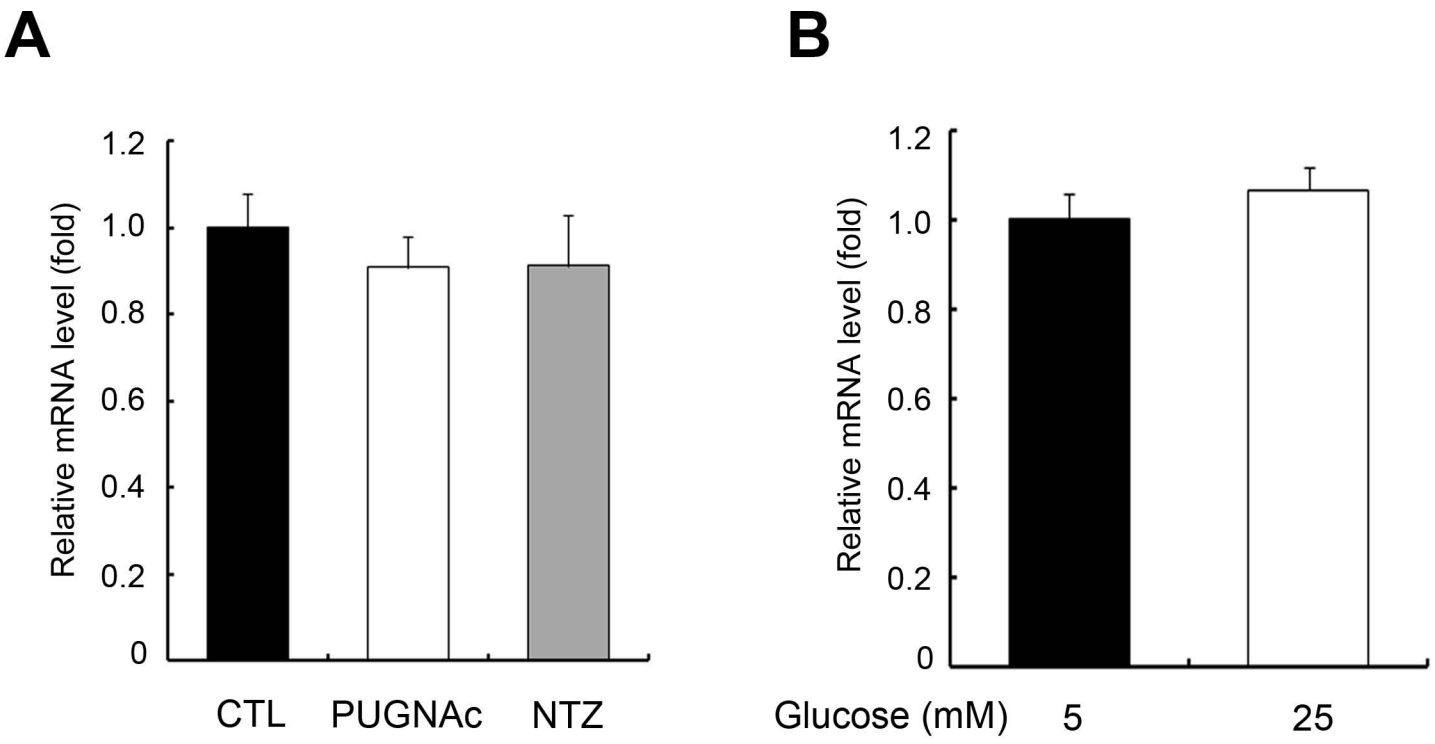
