

## Supplementary information

# Actin cytoskeleton remodeling accompanied by redistribution of adhesion proteins drives migration of cells in different EMT states

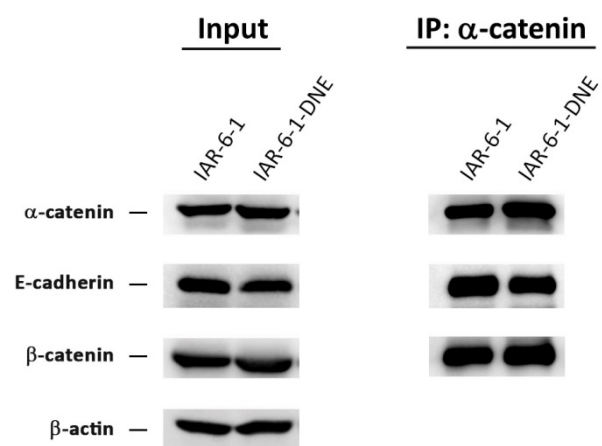
Alla S. Ilnitskaya <sup>1,†</sup>, Nikita I. Litovka <sup>1,†</sup>, Svetlana N. Rubtsova <sup>1</sup>, Irina Y. Zhitnyak <sup>1,2</sup> and Natalya A. Gloushankova <sup>1,\*</sup>

<sup>1</sup> Institute of Carcinogenesis, N.N. Blokhin National Medical Research Center of Oncology, 24 Kashirskoye Shosse, 115478 Moscow, Russia

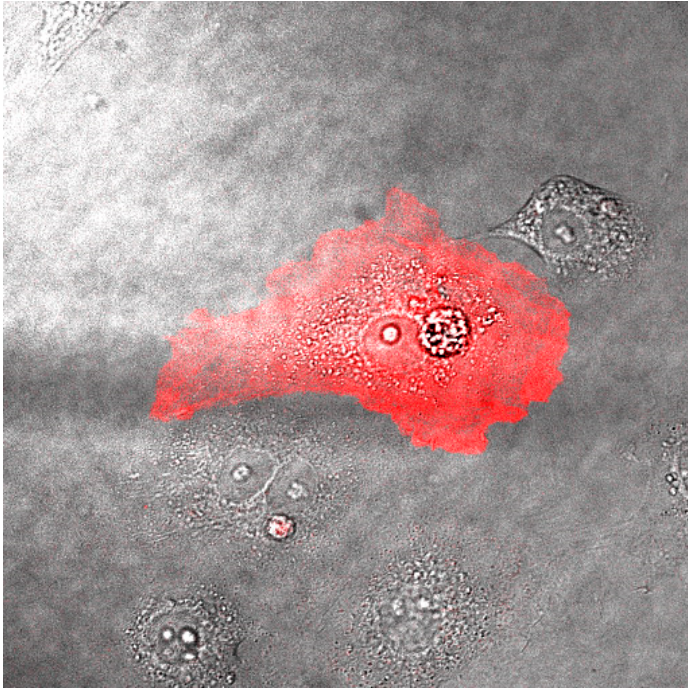
<sup>2</sup> Department of Molecular Genetics, University of Toronto, 661 University Ave, MaRS West, Toronto, ON 5MG 1M1, Canada

