

## xCELLigence | Cell Migration & Invasion Assay



### xCELLigence DP Real-time Cell Analyzer Going beyond end-point assays.

- continuously tracking cell migration
- label-free, physiological conditions
- minimal cell handling
- no laborious evaluation
- excellent reproducibility



**Prof. Dr. H. Ungefroren,**  
University Hospital Schleswig-Holstein, Germany:

„In our area of interest, tumor cell biology, we are studying oncogenic and metastatic signaling pathways in pancreatic carcinoma cells. Cell migration assays using the DP system have proven indispensable for our work, as it allows us to generate valuable, easily quantifiable kinetic data, combined with a simple and time-saving setup procedure.“

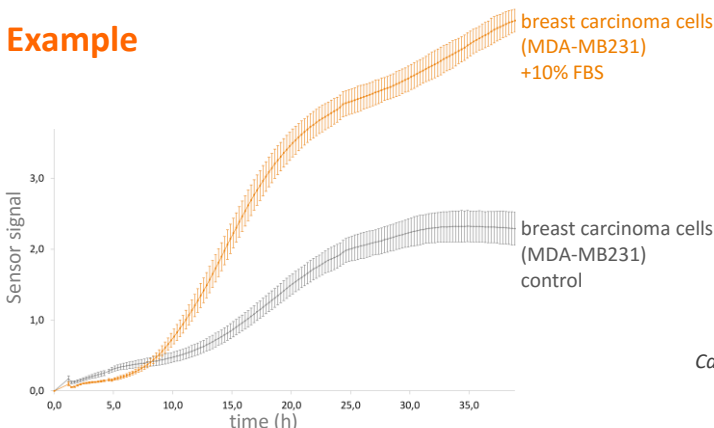
Visit Prof. Ungefroren's Lab:  
[bit.ly/DP-Lab](http://bit.ly/DP-Lab)

### Principle



- ① Cell migration & invasion plate
- ② Single well with upper chamber (a), membrane with microporous membrane (b) and lower chamber (c).
- ③ cell migration through the membrane
- ④ Microelectrode sensors on the underside of the membrane for label free detection
- ⑤ single well with migrated cells attached on microelectrode sensors

### Example



Carcinoma cells kindly provided by  
Prof. Dr. Hendrik Ungefroren,  
Universität zu Lübeck, CBMM



**Kerry Manton, Ph.D.,**  
Queensland University of  
Technology, Australia

“Primary human cells are notoriously variable in their responses. The peak rate of cell migration of primary keratinocytes from different patients varies from 12-22 hours. The use of single time-point Transwell assays is unreliable, costly and time-consuming. xCELLigence CIM technology removed the variability from our experiments and provided fast, high-quality results for less time and consumable cost.“

Cited from Br J Dermatol. 2013;168(3):  
496-503, DOI 10.1111/bjd.12119

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