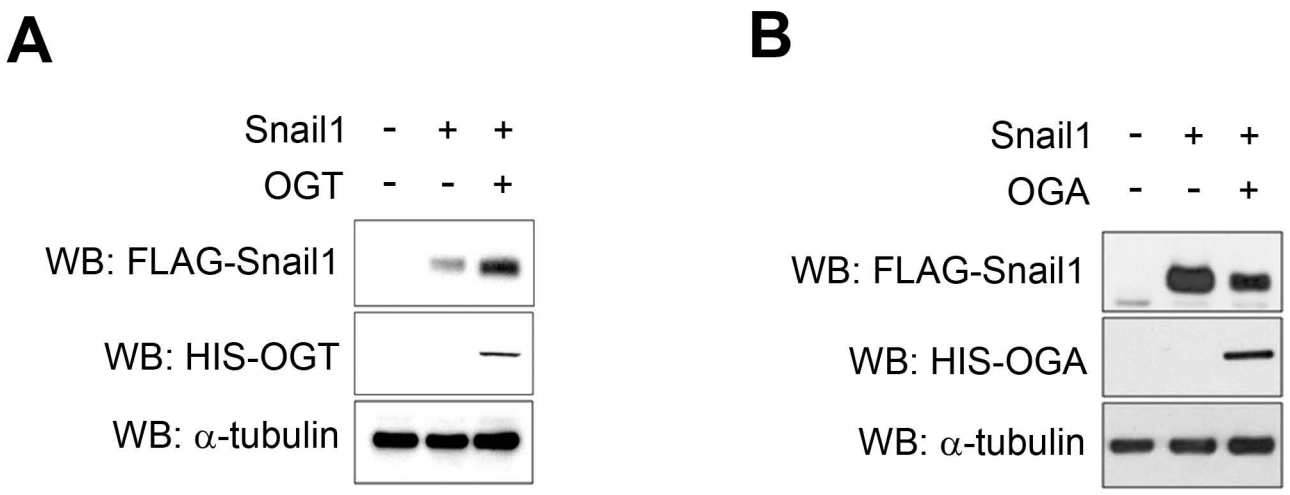
Supplementary Figure 1