\* Correspondence: n.gloushankova@ronc.ru

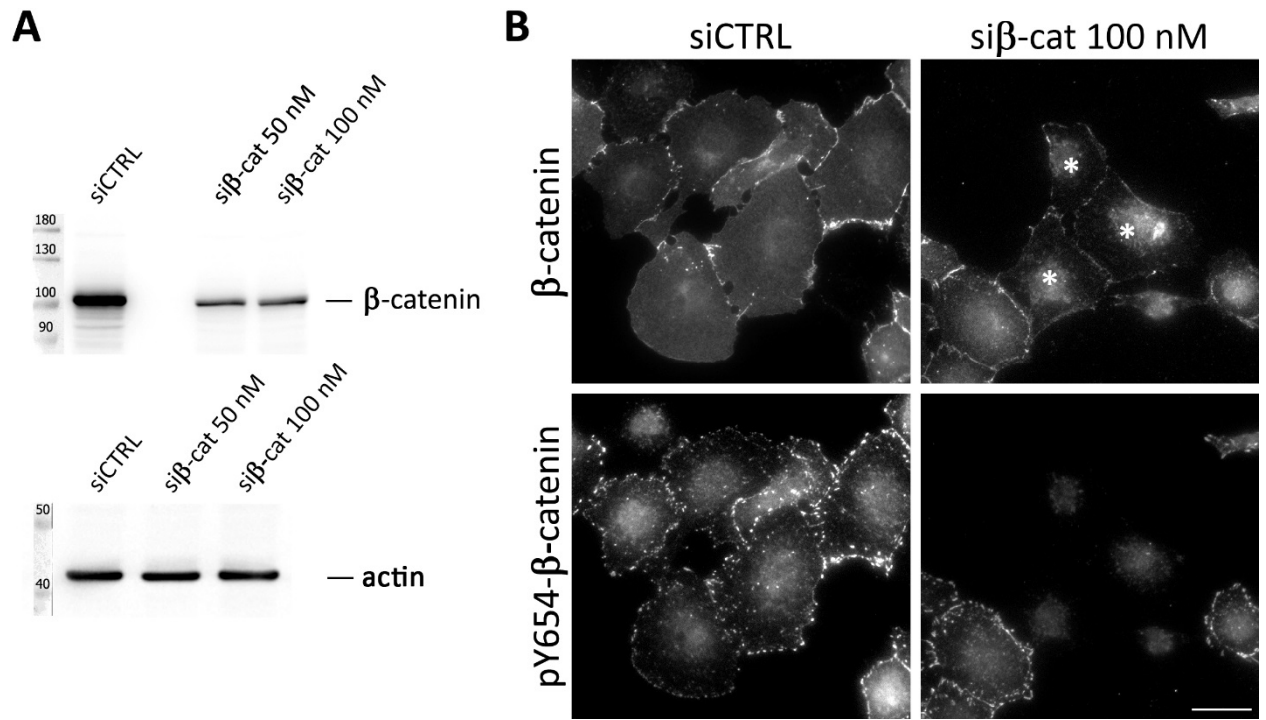
† These authors contributed equally to this work.



**Supplementary figure S1.**  $\alpha$ -Catenin forms complexes with other adhesion proteins in IAR-6-1 and IAR-6-1-DNE cells. Total cell lysates of sparse cultures of IAR-6-1 and IAR-6-1-DNE were immunoprecipitated for  $\alpha$ -catenin and probed with the indicated antibodies.



**Supplementary figure S2.** An IAR-6-1 cell transiently transfected with F-tractin-tdTomato in contact with other cells. Frame #1 from Supplementary Movie 5. Superimposition of DIC and red channels.



**Supplementary figure S3.** Depletion of  $\beta$ -catenin leads to loss of staining for pY654- $\beta$ -catenin. **(a)** Western blot for  $\beta$ -catenin in IAR-20 cells treated with EGF for 20 min 48 h after transfection with either control siRNA or siRNA to  $\beta$ -catenin. **(b)** Immunofluorescent staining for  $\beta$ -catenin and pY654- $\beta$ -catenin. All cells treated with control siRNA stain for pY654- $\beta$ -catenin on the free edges. Cells transfected with siRNA to  $\beta$ -catenin (indicated by asterisks) no longer stain for pY654- $\beta$ -catenin. Scale 20  $\mu$ m.

## Legends to Supplementary Videos

**Supplementary Video S1.** EGF-induced EMT in IAR-20 cells. 1 frame/5min.

**Supplementary Video S2.** EGF-induced EMT in IAR-20 cells stably expressing F-tractin-tdTomato. 1 frame/min

**Supplementary Video S3.** Migration of IAR-6-1 cells. 1 frame/5min. Arrowheads denote newly formed AJs. Arrowheads denote newly formed cell-cell contacts

**Supplementary Video S4.** Migration of IAR-6-1-DNE cells. 1 frame/5min

**Supplementary Video S5.** An IAR-6-1 cell transiently transfected with F-tractin-tdTomato in contact with other cells. 1 frame/min

**Supplementary Video S6.** Migration of a single IAR-6-1-DNE cell transiently transfected with F-tractin-tdTomato. 1 frame/min

**Supplementary Video S7.** MDA-MB-468 cells treated with EGF. 1 frame/10 min

**Supplementary Video S8.** EGF-induced migration in MDA-MB-468 cells expressing exogenous  $\alpha$ -catenin. 1 frame/10 min