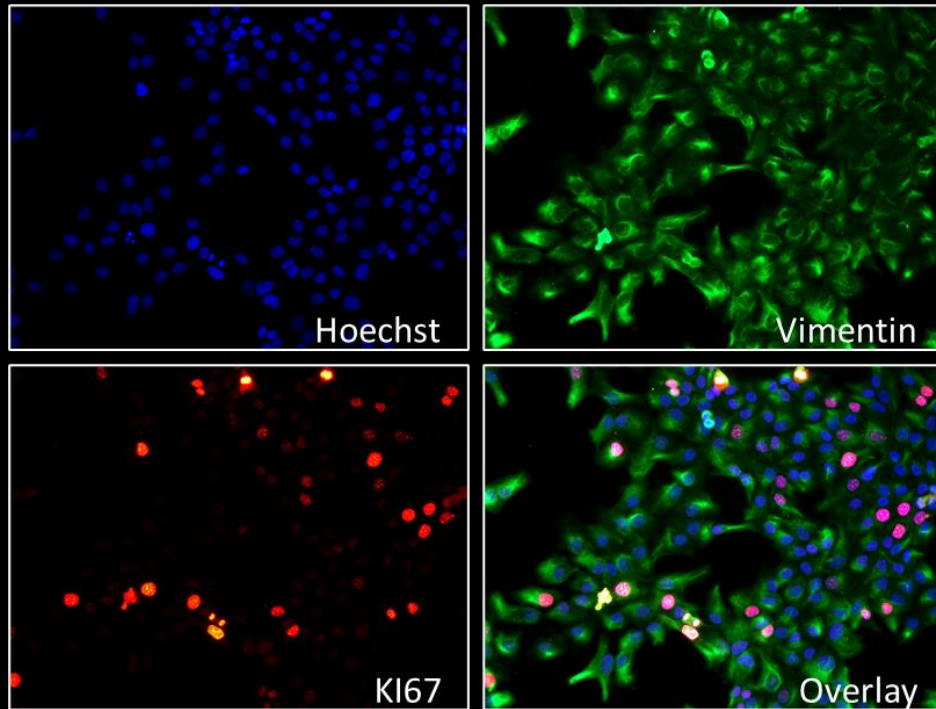


SKOV-3 48h

poly-lysine coated coverslips

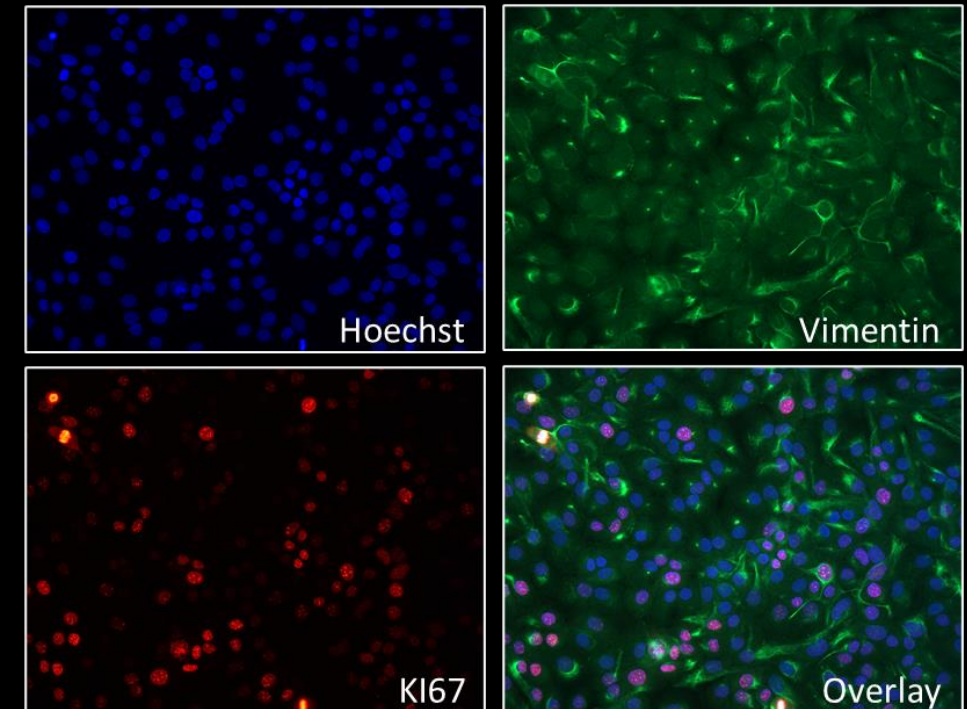


Droplet Microarray

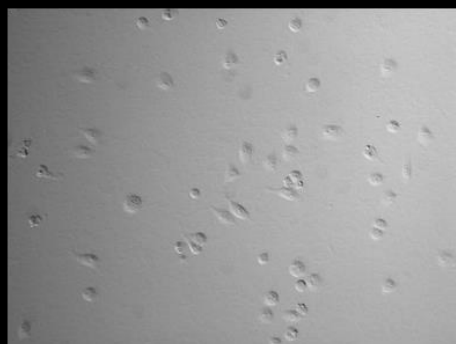
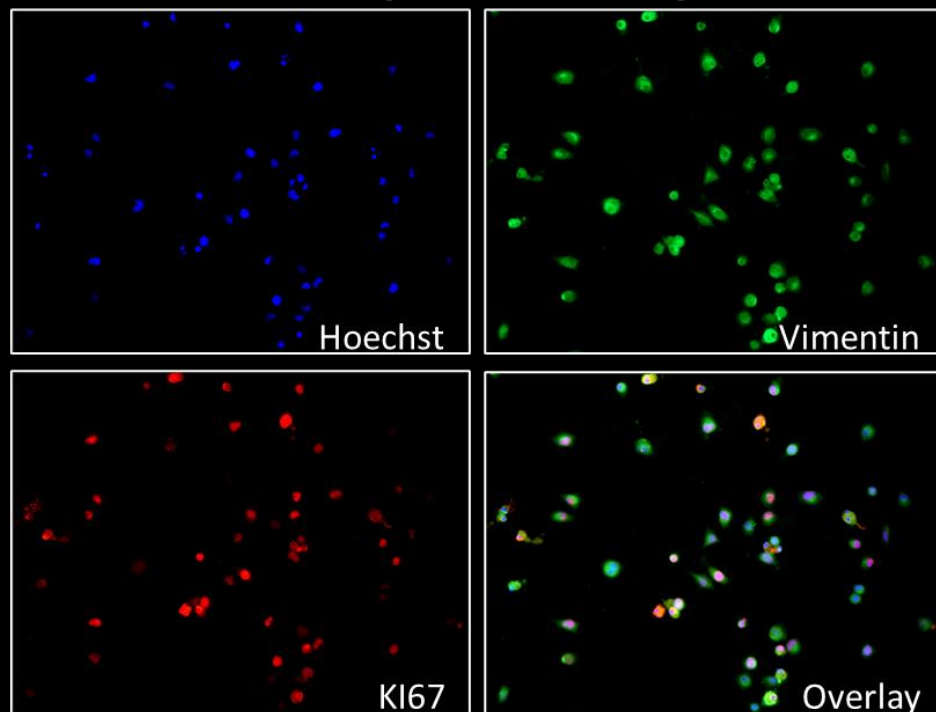


