

Article

Different Regulation of Glut1 Expression and Glucose Uptake during the Induction and Chronic Stages of TGFβ1-Induced EMT in Breast Cancer Cells

Azadeh Nilchian †, Nikolina Giotopoulou †, Wenwen Sun and Jonas Fuxe *

Karolinska Institutet, Department of Laboratory Medicine (LABMED), H5, Division of Pathology, F46, Karolinska University Hospital, 141 52 Huddinge, Sweden; azadeh.nilchian@ki.se (A.N.); nikolina.giotopoulou@ki.se (N.G.); wenwen.sun@ki.se (W.S.)

* Correspondence: jonas.fuxe@ki.se; Tel.: +46707980065

† These authors contributed equally to this paper.

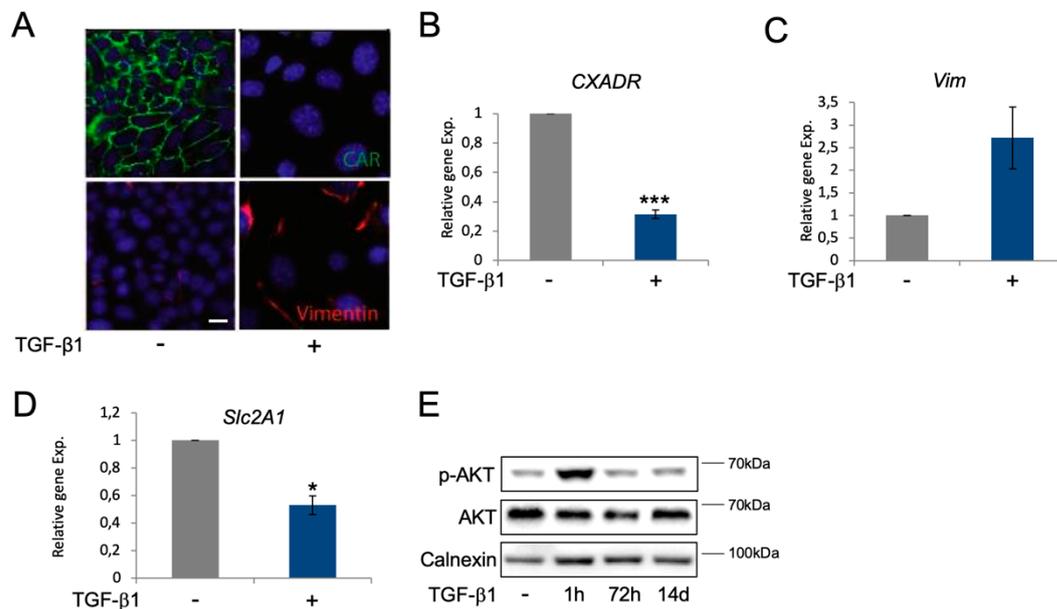


Figure S1. Regulation of EMT markers and Glut1 during TGF-β1-induced EMT in mammary epithelial cells. (A) Immunofluorescence staining of CXADR (green) and vimentin (red) in NMuMG cells after 72 h of TGF-β1 exposure (10ng/ml). DAPI staining was used to visualize cell nuclei. Scale bar = 10μm. (B-D) Bar graphs showing qPCR results from analyzing the effect of TGF-β1 exposure (10ng/ml) for 72 h on mRNA expression of *Cxadr*, *Vim* and *Slc2a1* (Glut1) in NMuMG cells. Data represent means±s.e.m. with three independent experiments in triplicates. * $p < 0.05$; *** $p < 0.01$.

