**Supplementary information**

**Title:** Salvianolic acid B specifically binds mortalin to attenuate the migration and invasion of hepatocellular carcinoma cells by inhibiting RECK/STAT3 signaling pathway

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2. supplementary figures and their legends, pages 5-6

**1. Supplementary tables**

**1.1. Table S1. Primers used in this study.**

|  |  |  |  |
| --- | --- | --- | --- |
| Names | | Primers | |
| MMP2 | F:CCCACTGCGGTTTTCTCGAAT  R:CAAAGGGGTATCCATCGCCAT | |
| MMP9 | F:TGTACCGCTATGGTTACACTCG  R:GGCAGGGACAGTTGCTTCT | |
| β-actin | F:TCAGGTCATCACTATCGGCACT  R:AAAGAAAGGGTGTAAAACGCA | |

**1.2. Table S2. Antibodies used in this study.**

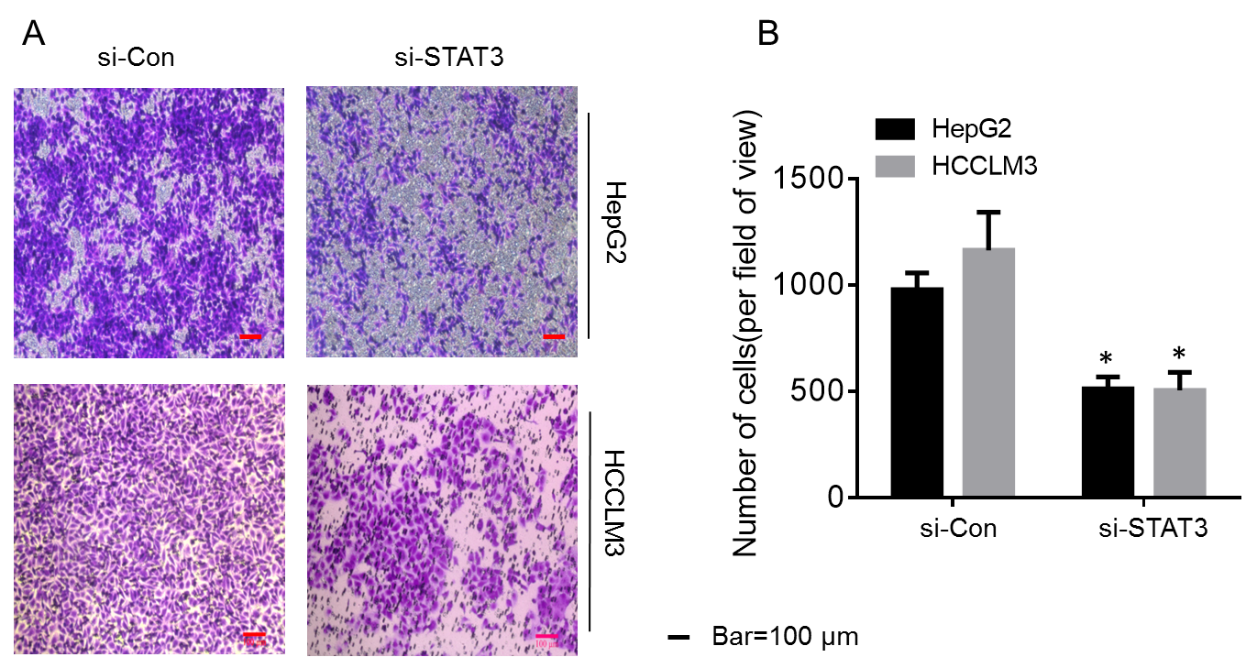
|  |  |  |  |
| --- | --- | --- | --- |
| Names | Web Link | Source | Used |
| p-STAT3 | <https://www.cellsignal.com/products/primary-antibodies/phospho-stat3-tyr705-d3a7-xp-rabbit-mab/9145?_=1473248676908> | Cell Signaling Technology | 1: 1000 |
| Ac-STAT3 | <https://www.cst-c.com.cn/products/primary-antibodies/acetyl-stat3-lys685-antibody/2523?site-search-type=Products> | Cell Signaling Technology | 1: 1000 |
| E-cadherin | <https://www.cellsignal.com/products/primary-antibodies/e-cadherin-24e10-rabbit-mab/3195?N=4294956287&Ntt=24E10&fromPage=plp> | Cell Signaling Technology | 1: 1000 |
| N-cadherin | <https://www.cellsignal.com/products/primary-antibodies/n-cadherin-d4r1h-xp-rabbit-mab/13116?site-search-type=Products&N=4294956287&Ntt=n-cadherin&fromPage=plp> | Cell Signaling Technology | 1: 1000 |