SKOV-3 72h

poly-lysine coated coverslips

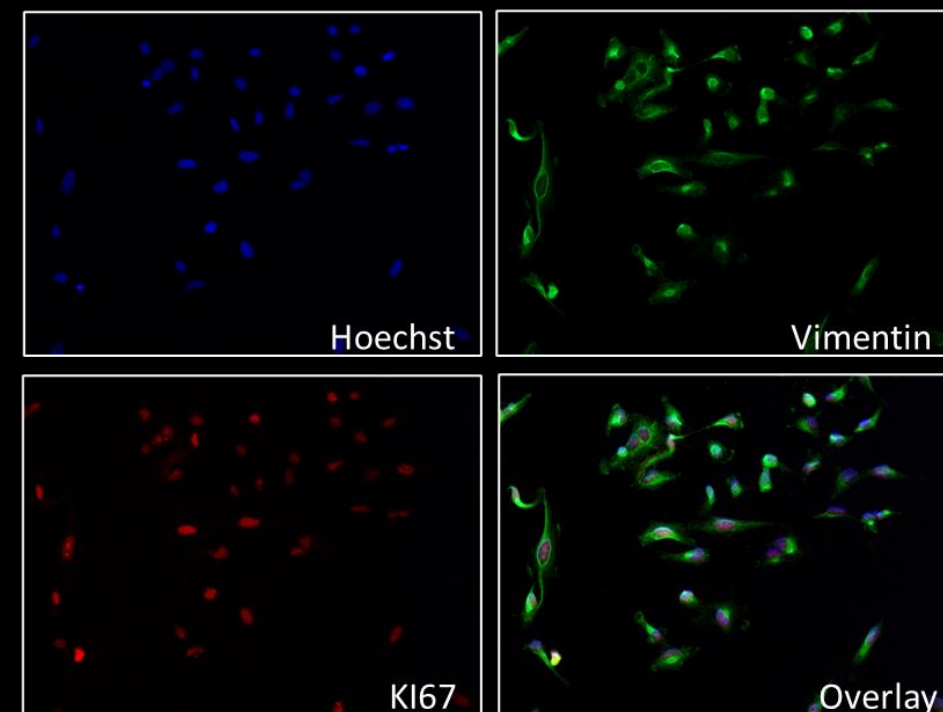


Droplet Microarray

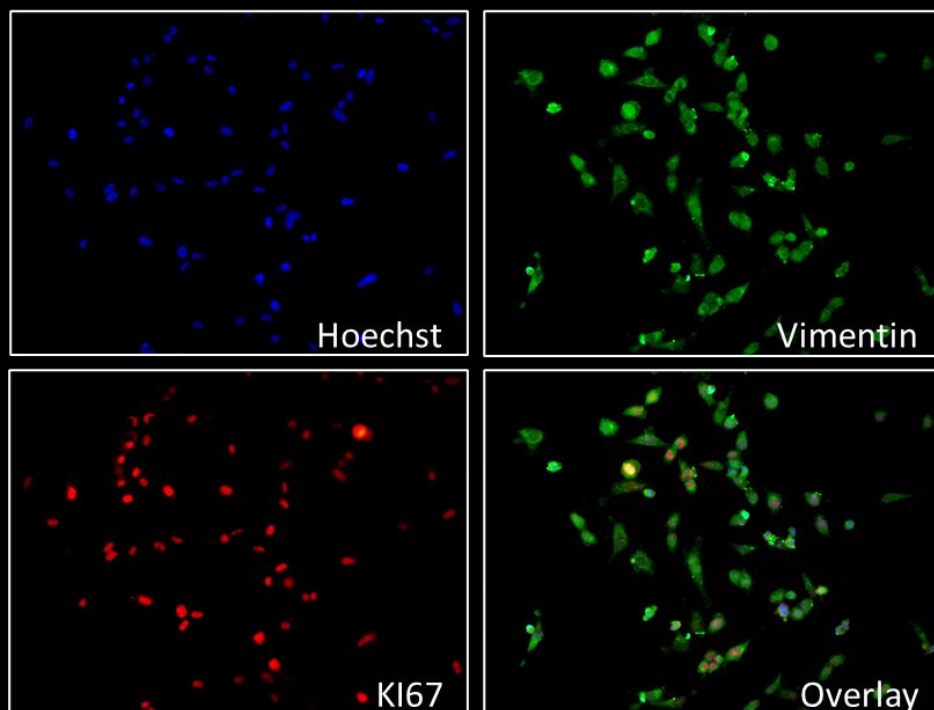


Hela 24h

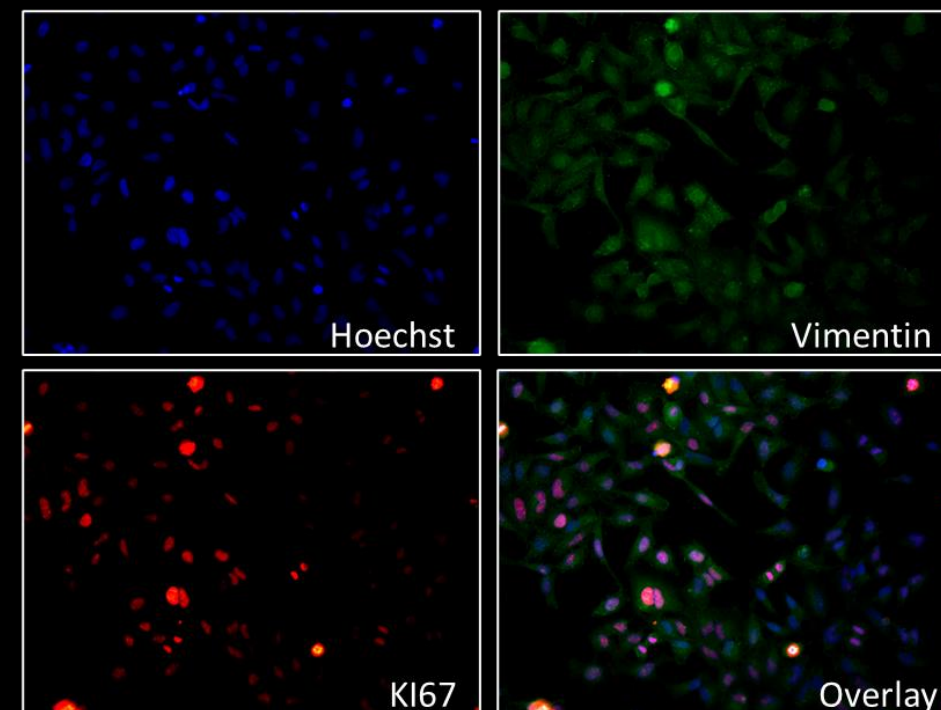
poly-lysine coated coverslips



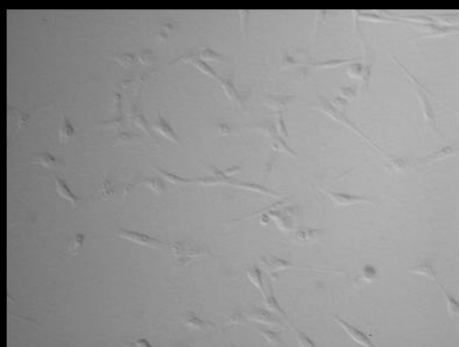
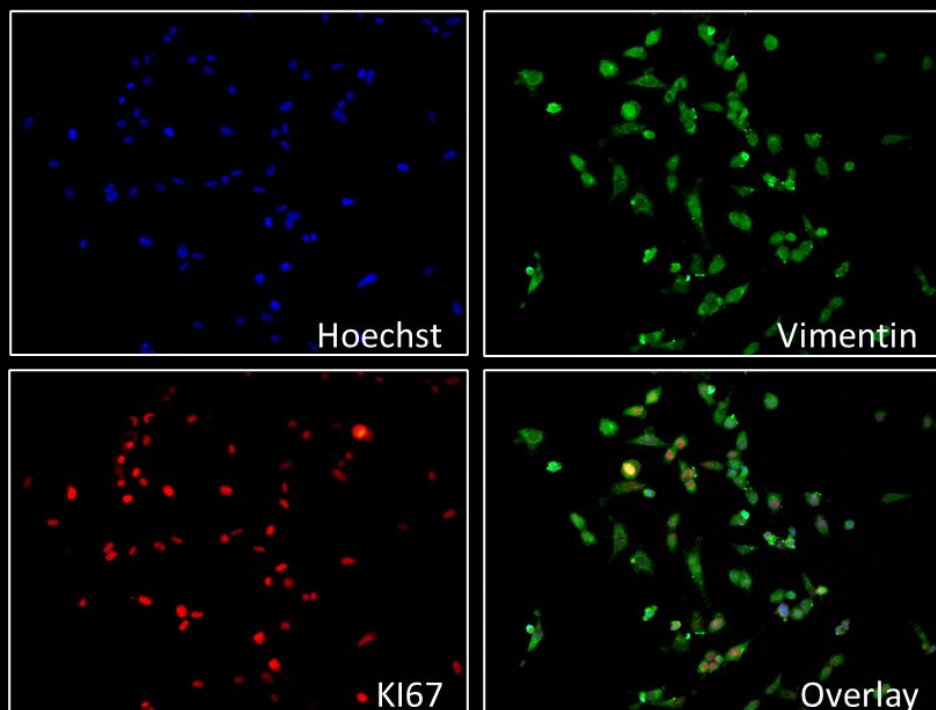
Droplet Microarray



