**Supplementary materials and methods**

**Wound healing assay**

The migration ability of SCC13 and Colo16 cells was detected by wound healing assay. In short, SCC13 and Colo16 cells were seeded into 12-well plates. At ~80% confluence, we used a pipette tip (200 µL) to scrape the center of the well and washed with PBS. Scratch healing was observed using a microscope after scratching for 0 and 24 h with ×40 magnification. The area of wound closure was analyzed using Image J software.

**Supplementary Figure 1. The effect of circSEC24A on CSCC migration and the expression of potential target miRNAs.** (A-D) SCC13 and Colo16 cells were transfected with si-NC or si-circSEC24A.(A and B) Wound healing assay was utilized to assess cell migration ability (×40) (Student’s *t*-test). (C and D) The expression of miR-1193, miR-217, miR-192-5p, miR-215-5p, and miR-381-3p was detected by qRT-PCR (ANOVA). (E and F) The expression of MAP3K9, SOX4, RAB23, PTEN, and FOSL1 was determined by qRT-PCR in SCC13 and Colo16 cells transfected with miR-NC or miR-1193. (ANOVA). \**P*<0.05.