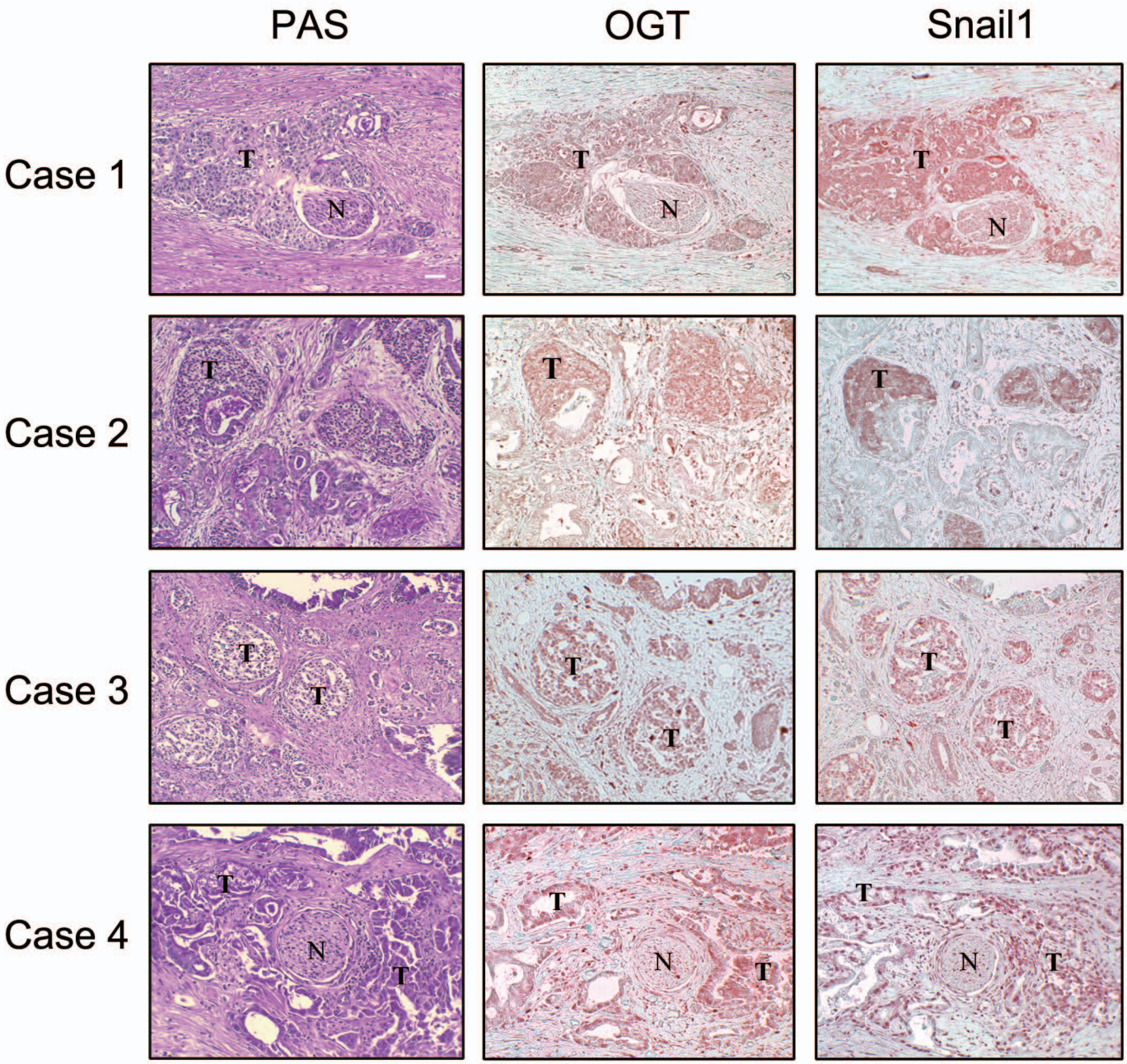
Supplementary Figure 1. Snail1 mRNA expression was not affected by OGA inhibitors or hyperglycemic condition. (A) Quantitative RT-PCR for Snail1 mRNA in A549 cells under OGA inhibitors treatment (n = 4, data are presented as mean ± SD). GAPDH was used for normalization. (B) Quantitative RT-PCR for Snail1 mRNA in A549 cells under normoglycemic (5 mM) and hyperglycemic (25 mM) conditions (n = 4, data are presented as mean ± SD). GAPDH was used for normalization.

