

P002 Gene targets for adhesion control upon transformation with K_B -ras(Q₆₁K): a screen with lentiviral RNAi library for mouse phosphatase genes

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K_B -Ras(Q₆₁K) induced transformation of fibroblast BALB/3T3 cells (T cells) as effectively as E-Ras, but with a different mode of action. We applied a subset mouse phosphatase short hairpin RNAs (shRNAs) library from The RNAi Consortium (TRC) consisting of 960 unique shRNA-expressing lentiviruses targeting mouse phosphatase genes with a single, distinct shRNA-expressing lentivirus in each well to identify candidate regulators of cell adhesion in mouse T cells, using high-content imaging. Firstly, we challenged T cells with colchicine or indanocine to turned off mitogenic and adhesion signal transmission. We characterized the performance of the library in the context of this screen and identified genes for which at least two independent shRNAs functional for adhesions **but not for division upon tubulin immobilization**. The shRNAs CDC25C, OLF125, DUSP8, PTPRA and PTPLA represented a collection of candidate regulators of cell adhesion that responsible for aberrant cell migrations upon transformations.