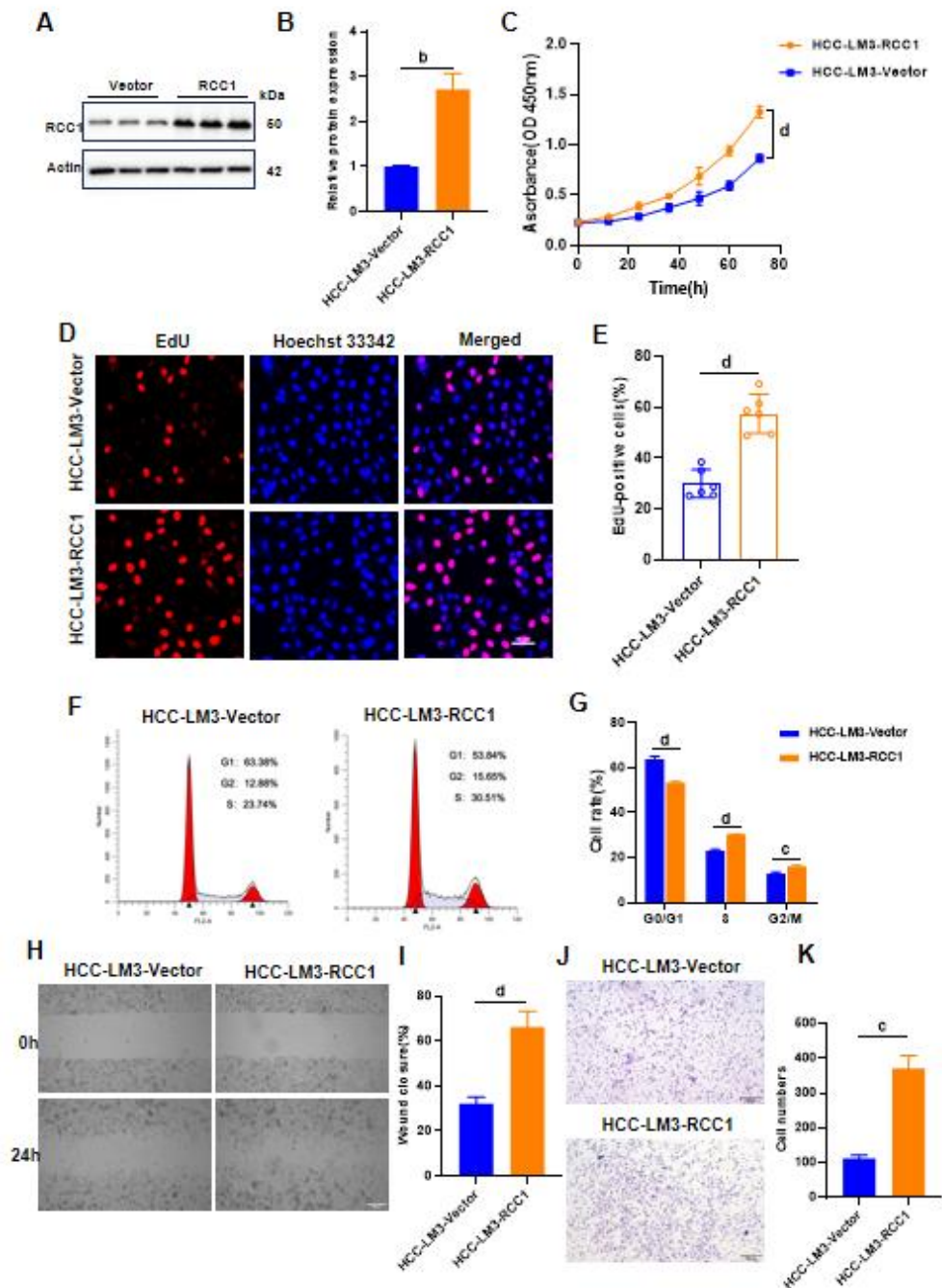


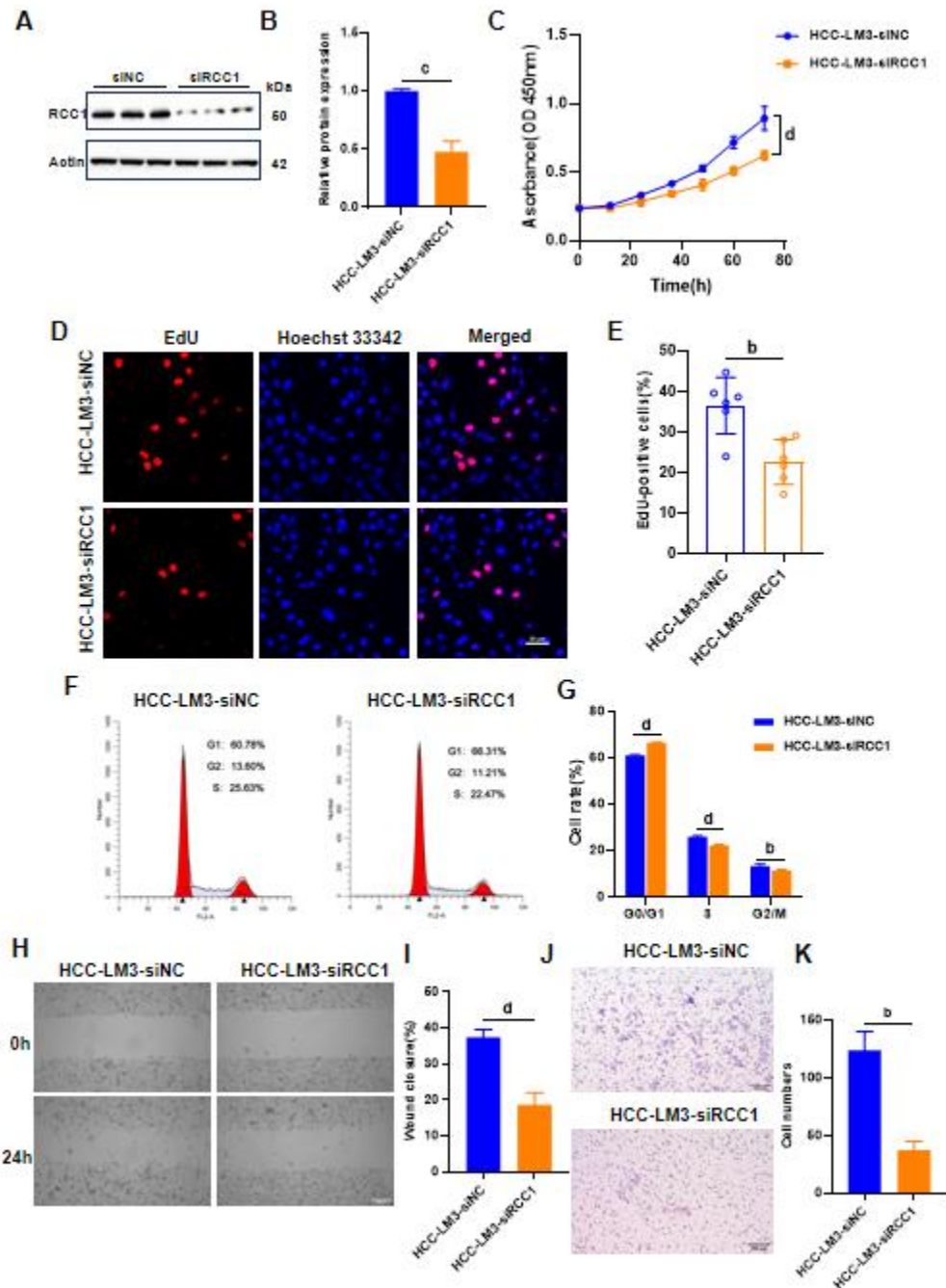
Supplementary Figure 1 Regulator of chromo-some condensation 1 expression is markedly higher in hepatocellular carcinomatissues than in adjacent normal tissues. ^b $P < 0.01$, ^c $P < 0.001$, ^d $P < 0.0001$. A: Immunoblotting analysis of RCC1 in AML12 and Hepa1-6 cells. Actin was used as the loading control; B: Quantification of RCC1 expression normalized to Actin according to (A); C: Immunoblotting analysis of RCC1 on six paired human HCC and adjacent non-cancerous tissues, with Actin as the loading control; D: Quantification of RCC1 expression normalized to Actin according to C; E: Immunohistochemical

staining of RCC1 on human HCC and adjacent non-cancerous tissues; F: The statistical results of RCC1-positive cells between HCC and adjacent non-cancerous tissues ($n = 10$).