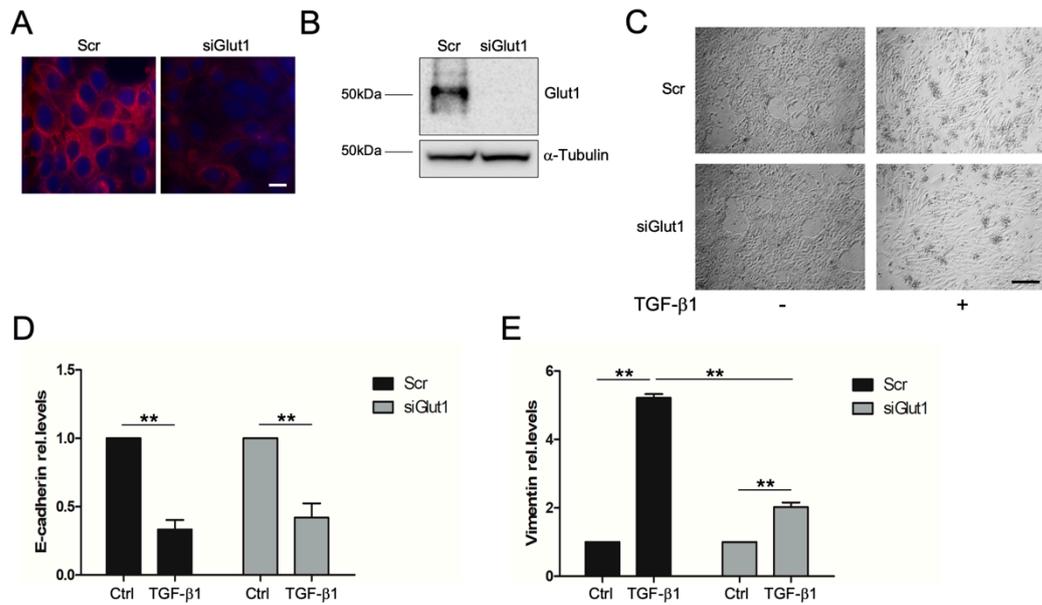


Figure S2. Effect of Glut1 knockdown on EMT. (A) Immunofluorescence staining of Glut1 (red) in NMuMG cells after transfection of scrambled control (Scr) or Glut1 siRNA (siGlut1). DAPI staining was used to visualize cell nuclei. Scale bar = 10µm. (B) Western blot analysis of the effect of scrambled control (Scr) or Glut1 siRNA (siGlut1) on Glut1 levels. α-Tubulin was used as a loading control. (C) Bright field images showing the effect of scrambled control (Scr) or Glut1 siRNA (siGlut1) on morphological changes associated with TGF-β1-induced EMT. Scale bar = 100µm. (D, E) Bar graphs showing quantification of western blot analysis of the effect of scrambled control (Scr) or Glut1 siRNA (siGlut1) on TGF-β1-mediated changes in E-cadherin (D) and vimentin (E) levels. Data represent means±s.e.m. with three independent experiments in triplicates. ** $p < 0.01$.