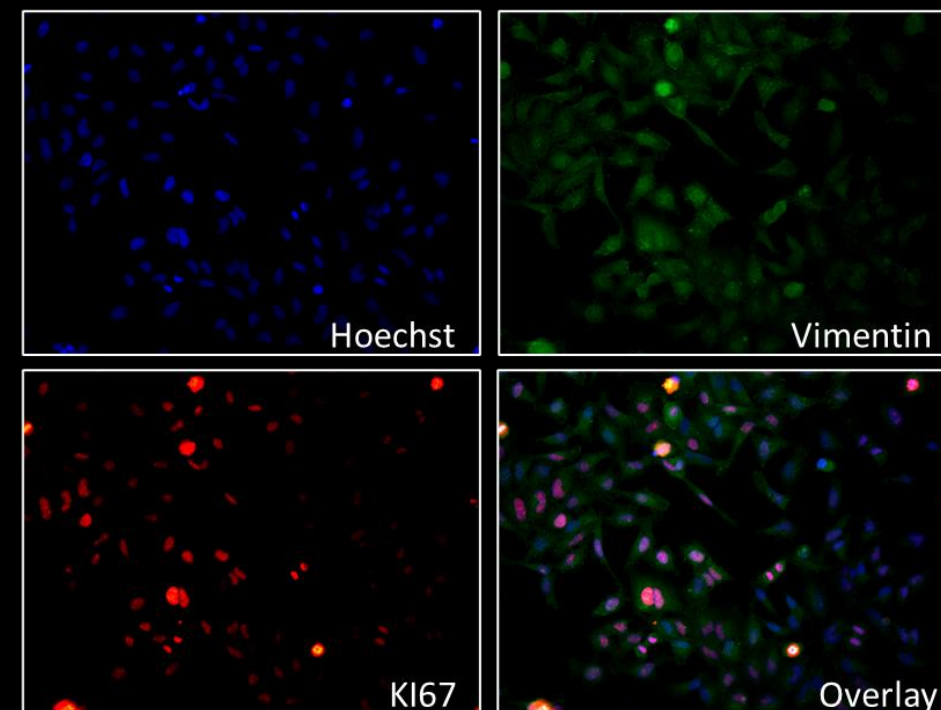
poly-lysine coated coverslips



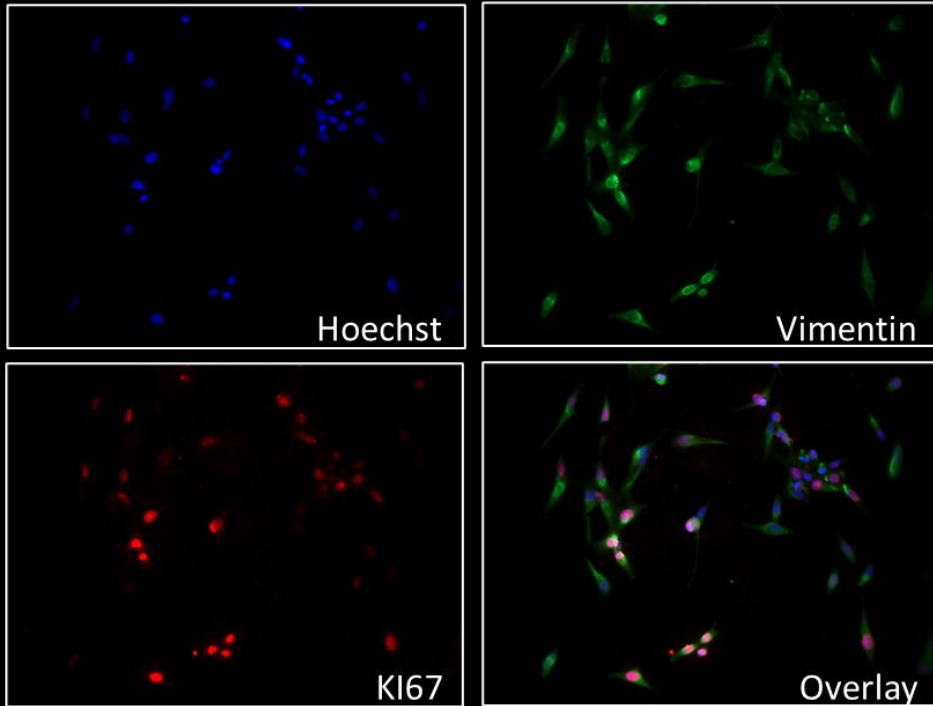
Droplet Microarray



poly-lysine coated coverslips

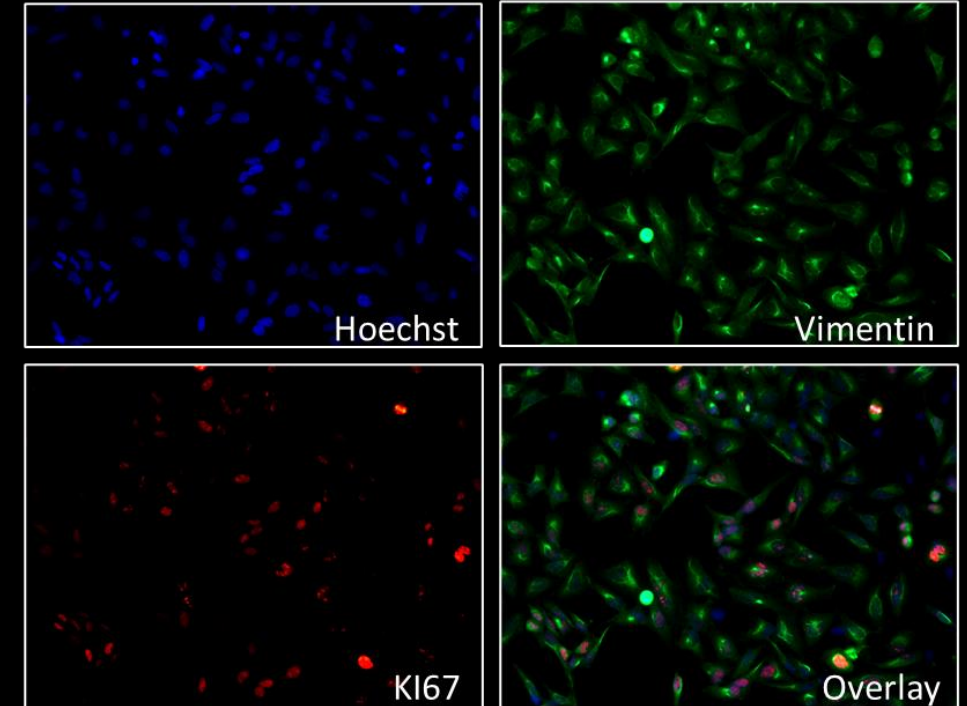


Droplet Microarray

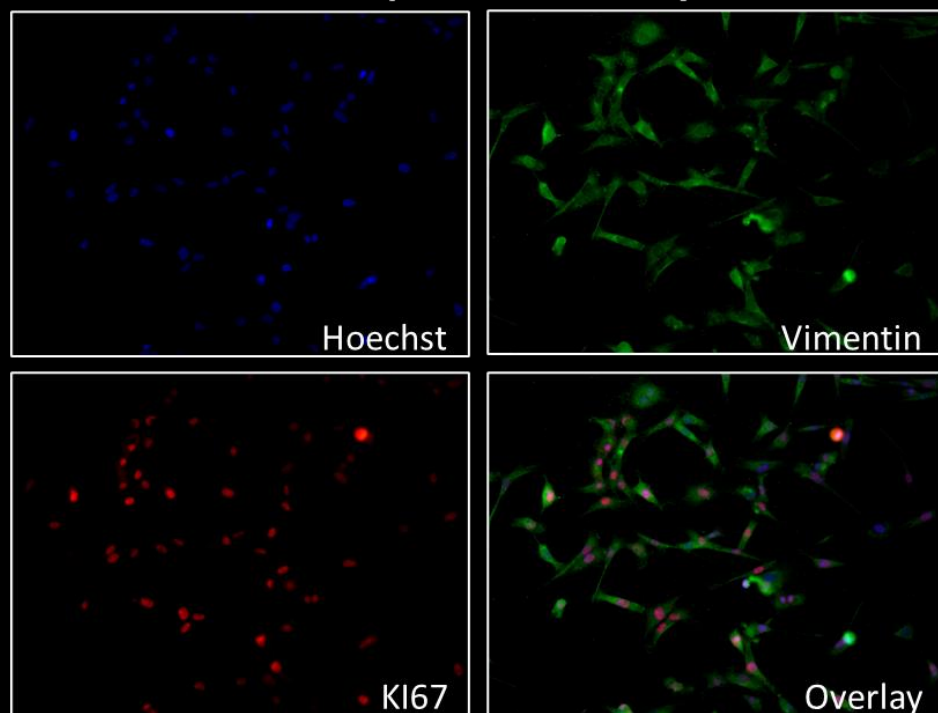


Hela 72h

poly-lysine coated coverslips