Supplementary Figure 2



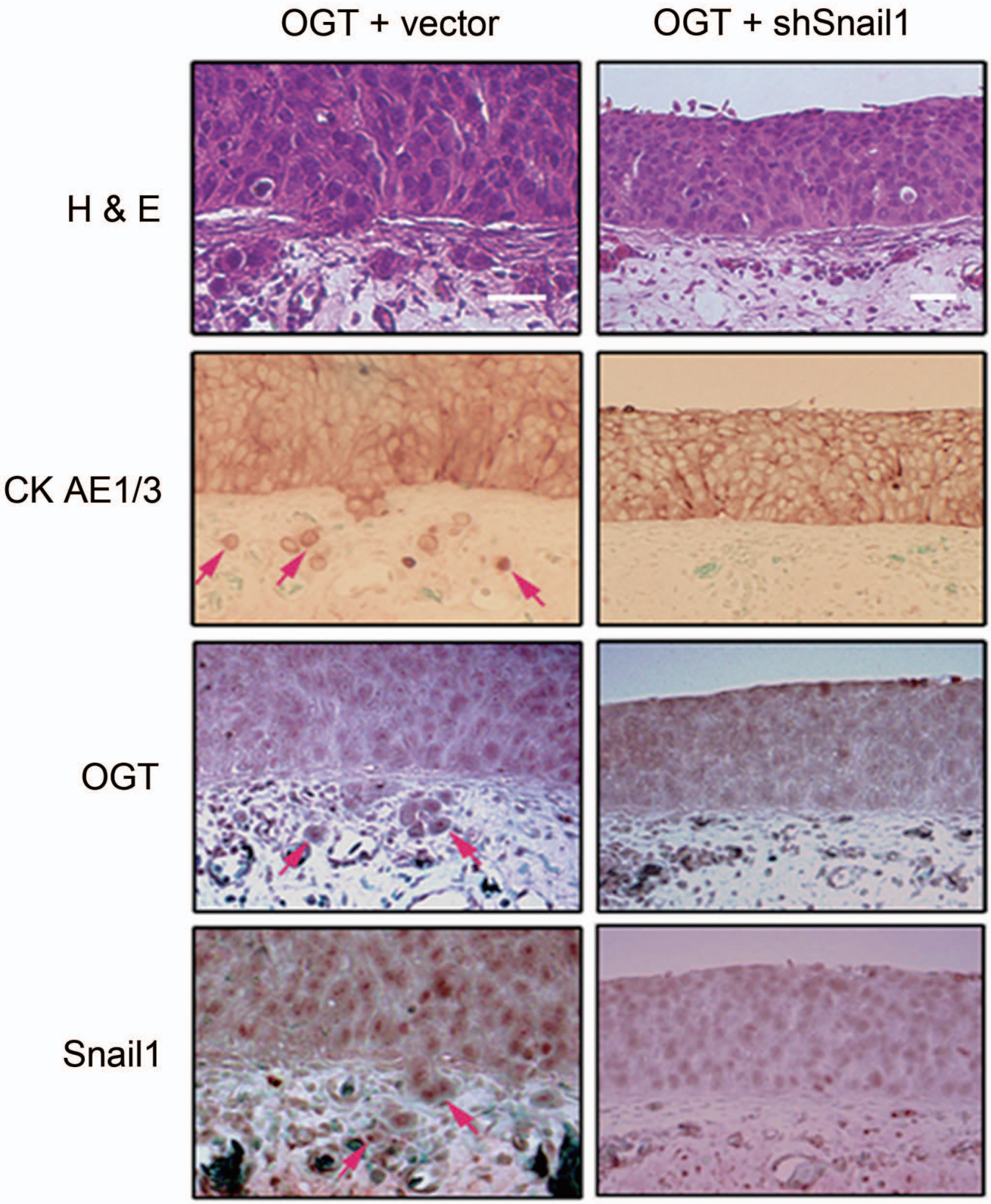
Supplementary Figure 2. Snail1 expression level was regulated by overexpressing OGT or OGA. (A) Western blot analysis of Snail1 in HEK293 cells with or without overexpressing OGT. α-tubulin was included as loading control. (B) Western blot analysis of Snail1 in HEK293 cells with or without overexpression of OGA. α-tubulin is shown as the loading control.