| Vimentin | <https://www.cellsignal.com/products/primary-antibodies/vimentin-d21h3-xp-rabbit-mab/5741?N=4294956287&Ntt=vimentin&fromPage=plp> | Cell Signaling Technology | 1: 1000 |
| MMP2 | <https://www.cst-c.com.cn/products/primary-antibodies/mmp-2-d4m2n-rabbit-mab/40994?site-search-type=Products&N=4294956287&Ntt=mmp2&fromPage=plp> | Cell Signaling Technology | 1: 1000 |
| MMP9 | <https://www.cst-c.com.cn/products/primary-antibodies/mmp-9-d6o3h-xp-rabbit-mab/13667?site-search-type=Products&N=4294956287&Ntt=mmp9&fromPage=plp> | Cell Signaling Technology | 1: 1000 |
| RECK | <https://www.cst-c.com.cn/products/primary-antibodies/reck-d8c7-rabbit-mab/3433?site-search-type=Products&N=4294956287&Ntt=reck&fromPage=plp&_requestid=64915> | Cell Signaling Technology | 1: 1000 |
| Mortalin | <https://www.cst-c.com.cn/products/primary-antibodies/grp75-d13h4-xp-rabbit-mab/3593?site-search-type=Products&N=4294956287&Ntt=mortalin&fromPage=plp> | Cell Signaling Technology | 1: 1000 |
| Flag | http://www.affbiotech.cn/goods-6269-T0003-Flag-Tag+Antibody.html | Affinity | 1:1000 |
| Ubiquitin | <https://www.ptgcn.com/products/ubiquitin-Antibody-10201-2-AP.htm> | Proteintech Group | 1: 1000 |
| β-Actin | <http://www.beyotime.com/product/AA128.htm> | Beyotime | 1:1000 |
| GAPDH | <http://www.beyotime.com/product/AG019.htm> | Beyotime | 1:1000 |