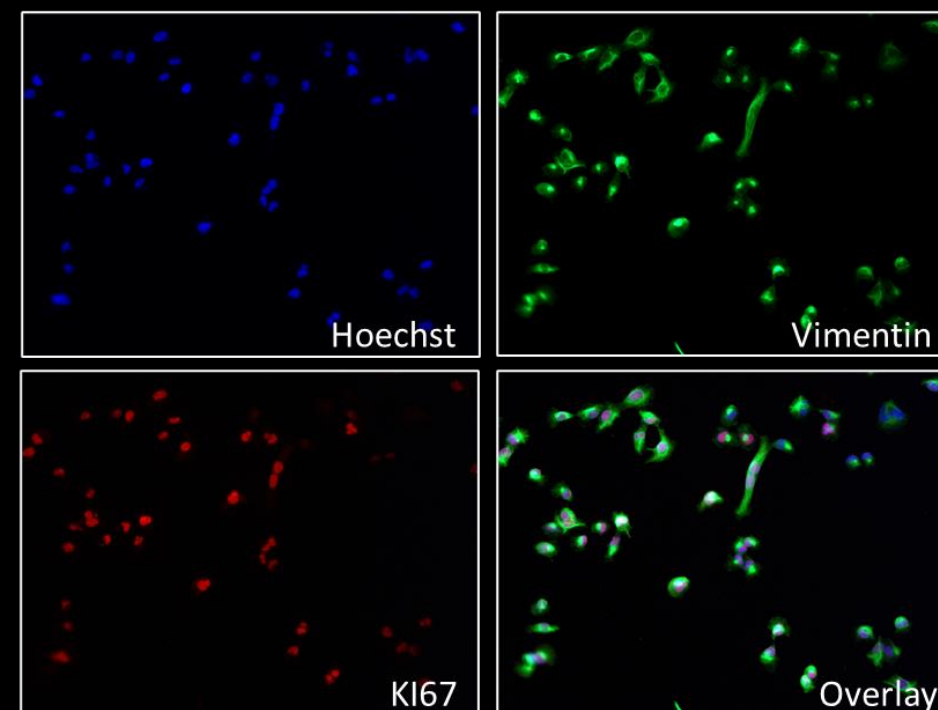


Droplet Microarray

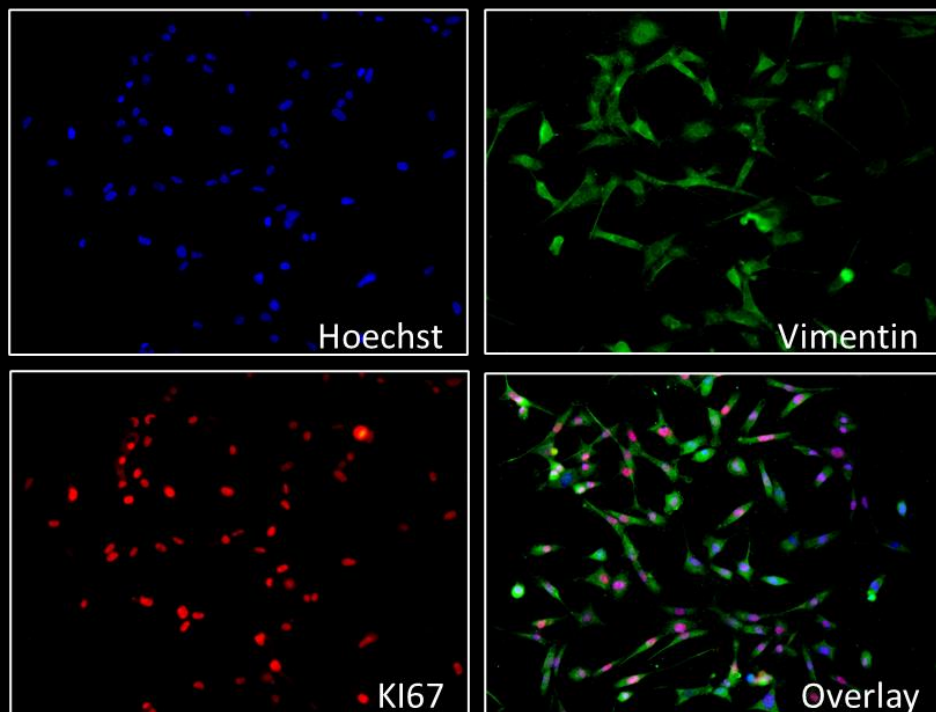


MDA-MB231 24h

poly-lysine coated coverslips

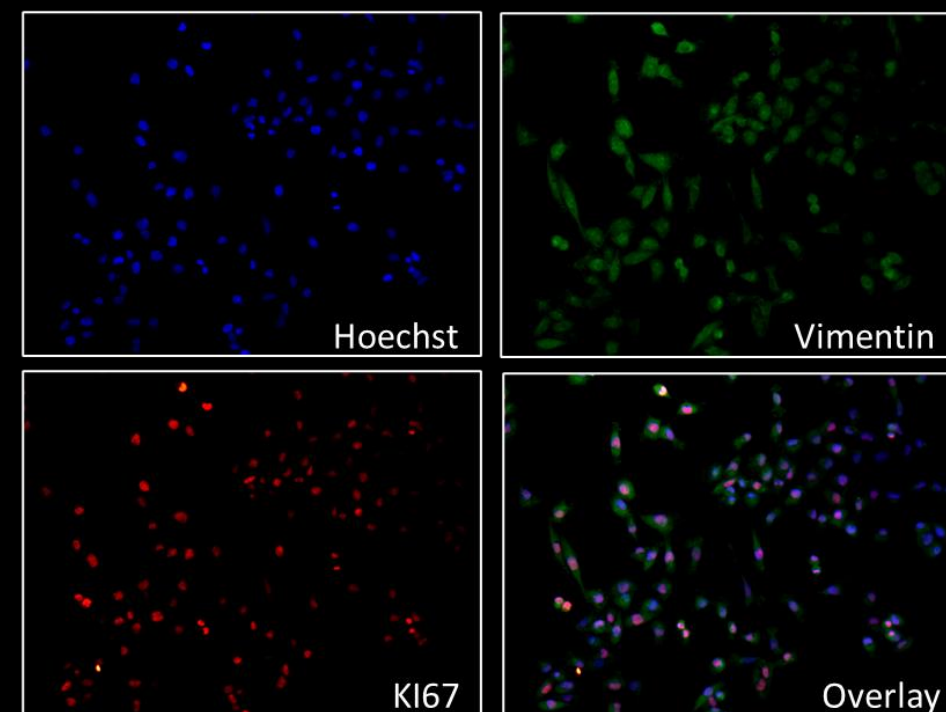


Droplet Microarray

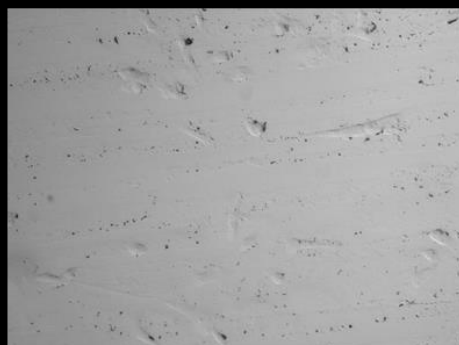
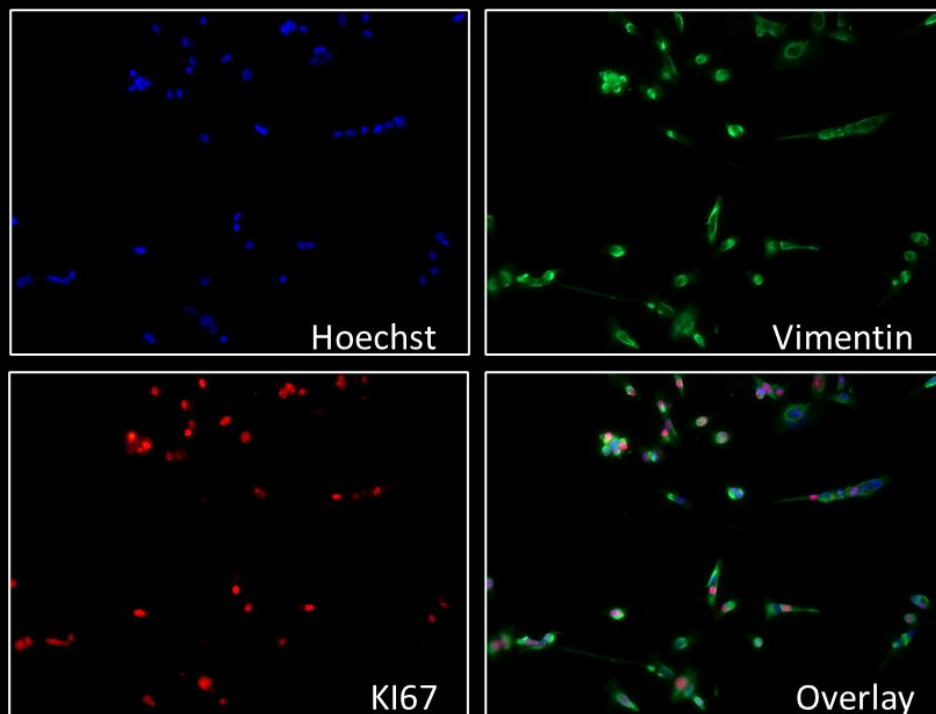