Supplementary Figure 3



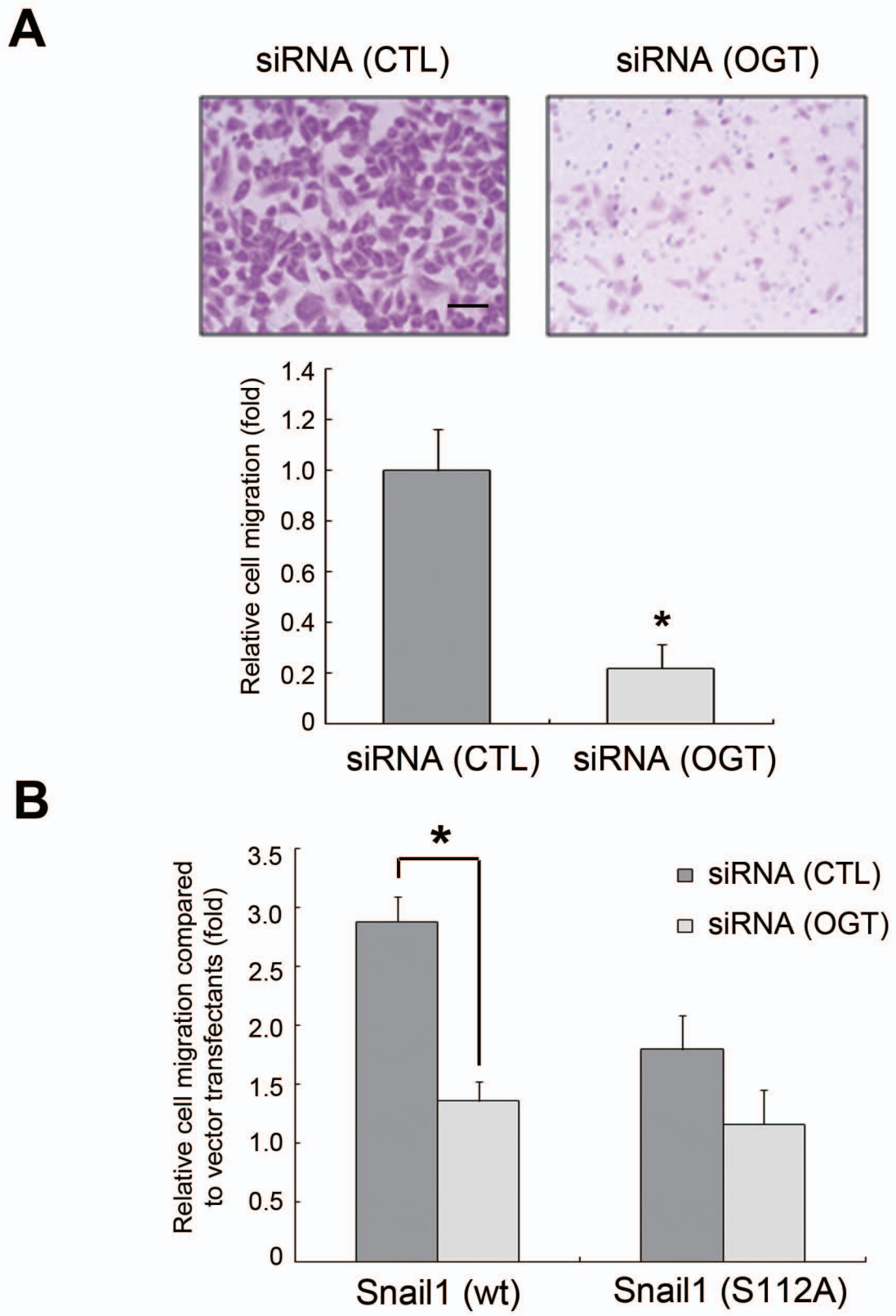
Supplementary Figure 3. OGT and Snail1 expression in primary invasive pancreatic cancer. OGT and Snail1 was detected by immunohistochemical staining of paraffin sections from 4 different invasive pancreatic adenocarcinomas. OGT and Snail1 were co-expressed in invasive cancer cells (T). N: peripheral nerve entrapped by tumor cells. PAS: periodic acid Schiff staining (scale bar; 100 μm).

