

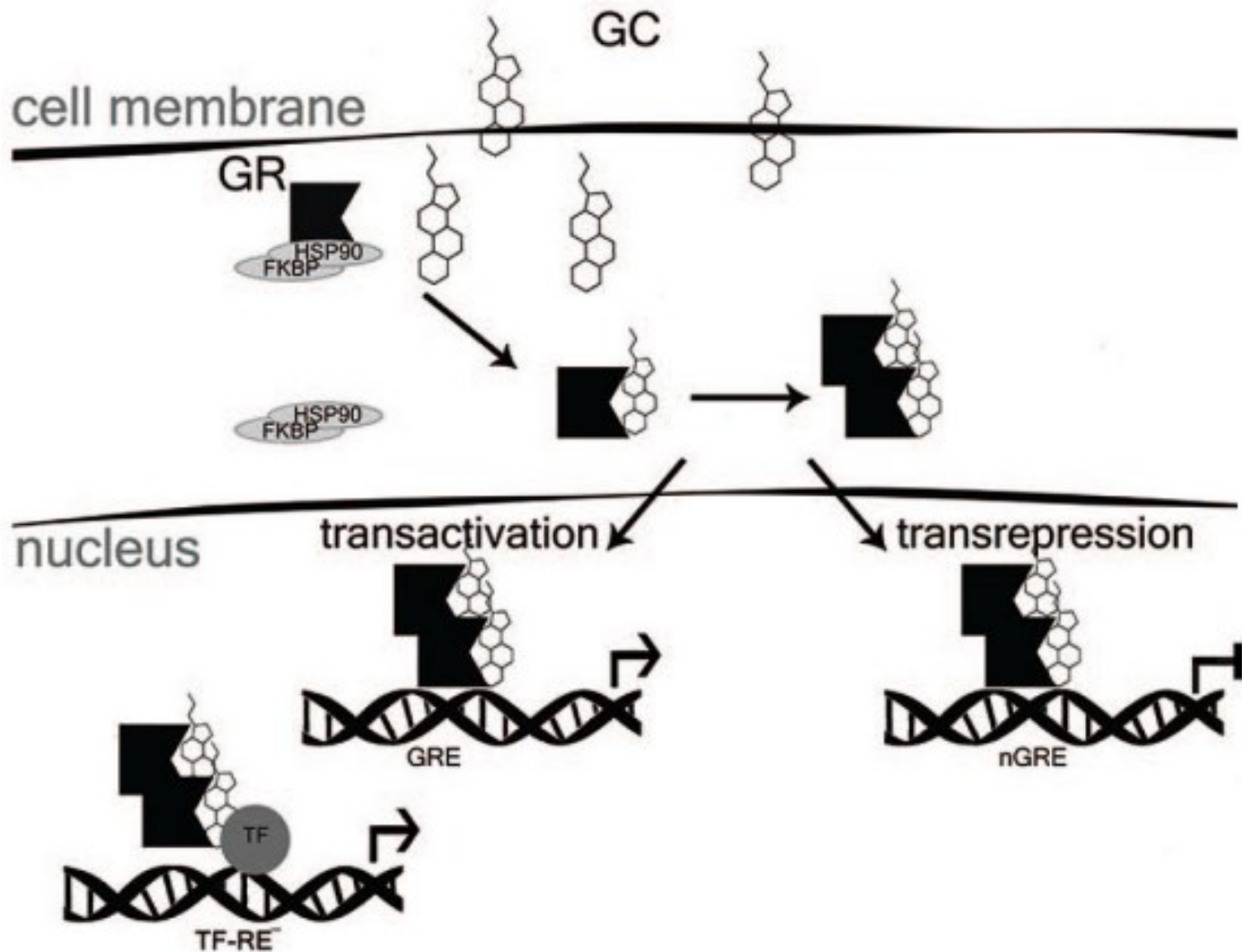
Effects of Glucocorticoid Receptor Activation on the
Expression of Intercellular Adhesion Regulatory Genes
in Breast Cancer Cells *in vitro*