MDA-MB231 48h

poly-lysine coated coverslips

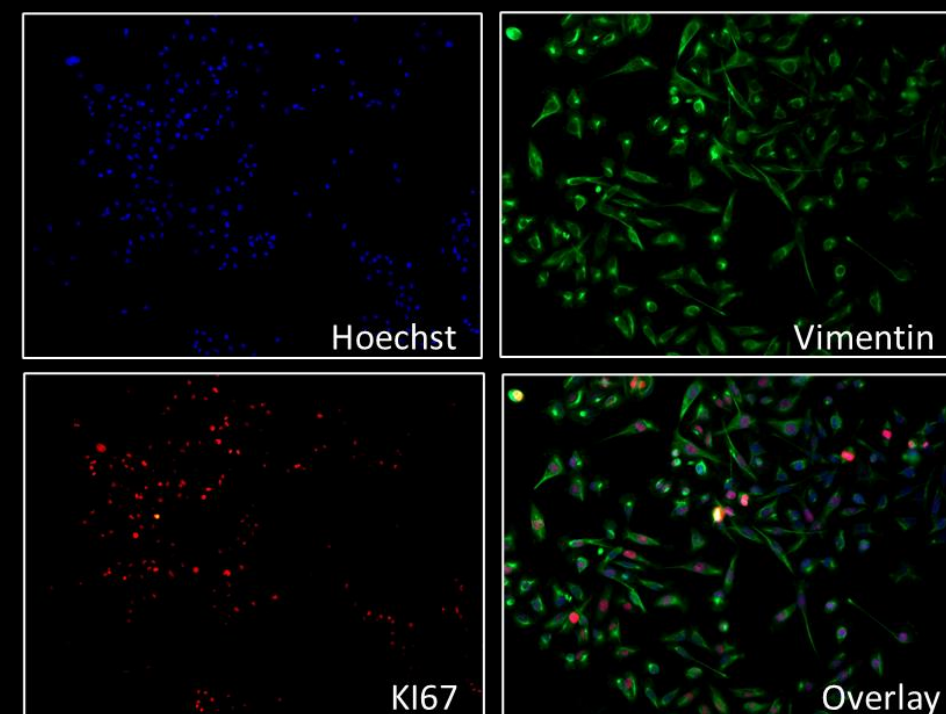


Droplet Microarray

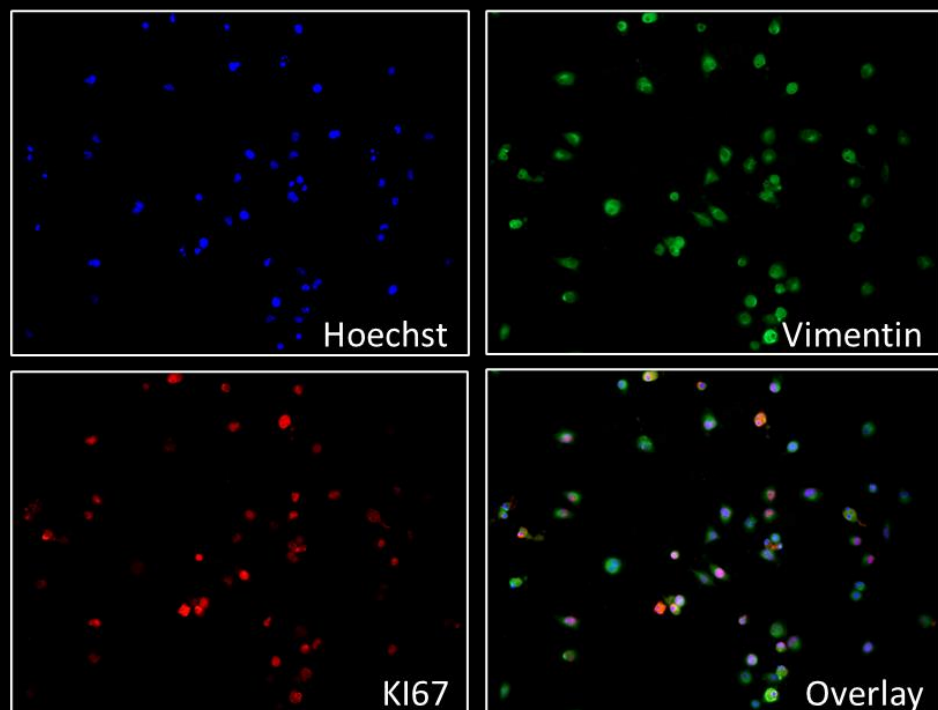


MDA-MB231 72h

poly-lysine coated coverslips

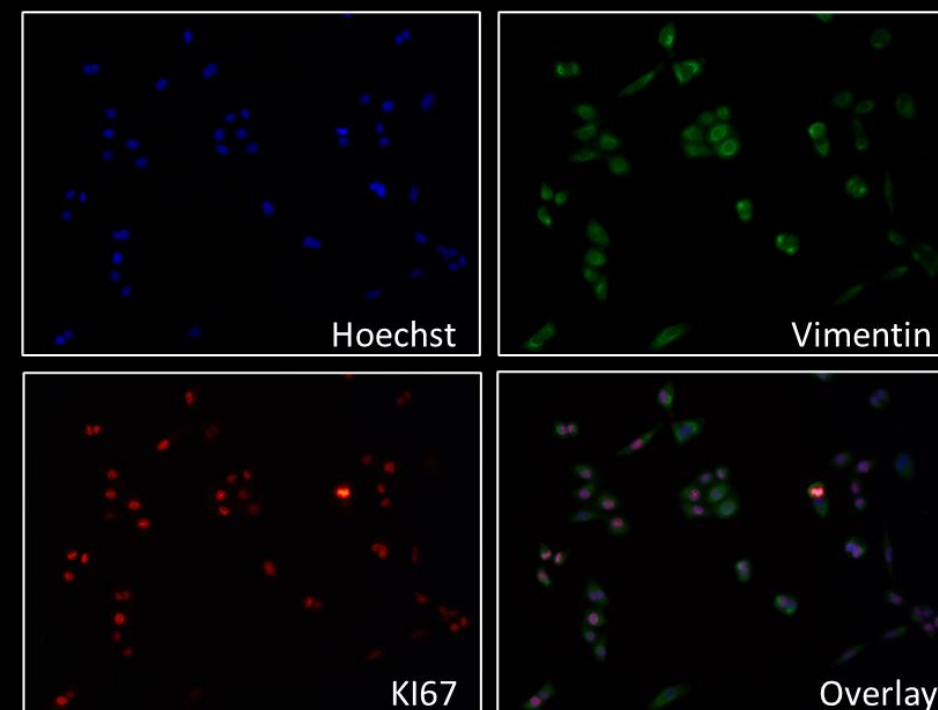


Droplet Microarray

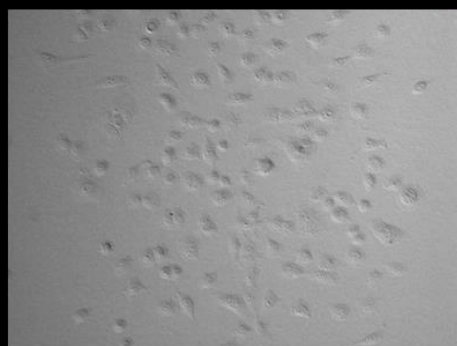
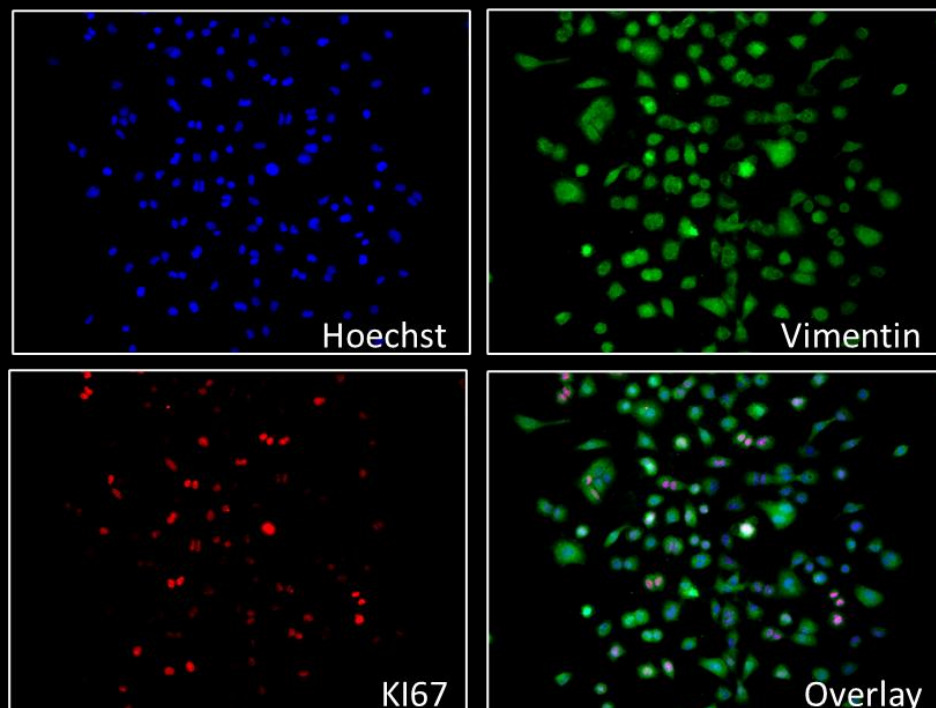