Supplementary Figure 4



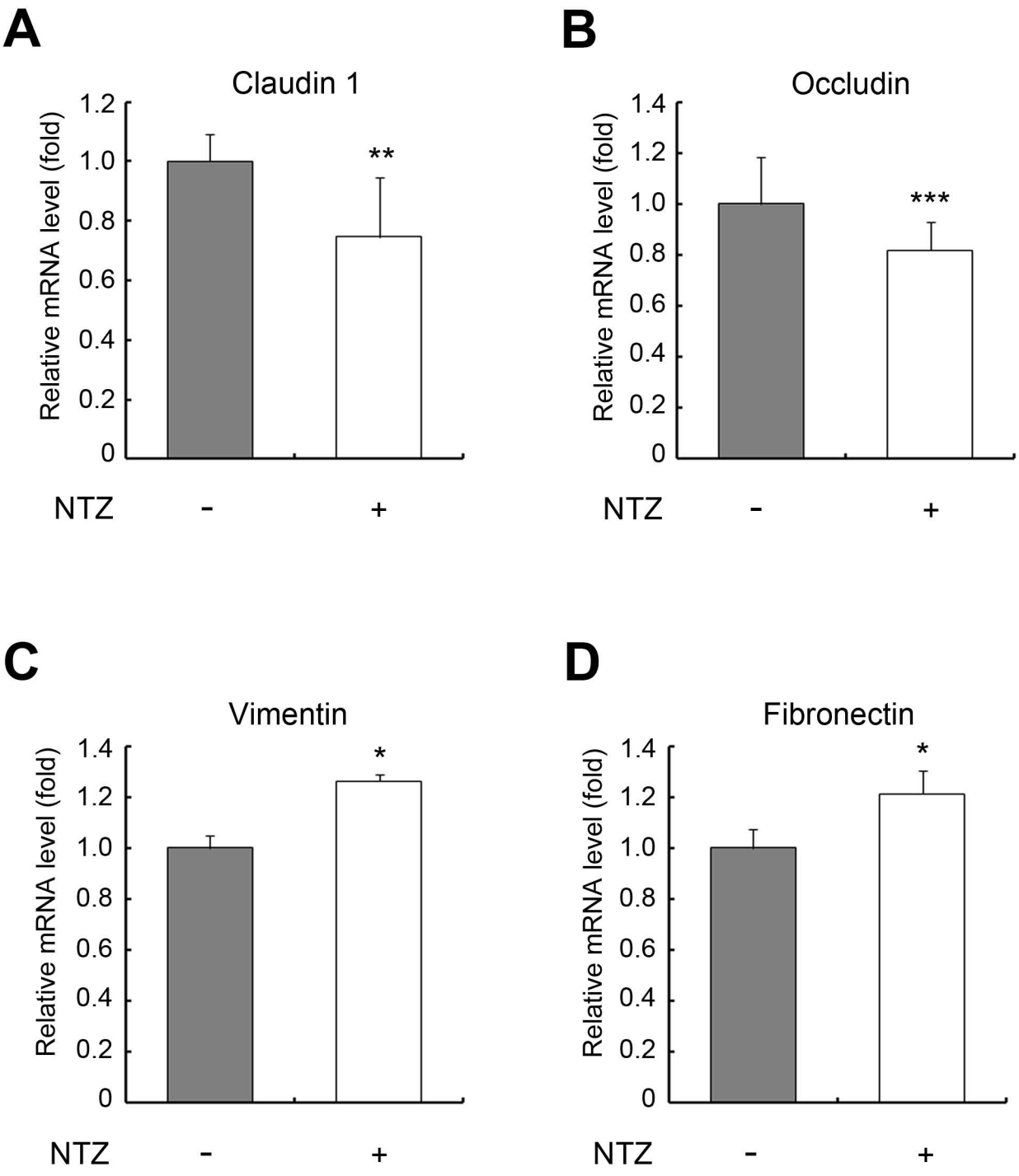
Supplementary Figure 4. Immunohistochemical detection of keratin (CK AE1/3), OGT and Snail1 in sections from CAM samples. Arrows in the left panel denote invasive MCF-7 cells. Under conditions of knock-down of Snail1 (right panel), invasive cells cannot be detected (scale bars; 100 μm).

Supplementary Figure 5



Supplementary Figure 5. siRNA-mediated OGT knock-down abolishes cell migration. (A) The relative migratory activity of A549 cells transfected with siRNA for OGT compared to control siRNA transfected cells was determined following 2 days in culture (scale bar; 100 μm, n = 4, data are presented as mean ± SD, * $P < 0.01$ by student's t test). (B) siRNA-mediated knock-down of OGT abolishes cell migration by wild-type Snail1, while S112A mutant was only minimally affected. Minimal amount of wild-type or S112A Snail1 expression vectors (50 ng) were transfected with or without siRNA for OGT; the relative fold-increase of cell migration compared to control vector transfected A549 cells is represented (n = 4, data are presented as mean ± SD, * $P < 0.01$ by student's t test).

Supplementary Figure 6



Supplementary Figure 6. OGA inhibitor NTZ influences epithelial and mesenchymal gene transcription. (A-D) Quantitative RT-PCR for claudin-1, occludin, vimentin, and fibronectin mRNA in A549 cells (n = 4, data are presented as mean ± SD. * $P < 0.01$, ** $P < 0.02$, and *** $P < 0.03$ by student's t test). GAPDH was used for normalization.