Supplementary Table 2: The qRT-PCR primers for this study

|  |  |  |
| --- | --- | --- |
| **Gene** |  | **Primer** |
| circASCC3 | Forward | 5'-TGTGTATGATTCCCAGGCTGAAGC-3' |
|  | Reversed | 5'-GAGTGGCATTGGTTCGCTGTAGG-3' |
| ASCC3 | Forward | 5'- CCTCCATCGAGTCCCTTCCT -3' |
|  | Reversed | 5'- AACTAAGTCATCCCACGAGCC -3' |
| GAPDH | Forward | 5'-TCAGCAATGCCTCCTGCAC-3' |
|  | Reversed | 5'-TGGCATGGACTGTGGTCAATG-3' |
| C5 | Forward | 5'-ACCAGCTCCAGGTTCATCTGTCTC-3' |
|  | Reversed | 5'-CACTGTCCACTGCTGCTAATGCC-3' |
| CD163 | Forward | 5'-TTCACTGCACTGGGACTGAG-3' |
|  | Reversed | 5'-CACTCTCTATGCAGGCCACA-3' |
| PD-L1 | Forward | 5′-TCACTTGGTAATTCTGGGAGC-3′ |
|  | Reversed | 5′-CTTTGAGTTTGTATCTTGGATGCC-3′ |
| CD206 | Forward | 5′-AAGAGGTTCGGTTCACCCAC-3′ |
|  | Reversed | 5′-GGGTGGGTTACTCCTTCTGC-3′ |
| Arg1 | Forward | 5′-CTTAAAGAACAAGAGTGTGATGTGA-3′ |
|  | Reversed | 5′-ATTGCCAAACTGTGGTCTCC-3′ |
| E-cadherin | Forward | 5'-GAACGCATTGCCACATACAC-3' |
|  | Reversed | 5'-GAATTCGGGCTTGTTGTCAT-3' |
| Vimentin | Forward | 5'-TTGCCGTTGAAGCTGCTAACTACC-3' |
|  | Reversed | 5'-AATCCTGCTCTCCTCGCCTTCC-3' |
| miR-432-5p | Forward | 5′-AACGAGACGACAGAC-3′ |
|  | Reversed | 5′-CTTGGAGTAGGTCATTGGGT-3′ |
| U6 | Forward | 5’-GTGCTCGCTTCGGCAGCACATATAC-3' |
| 　 | Reversed | 5'-AAAATATGGAACGCTTCACGAATTTGC-3' |

Supplementary Table 3: The antibodies, recombinant proteins, ELISA kits and drugs used in this study.

|  |  |  |
| --- | --- | --- |
| **Antibody, recombinant protein and drug** | **Company** | **Cat No** |
| Anti-GAPDH | Abcam | ab181603 |
| Anti-E-cadherin | Abcam | ab227639 |
| Anti-Vimentin | Abcam | ab16700 |
| Anti-PD-L1 | Abcam | ab205921 |
| 7-AAD Viability Staining Solution | Biolegend | 420404 |
| APC anti-mouse CD14 | Biolegend | 123311 |
| APC/Cyanine7 anti-mouse/human CD11b | Biolegend | 101226 |
| FITC anti-mouse CD3 | Biolegend | 100203 |
| Alexa Fluor® 700 anti-mouse F4/80 | Biolegend | 123129 |
| PE/Cyanine7 anti-mouse CD11c | Biolegend | 117318 |
| Anti-Mouse NK1.1 Alexa Fluor®488 | Cedarlane | CL8994AF4 |
| Brilliant Violet 421™ anti-mouse CD163 | Biolegend | 155309 |
| Brilliant Violet 510™ anti-mouse CD4 | Biolegend | 100559 |
| Brilliant Violet 605™ anti-mouse CD8a | Biolegend | 100744 |
| Alexa Fluor® 647 anti-human/mouse Granzyme B | Biolegend | 515405 |
| PE/Cyanine7 anti-mouse IFN-γ | Biolegend | 505826 |
| PerCP anti-mouse CD45 | Biolegend | 103130 |
| PE/Cyanine7 anti-human CD163 | Biolegend | 326514 |
| APC anti-mouse CD274 (B7-H1, PD-L1) | Biolegend | 124311 |
| Anti-Mouse CD32/CD16, Purified (rat IgG2a) | Biolegend | MCD03216-M |
| Hu Fc Block Pure Fc | BD Pharmingen | 564219 |
| Ultra-LEAF™ Purified anti-human CD3 Antibody | Biolegend | 300332 |
| Ultra-LEAF purified anti-human CD28 Antibody | Biolegend | 302923 |
| Human Complement C5a ELISA kit | Abcam | ab193695 |
| Mouse Complement C5a ELISA kit | Abcam | ab193718 |
| Human Granzyme B ELISA kit | Abcam | ab235635 |
| Human IFN gamma ELISA kit | Abcam | ab46025 |
| Mouse PD-L1 ELISA kit | Genie | MOFI00247 |
| PMX-53 | MedChemExpress | HY-106178 |
| Recombinant Human C5a | Peprotech | 300-70 |
| Atezolizumab | Selleck | A2004 |
| Durvalumab | Selleck | A2013  |
| RMP1-14 | Bioxcell | BP0146 |
| IgG | Abcam | ab172730 |

Supplementary Table 4: Target sequences of shcircASCC3

|  |  |
| --- | --- |
| **shRNA**  | **Target sequence** |
| shcircASCC3-1 | GACTTAGATGAGCTATTTGAA |
| shcircASCC3-2 | AGATGAGCTATTTGAACTGCT |
| shcircASCC3-3 | AGACTTAGATGAGCTATTTGA |

Supplementary Table 5: the probe sequence of circASCC3 and miR-432-5p

|  |  |
| --- | --- |
| **Target** | **Sequence** |
| circASCC3 | 5’-ATTTGAACTGCTGGGACCTG-3’ |
| miR-432-5p | 5′-CCACCCAATGACCTACTCCAAGA-3′ |