A549 24h

poly-lysine coated coverslips

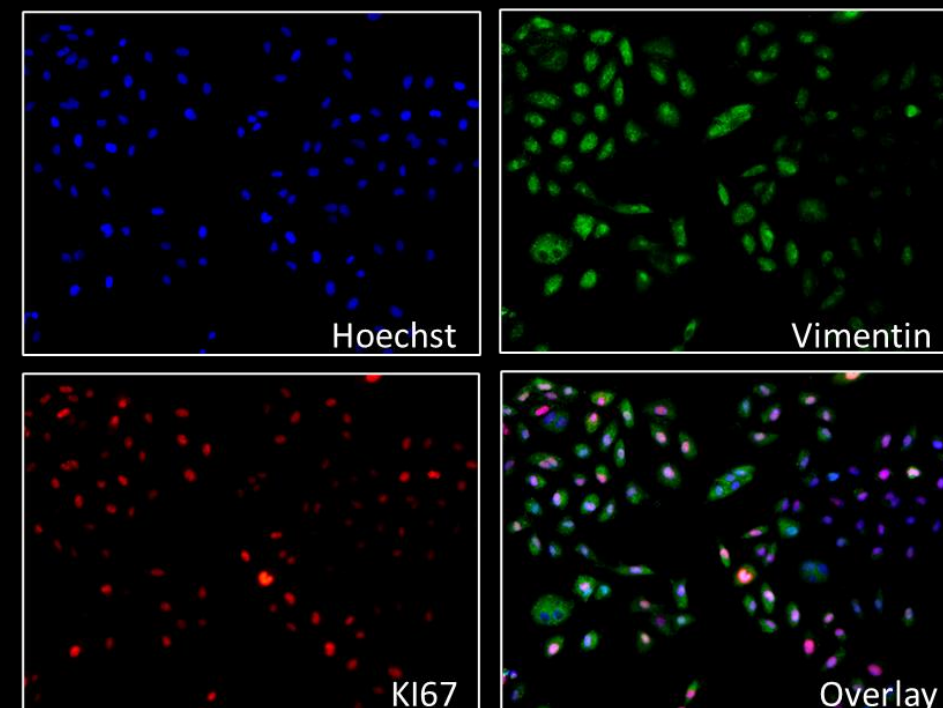


Droplet Microarray

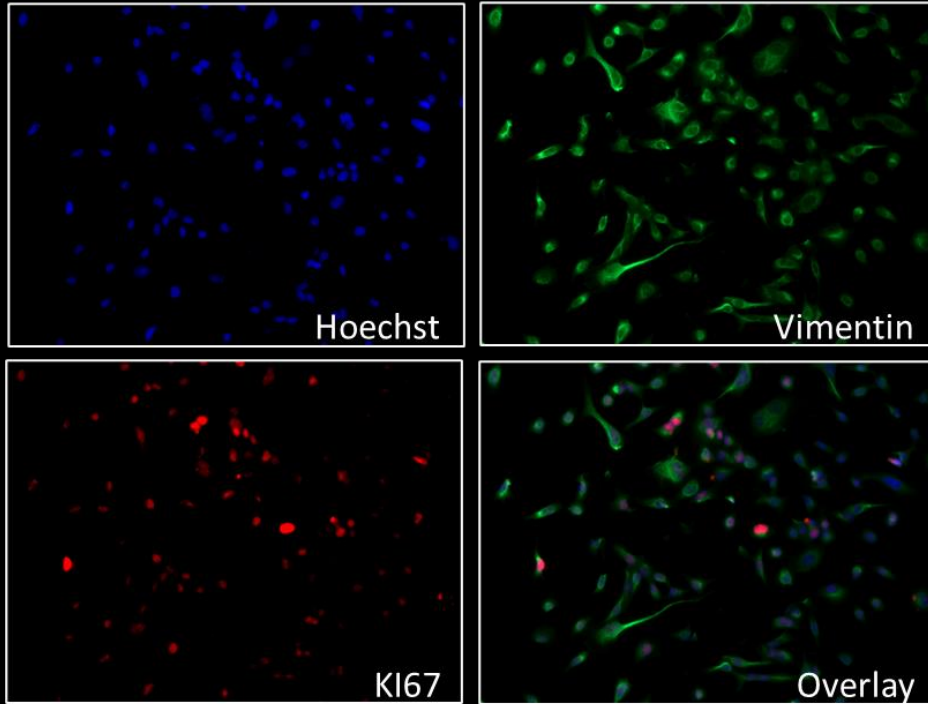


A549 48h

poly-lysine coated coverslips

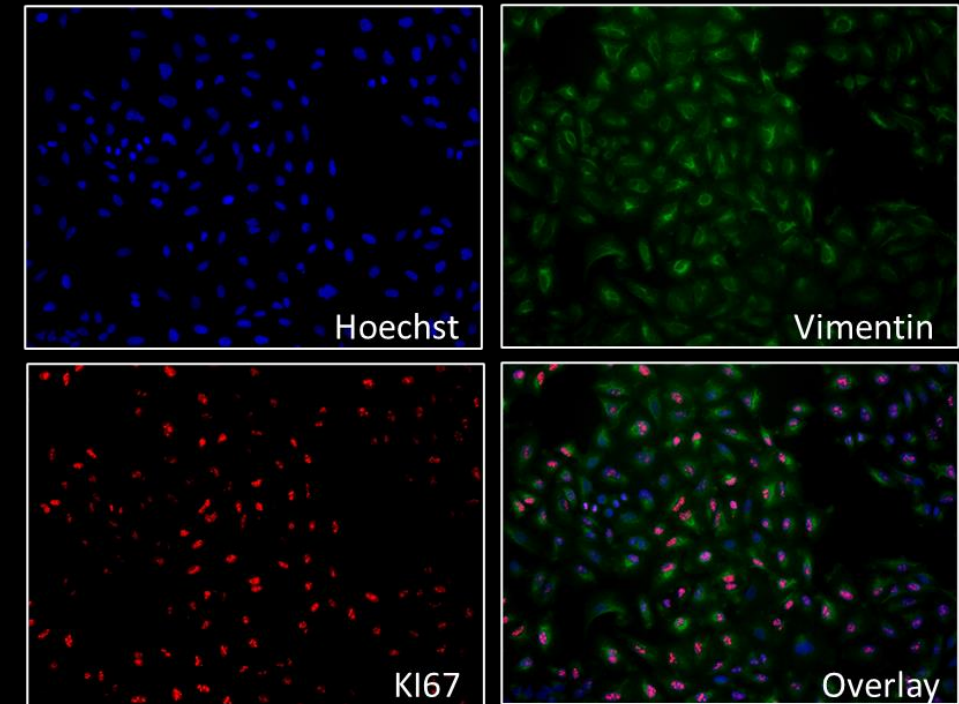


Droplet Microarray

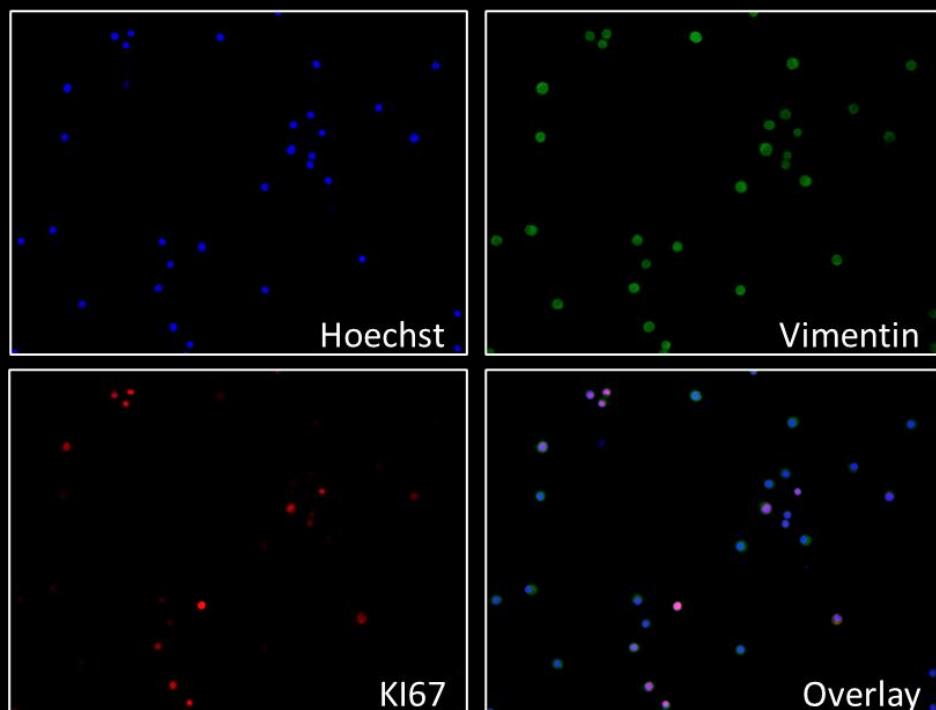


A549 72h

poly-lysine coated coverslips

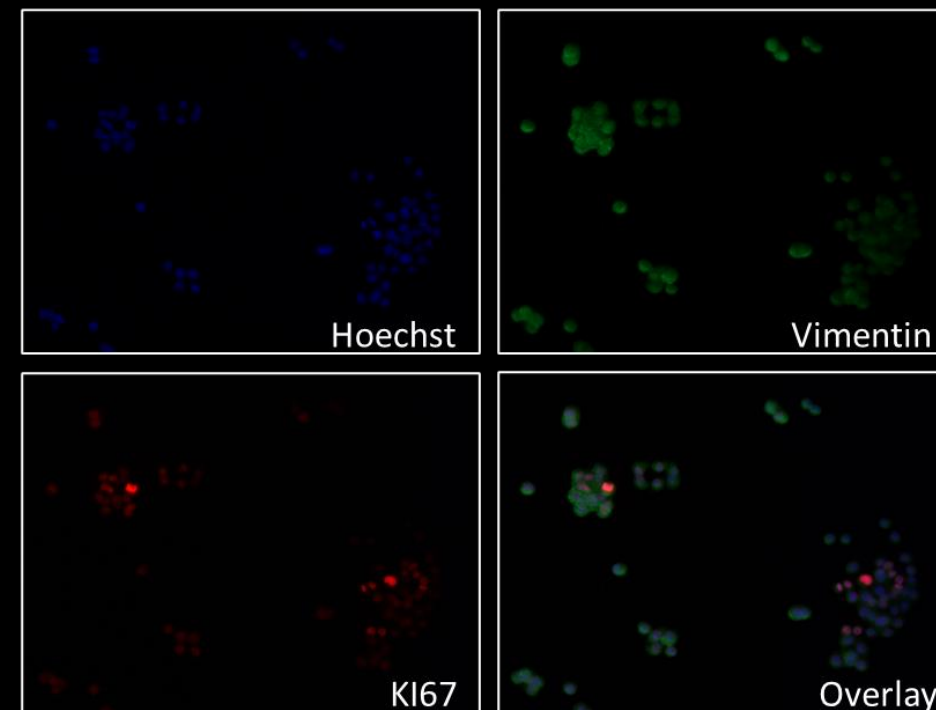