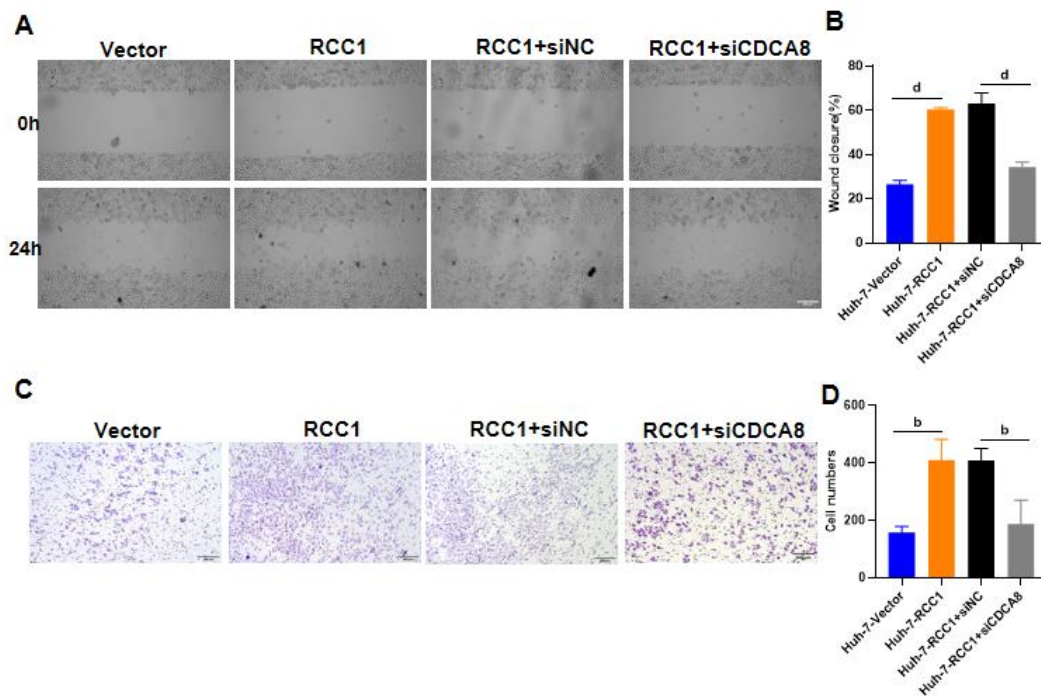
Supplementary Figure 2 Regulator of chromosome condensation 1 overexpression promotes the cell growth and motility of hepatocellular carcinoma-LM3 cells. ^b $P < 0.01$, ^c $P < 0.001$, ^d $P < 0.0001$. **A:** Immunoblotting analysis of RCC1 in vector and RCC1-overexpressing HCC-LM3 cells, with Actin as the loading control; **B:** Quantification of RCC1 expression normalized to Actin

according to (A); C and D: CCK-8 assay and EdU incorporation assay detected the proliferation in vector and RCC1-overexpressing HCC-LM3 cells; E: Statistical results of EdU-positive cell percentage from; F and G: Cell cycle analysis and the statistical results between HCC-LM3-Vector and HCC-LM3-RCC1 cells; H: Wound healing assay detected the migration in vector and RCC1-overexpressing HCC-LM3 cells; I: Statistical results of wound closure percentage from (H); J: Transwell invasion assay detected the invasion in HCC-LM3-Vector and HCC-LM3-RCC1; K: Statistical results of cell numbers from (J).



Supplementary Figure 3 Knockdown of regulator of chromosome condensation 1 inhibits the proliferation and motility of hepatocellular carcinoma-LM3 cells. ^bP < 0.01, ^cP < 0.001, ^dP < 0.0001. A: Immunoblotting analysis of RCC1 in siNC and RCC1-knockdown HCC-LM3 cells. Actin was used as the loading control; B: Quantification of RCC1 expression normalized to Actin

according to (A); C and D: CCK-8 assay and EdU incorporation assay detected proliferation in siNC and RCC1-knockdown HCC-LM3 cells. E: Statistical results of EdU-positive cell percentage from (D); F and G: Cell cycle analysis and the statistical results between HCC-LM3-siNC and HCC-LM3-siRCC1; H: Wound healing assay detected the migration in siNC and RCC1-knockdown HCC-LM3 cells; I: Statistical results of wound closure percentage from (H); J: Transwell invasion assay detected the invasion in HCC-LM3-siNC and HCC-LM3-siRCC1; K: Statistical results of cell numbers from (J).



Supplementary Figure 4 Silencing cell division cycle-associated 8 suppresses chromo-some condensation 1-induced invasion and migration of hepatocellular carcinoma cells. ^b $P < 0.01$, ^d $P < 0.0001$ A: Wound healing assay was used to assess migration in Huh-7 cells under different treatments; B: Statistical results of wound closure percentage from (A); C: Transwell invasion assay was used to assess invasion in different treatment Huh-7 cells; D: Statistical results of cell numbers from (C).