**1.3. Table S3. siRNAs used in this study.**

|  |  |  |  |
| --- | --- | --- | --- |
| Names | Web Link | Source | Used |
| RECK-  siRNA | <https://datasheets.scbt.com/sc-39718.pdf> | Santa Cruz Biotechnology | 50 nM |
| Mortalin-  siRNA | <https://datasheets.scbt.com/sc-35520.pdf> | Santa Cruz Biotechnology | 50 nM |
| STAT3-  siRNA | https://datasheets.scbt.com/sc-29493.pdf | Santa Cruz Biotechnology | 50 nM |
| NC-  siRNA | <http://datasheets.scbt.com/sc-37007.pdf> | Santa Cruz Biotechnology | 50 nM |

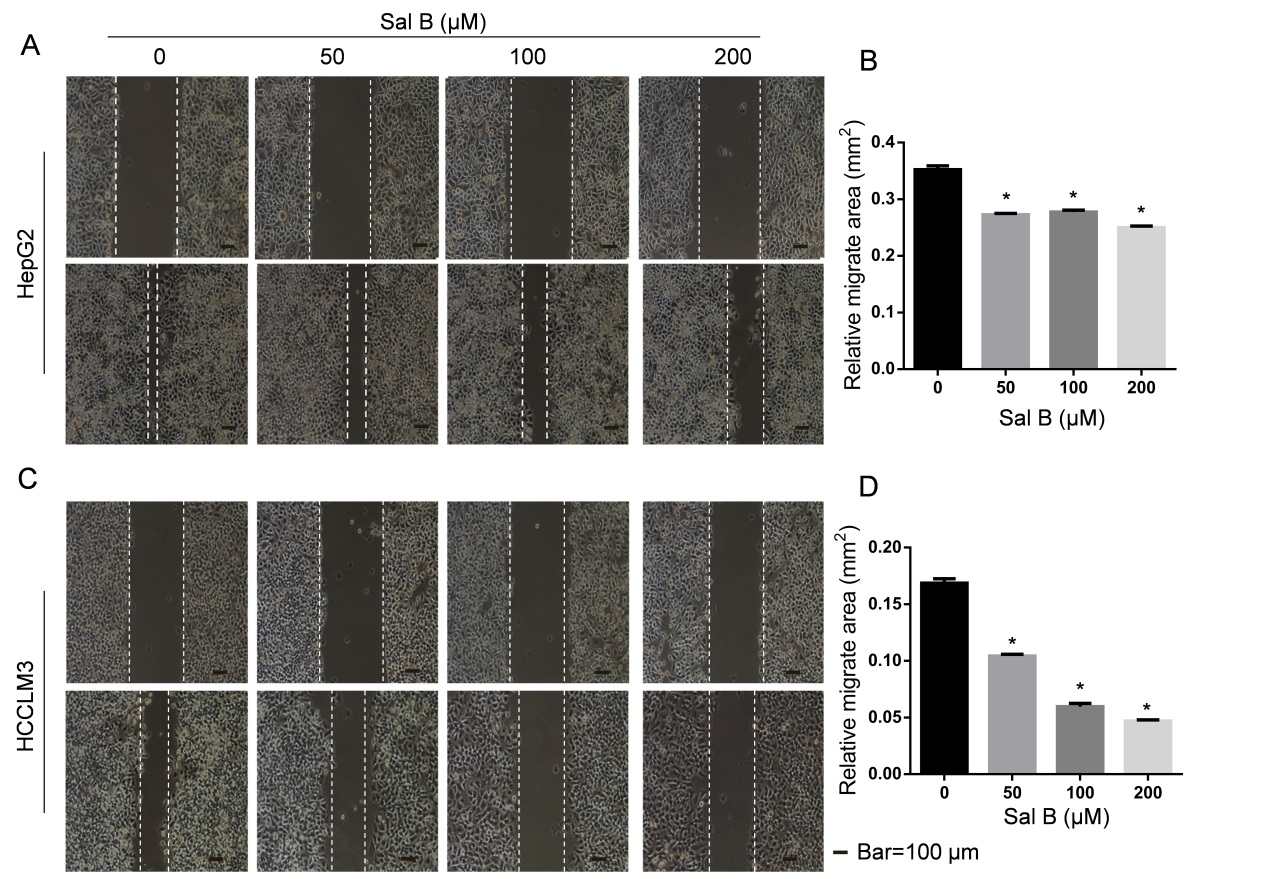
**2. Supplementary Figures and their legends**

2.1. Figure S1



2.1. Figure S1. Effect of STAT3 in migration of hepatocellular carcinoma cells. HepG2 and HCCLM3 cells were subjected to the migration assays with different STAT3 levels, and migrated cells were counted with Stat Monitor in photoshop (mean ± SD, n=3). \*P < 0.05, statistically significant difference vs. untreated cells (A and B). Bars = 100 μm.

2.2. Figure S2



2.2. Figure S2. Sal B inhibited the scratch healing process of hepatocellular carcinoma cells. (A and B) HepG2 cells were exposed to 0.0, 50.0, 100.0, or 200.0 μM Sal B for 48 h, Wound healing assay analyses were performed, relative levels of cell migration areas were determined by Image J. Bars=100μm. (C and D) HCCLM3 cells were exposed to 0.0, 50.0, 100.0, or 200.0 μM Sal B for 24 h, Wound healing assay analyses were performed, relative levels of cell migration areas were determined by Image J. Bars=100μm.