Droplet Microarray

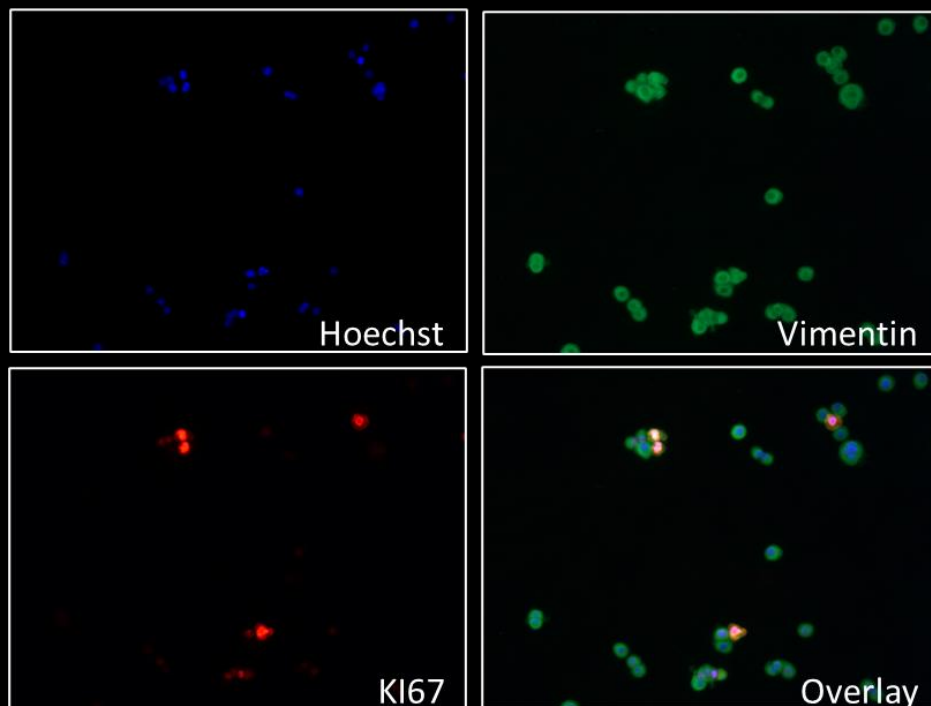


HT29 24h

poly-lysine coated coverslips

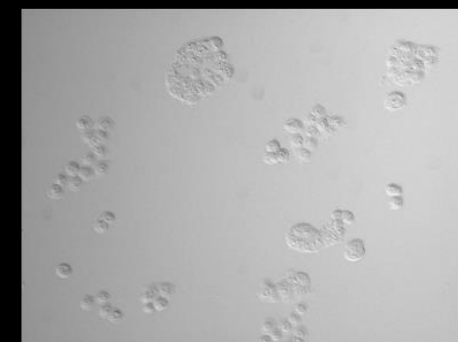
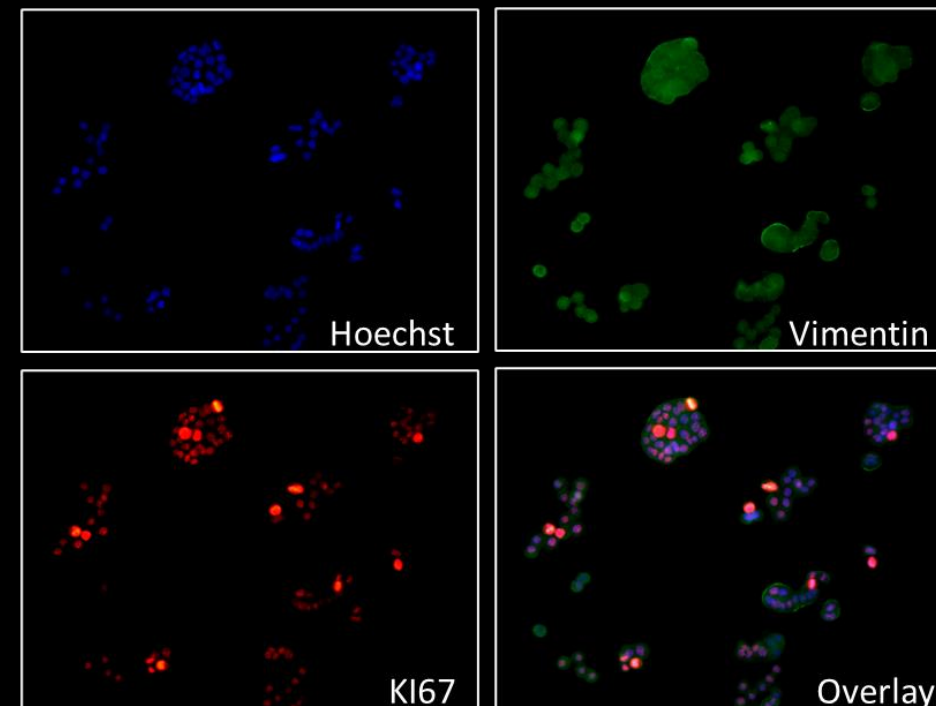


Droplet Microarray

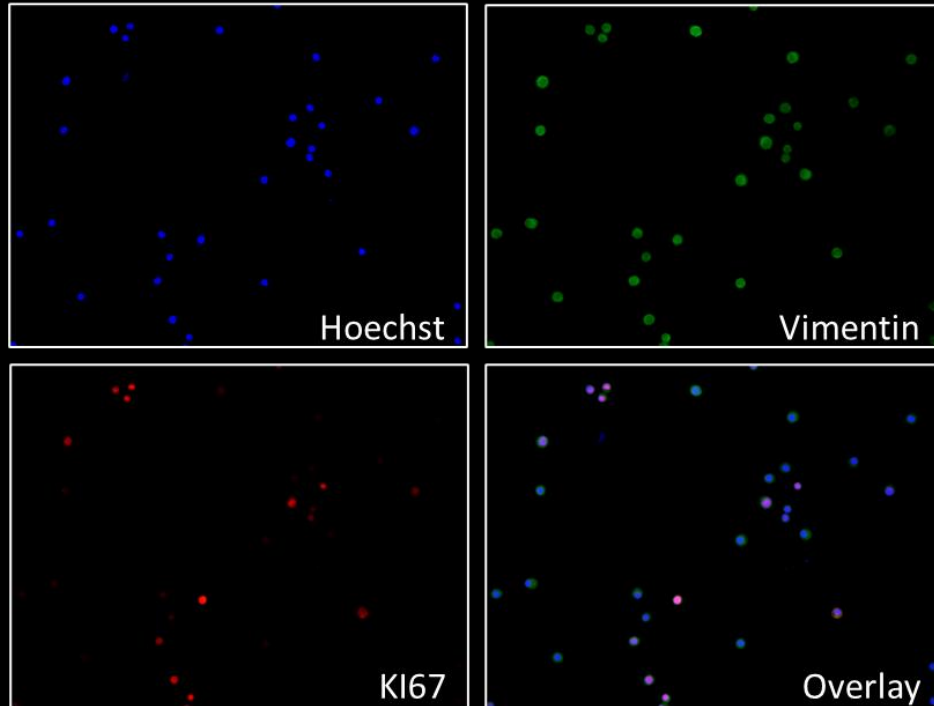


HT29 48h

poly-lysine coated coverslips

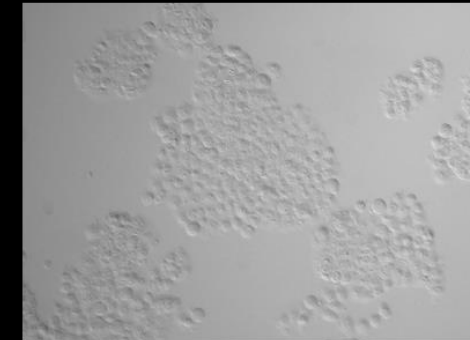