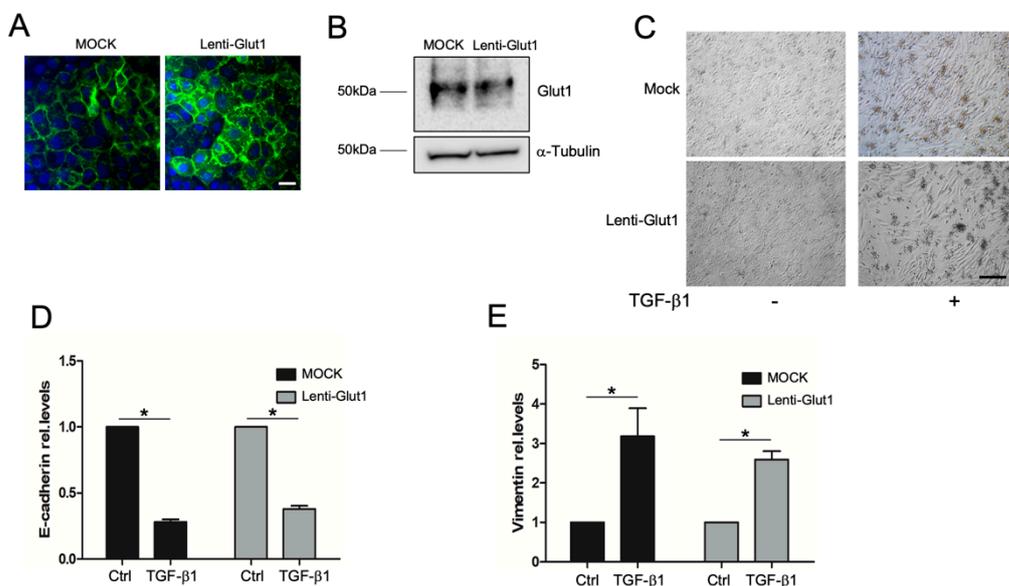


Figure S3. Effect of Glut1 overexpression on EMT. (A) Immunofluorescence staining of Glut1 (green) in NMuMG cells transduced with a lentivirus expressing non-coding cDNA (mock) or Glut1 (Lenti-Glut1). DAPI staining was used to visualize cell nuclei. Scale bar = 10µm. (B) Western blot analysis of Glut1 levels in NMuMG cells transduced with mock or Lenti-Glut1. α-Tubulin was used as a loading control. (C) Bright field images showing the effect of mock or Lenti-Glut1 transduction on morphological changes during TGF-β1-induced EMT. Scale bar = 100µm. (D, E) Bar graphs showing quantification of western blot analysis of the effect of mock or Lenti-Glut1 transduction on TGF-β1-mediated changes in E-cadherin (D) and vimentin (E) levels. Data represent means±s.e.m. with three independent experiments in triplicates. * $p < 0.05$.

TGF- β 1-mediated changes in E-cadherin (D) and vimentin (E) levels. Data represent means \pm s.e.m. with three independent experiments in triplicates. * p <0.05.

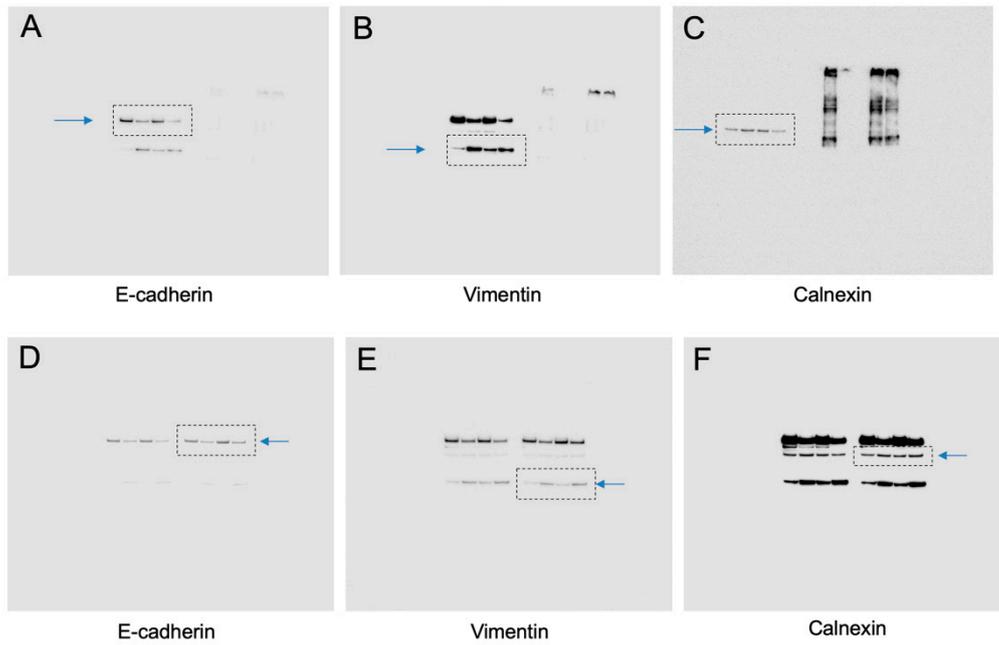


Figure S4. Original blots. Original blots for E-cadherin, vimentin and calnexin results included in Fig. 4B (A-C) and 4D (D-E).