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Mechanism of GR activation by GC



Aim

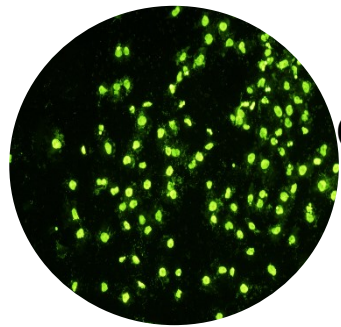
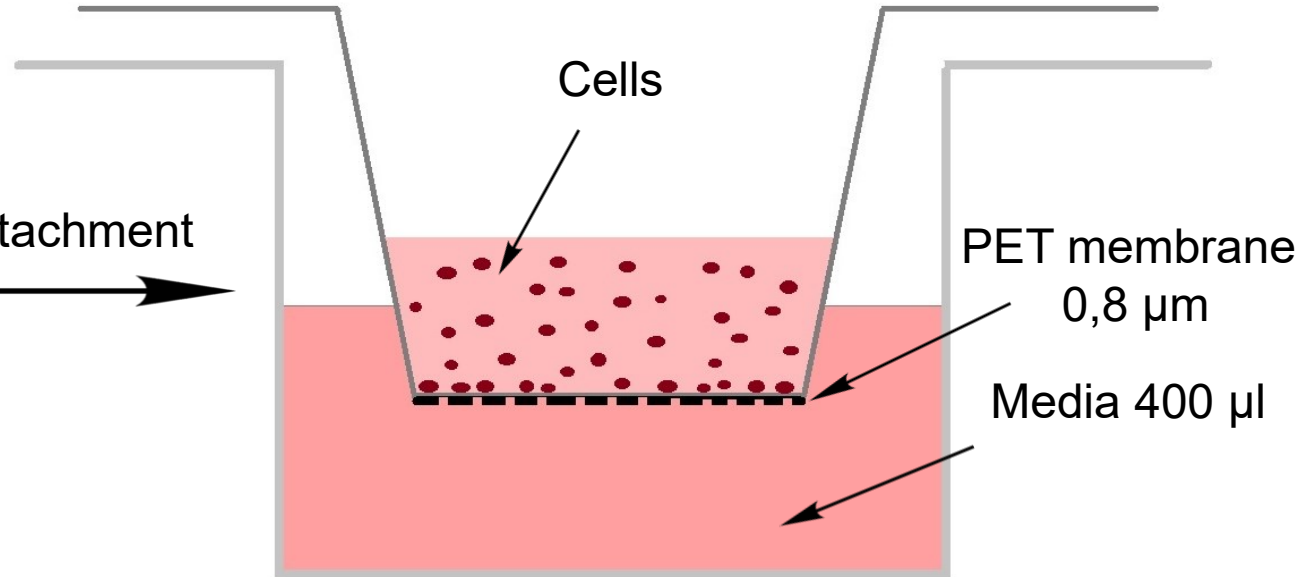
The main aim of this study was to find out the molecular markers associated with GC-stimulated motility and migration of breast cancer cells