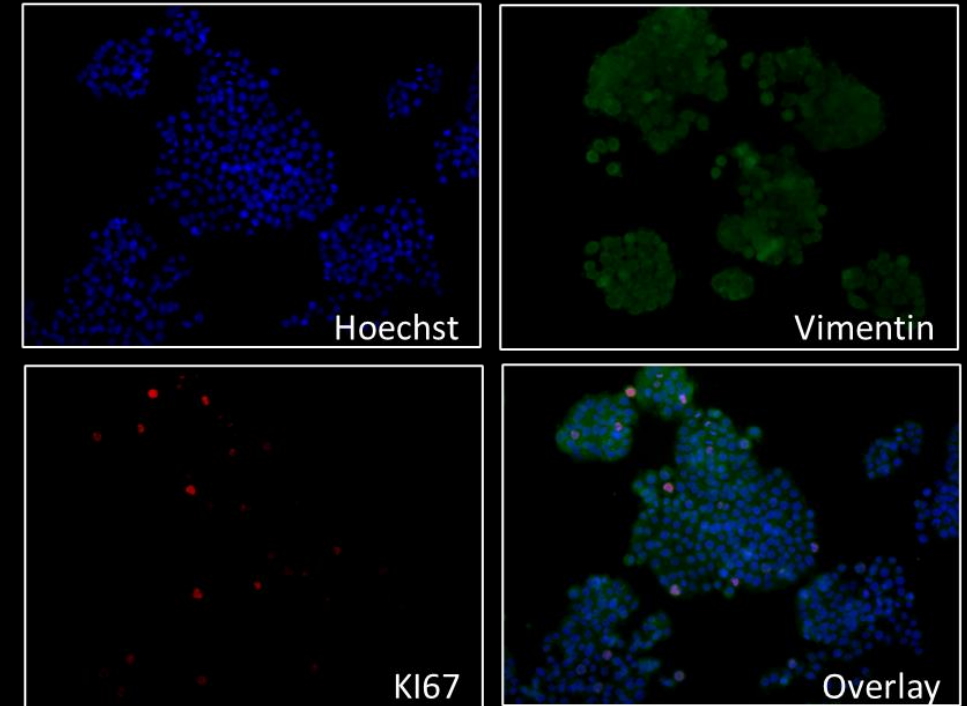


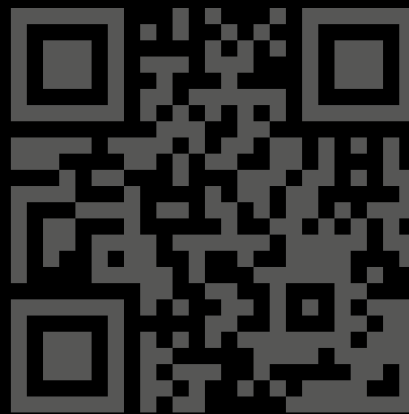
Droplet Microarray



HT29 72h

poly-lysine coated coverslips





AQUARRAY GmbH
Hermann-von-Helmholtz-Platz 6
76344 Eggenstein-Leopoldshafen
Germany

Phone: +49 7247 206 900 8
Email: team@aquarray.com
Web: www.aquarray.com



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