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| **Supplementary Table 1. Summary of primary antibodies used in Western Blot, Immunochemistry,** **immunofluorescence, Co-immunoprecipitation and Chromatin immunoprecipitation** |
| Antibody | Concentration | Cat. No. | Company |
| for WB | for IHC | for IF | for co-IP | for CHIP |
| STOML2 | / | 1: 200 | / | / | / | HPA062016 | Human Protein Atlas |
| STOML2 | 1:1000 | / | 1:200 | / | / | #73956 | Cell Signaling Technology |
| STOML2 | / | / | / | 1:50 | / | ab191884 | Abcam |
| Ki-67 | / | 1: 100 | / | / | / | ab16667 | Abcam |
| PINK1 | 1:1000 | / | 1:100 | / | / | ab216144 | Abcam |
| Parkin | 1:1000 | / | / | / | / | #4211 | Cell Signaling Technology |
| p62 | 1:1000 | 1:100 | / | / | / | ab56416 | Abcam |
| LC3B | 1:1000 | / | 1:200 | / | / | #2775 | Cell Signaling Technology |
| COXIV | 1:1000 | / | 1:150 | / | / | #4844 | Abcam |
| Tim23 | 1:1000 | / | / | / | / | 11123-1-AP | Proteintech |
| VDAC1 | 1:1000 | / | / | / | / | 10866-1-AP | Proteintech |
| HIF1α | 1:1000 | / | / | / | 1:100 | # 36169 | Cell Signaling Technology |
| GAPDH | 1:3000 | / | / | / | / | ab9484 | Abcam |
| TOMM20 | 1:1000 | / | / | / | / | WH0009804M1 | Sigma-Aldich |
| COXIV | / | / | 1:200 | / | / | # 11967 | Cell Signaling Technology |
| LAMP1 | / | / | 1:200 | / | / | #4844 | Cell Signaling Technology |
| PINK1 | / | / | 1:100 | / | / | ab186303 | Abcam |
| Flag | 1:1000 | / | / | 1:50 | / | F7425 | Sigma-Aldich |
| normal rat IgG | / | / | / | 1:50 | / | I5006 | Sigma-Aldich |
| Anti-rabbit IgG (H+L) (DyLight™ 680 Conjugate) | 1:15000 | / | / | / | / | #5366 | Cell Signaling Technology |
| Anti-mouse IgG (H+L) (DyLight™ 800 4X PEG Conjugate) | 1:15000 | / | / | / | / | #5257 | Cell Signaling Technology |
| Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) | / | / | 1:500 | / | / | ab150077 | Abcam |
| Goat Anti-Mouse IgG H&L (Alexa Fluor® 647) | / | / | 1:500 | / | / | ab150115 | Abcam |
| Abbreviation: Co-IP, immunoprecipitation; WB, western blot; IHC, immunohistochemistry; IF, immunofluorescence; ChIP, Chromatin immunoprecipitation. |
| Note: Cambridge, UK; Cell signaling Technology, Danvers, MA, USA; Proteintech Group, Inc, Pearl Street, Rosemont, USA; Sigma-Aldrich, Spruce Street, St. Louis, USA; Life Technology, Staley Road Grand Island, NY, USA. |

**Supplementary Table 2. Primers and target sequences in this study**

|  |  |  |
| --- | --- | --- |
| Identifier | Forward (5’-3’) | Reverse (5’-3’) |
| **For qPCR** |
| STOML2 | CCCGCTGCAAGTATGATGG | GTTCCTGAGACGCTGTTC |
| PINK1 | CCGCTGCAAGTATGATGG | GTTCCTGAGACGCTGTTC |
| GAPDH | TGCGAGTACTCAACACCAACA | GCATATCTTCGGCCCACA |
| **For STOML2-Knockdown** |
| STOML2 sh#1 | CCGGGATGCAAGTCTTGATGAGGAACTCGAGTTCCTCATCAAGACTTGCATCTTTTTTG | AATTCAAAAAGATGCAAGTCTTGATGAGGAACTCGAGTTCCTCATCAAGACTTGCATC |
| STOML2 sh#2 | CCGGCCGTTATGAGATCAAGGATATCTCGAGATATCCTTGATCTCATAACGGTTTTTTG | AATTCAAAAACCGTTATGAGATCAAGGATATCTCGAGATATCCTTGATCTCATAACGG |
| **For ChIP assay** |
| HRE | CGATACTACGCTCTGGTG | AAGGCTGTGGTTGTTCTG |

Abbreviation: qPCR, quantitative real-time polymerase chain reaction; ChIP, Chromatin immunoprecipitation

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| **Supplementary Table 3. Relationship between low and high STOML2 and Clinicopathologic features**  |
| Variables |  STOML2 Level  |   |
| High (*n* =105) | Low (*n* =122) |  |
| No. of patients | % | No. of patients | % |  ***P***value |
| **Age**, yrsa |  52.7 | 51.9 | 0.577 |
| **Sex** |  |  |  |  | 0.573 |
|  Male | 93 | 88.6 | 105 | 86.1 |  |
|  Female | 12 | 11.4 | 17 | 13.9 |  |
| **Hepatitis B history** | 　 | 　 | 　 | 0.520 |
|  Yes | 89 | 84.8 | 107 | 87.7 | 　 |
|  No | 16 | 15.2 | 15 | 12.3 | 　 |
| **HBeAg** |  |  |  |  | 0.797 |
|  Positive | 37 | 35.2 | 45 | 36.9 |  |
|  Negative | 68 | 64.8 | 77 | 63.1 |  |
| **AFP**,U/La |  6793 | 4450 | 0.215 |
| **ALT**, U/La |  60.3 | 49.8 | 0.242 |
| **Liver cirrhosis** | 　 | 　 | 　 | 0.865 |
|  Yes | 85 | 81.0 | 100 | 82.0 | 　 |
|  No | 20 | 19.0 | 22 | 18.0 | 　 |
| **Microvascular invasion** |  |  |  |  | 0.005 |
|  Yes | 54 | 51.4 | 40 | 32.8 |  |
|  No | 51 | 48.6 | 82 | 67.2 | 　 |
| **Tumor size**a, cm  |  5.9  | 5.3 | 0.244  |
| **Tumor number** |  |  | 0.848 |
|  Single | 90 | 86.7 | 106 | 86.1 |  |
|  Multiple | 15 | 13.3 | 16 | 13.9 |  |
| **Tumor encapsulation** | 　 | 　 | 0.690 |
|  Complete | 50 | 47.6 | 62 | 50.8 | 　 |
|  No | 55 | 52.4 | 60 | 49.1 | 　 |
| **Tumor differentiation** |  |  |  | 0.312 |  |
|  High | 23 | 21.9 | 20 | 16.4 |  |
|  Low | 82 | 78.1 | 102 | 83.6 | 　 |
| **TNM stage** |  |  | 0.070 |
| Ⅰ | 49 | 46.7 | 72 | 59.0 |  |
| Ⅱ | 37 | 35.2 | 39 | 32.0 |  |
| Ⅲ | 19 | 18.1 | 11 | 9.0 | 　 |

a Independent-samples *t*-test, Abbreviations: AFP: alpha fetoprotein; HBeAg: hepatitis B e antigen; TNM, Tumor-Node-Metastasis;