Boyden chamber assay

Control/Dex-
treated cells,
120h



Trypsin detachment

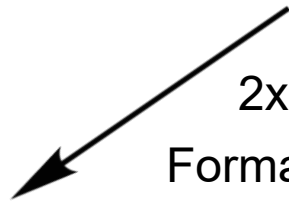


Counting of migrated cells

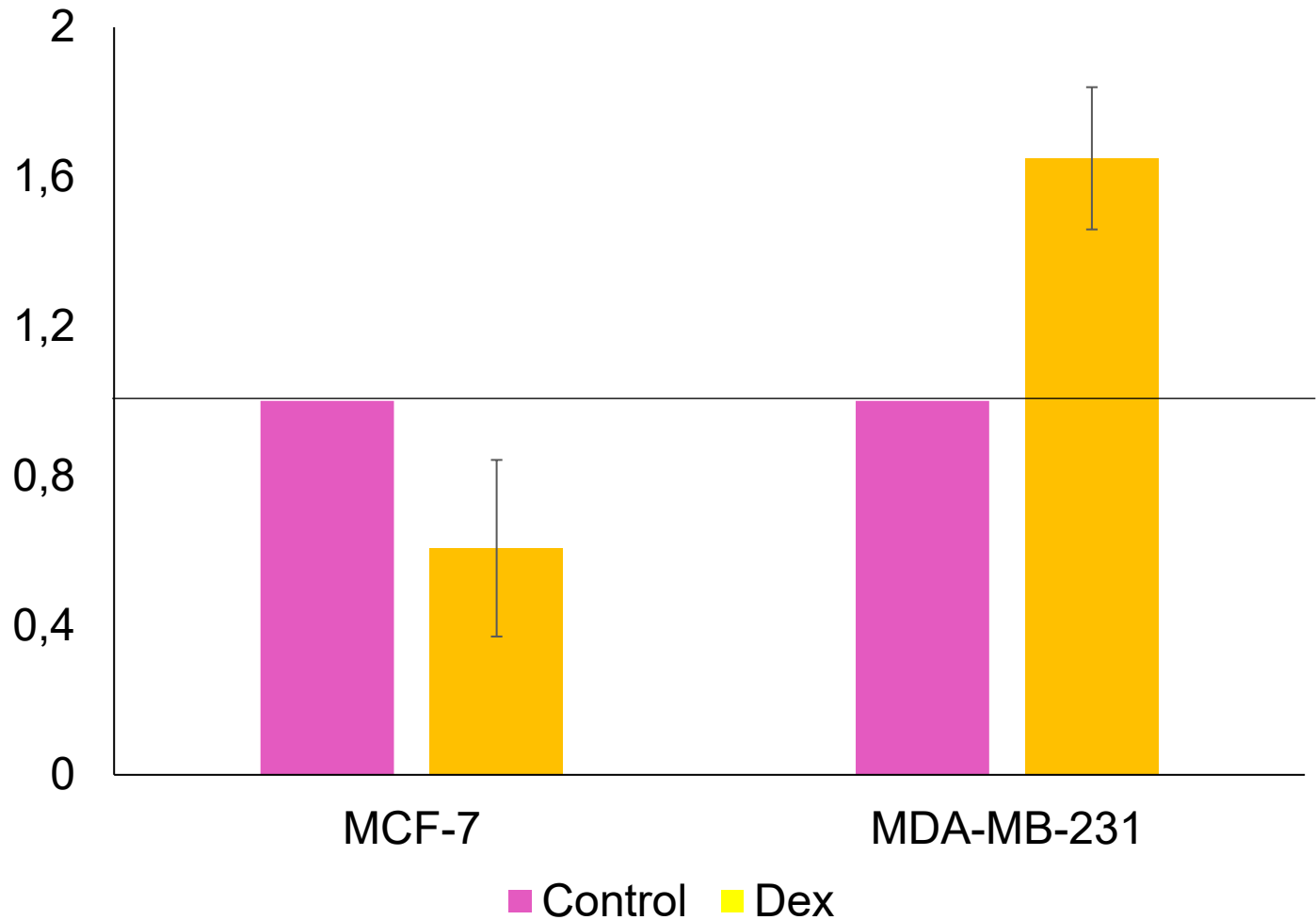


Incubation 24 h
2x washes in PBS

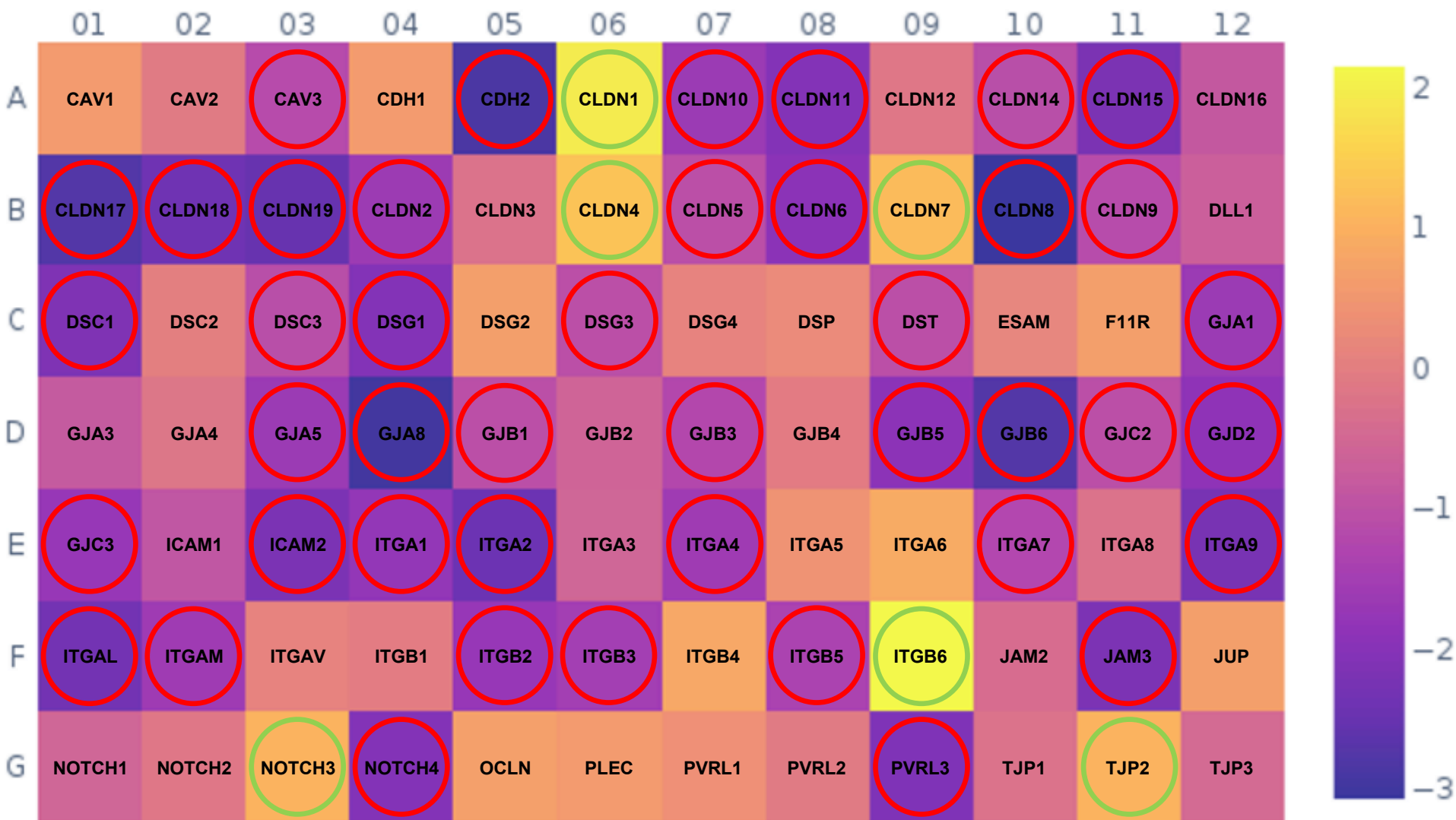
Formalin fixation
SYBR GOLD staining



Migration activity

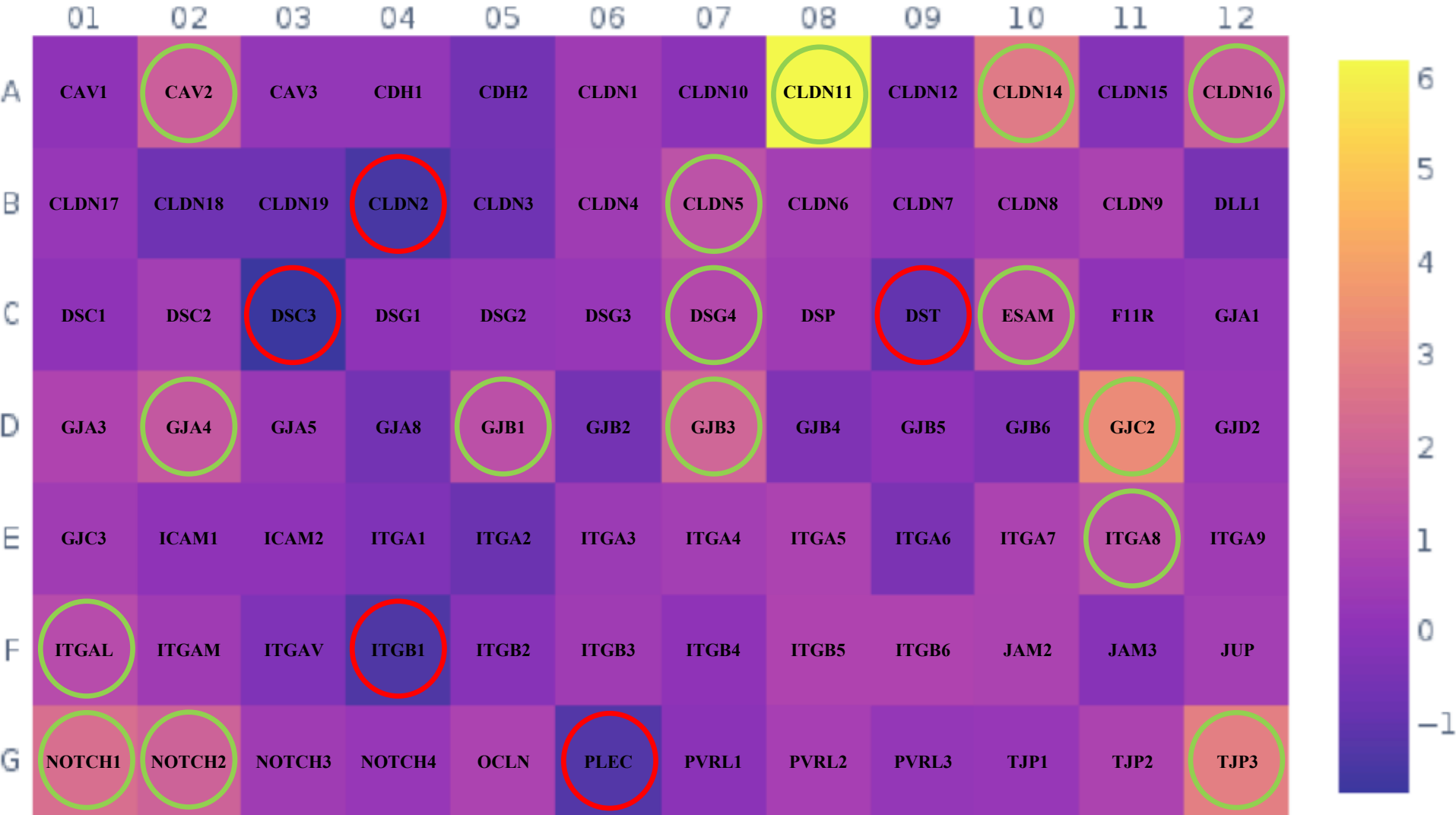


Relative change in gene expression in MCF-7 cells



RT² Profiler™ PCR Array Human Adherens Junctions Gene Panel

Relative change in gene expression in MDA-MB-231 cells



RT² Profiler™ PCR Array Human Adherens Junctions Gene Panel

Results

- Dex increased the relative migratory activity of MDA-MB-231 cells and significantly decreased this index in MCF-7 cells
- In MCF-7 cells with low metastatic potential GC decreased the expression of claudins, integrins and caveolins
- In triple negative breast cancer MDA-MB-231 cells activation of GR led to significant decrease in the expression of claudins and connexins

Discussion

We showed that GCs stimulated the invasion and metastasis of breast cancer cells in phenotype-dependent manner. Moreover, we determined the most significant genetic markers of GC-associated loss of adhesion in breast cancer cells

Acknowledgments

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Thank you!