## SUPPLEMENTARY TABLES

**Supplementary Table 1.** Cox regression analysis of 72 differentially expressed autophagy-related genes in glioblastoma patients

| Gene     | Univariate analysis | Multivariate analysis |
|----------|---------------------|-----------------------|
|          | HR                  | z                     | pvalue   | HR                  | z                     | pvalue   |
| CXCR4    | 1.12752231          | 1.36150731            | 0.1735342| -                   | -                     | -        |
| MAP1LC3C | 1.09214902          | 1.51592606            | 0.12953805| -                   | -                     | -        |
| IL24     | 1.0905155           | 1.02655736            | 0.30462894| -                   | -                     | -        |
| CASP1    | 1.09631446          | 1.05763629            | 0.29022129| -                   | -                     | -        |
| APOL1    | 1.03878724          | 0.56953867            | 0.56899063| -                   | -                     | -        |
| PARK2    | 1.1116884           | 1.05253107            | 0.29255596| -                   | -                     | -        |
| GRID1    | 0.96610039          | -0.4636662            | 0.64288692| -                   | -                     | -        |
| RB1CC1   | 1.05469152          | 0.4335599             | 0.66460806| -                   | -                     | -        |
| WDFY3    | 0.97232968          | -0.2591414            | 0.79552617| -                   | -                     | -        |
| EGFR     | 1.15572387          | 1.78927734            | 0.07357016| -                   | -                     | -        |
| ERBB2    | 1.15521018          | 0.41012589            | 0.80228957| -                   | -                     | -        |
| NRG3     | 1.10542657          | 0.21558467            | 0.82305292| -                   | -                     | -        |
| HDAC1    | 1.05081003          | -0.2503851            | 0.82305292| -                   | -                     | -        |
| MAPK8IP1 | 1.27332956          | 2.31674033            | 0.02051788| -                   | -                     | -        |
| RPTOR    | 1.01501452          | 0.4335599             | 0.66460806| -                   | -                     | -        |
| AMBRA1   | 1.15572387          | 1.78927734            | 0.07357016| -                   | -                     | -        |
| SERPIN1A| 1.11604409          | 1.62702842            | 0.10373106| -                   | -                     | -        |
| MAPK3    | 1.19157365          | 1.61187975            | 0.10698795| -                   | -                     | -        |
| DAPK2    | 1.16347952          | 2.53110692            | 0.01137032| -                   | -                     | -        |
| IFNG     | 1.21783781          | 1.31300654            | 0.18910705| -                   | -                     | -        |
| PINK1    | 1.11048638          | 0.9324178             | 0.35112065| -                   | -                     | -        |
| ATG2B    | 1.02325887          | 0.21985061            | 0.82598751| -                   | -                     | -        |
| BIRC5    | 1.03313466          | 0.47552664            | 0.63441165| -                   | -                     | -        |
| CTSB     | 1.31560381          | 2.54009925            | 0.0110821| -                   | -                     | -        |
| ITGB1    | 1.19157365          | 1.61187975            | 0.10698795| -                   | -                     | -        |
| MAPK1    | 0.92472275          | -0.7449741            | 0.45628737| -                   | -                     | -        |
| IKBKB    | 1.08210872          | 0.59394047            | 0.57758593| -                   | -                     | -        |
| MAPK8    | 0.91317847          | -0.9090328            | 0.36333282| -                   | -                     | -        |
| PRKCB    | 0.93580259          | -0.8419977            | 0.39978924| -                   | -                     | -        |
| ULK1     | 1.16006405          | 1.17391162            | 0.24043043| -                   | -                     | -        |
| DRAM1    | 1.21266735          | 1.9069304             | 0.0565296| -                   | -                     | -        |
| FKBPI2   | 1.37459207          | 2.92057153            | 0.0034939| -                   | -                     | -        |
| GNB2L1   | 0.83523584          | -1.2999676            | 0.19361207| -                   | -                     | -        |
| MAPK3    | 1.12040281          | 0.81243541            | 0.41654183| -                   | -                     | -        |
| NRG1     | 1.14389011          | 2.74819125            | 0.0059925| 1.14157962          | 2.66231234          | 0.00776058|
| Gene   | Fold Change | P-value  | q-value | Fold Change | P-value  | q-value |
|--------|-------------|----------|---------|-------------|----------|---------|
| ITGA3  | 1.19112653  | 2.68707229 | 0.00720814 | 1.14941814 | 2.02128687 | 0.04325008 |
| VEGFA  | 1.08260766  | 1.50294174 | 0.13285407 | -            | -        | -       |
| MYC    | 0.9135298   | -1.0194185 | 0.30800432 | -            | -        | -       |
| ATG4A  | 1.05172571  | 0.34005326 | 0.73381642 | -            | -        | -       |
| CDKN1A | 1.10613952  | 1.36952825 | 0.17083421 | -            | -        | -       |
| GNAI3  | 0.9559024   | -0.2984975 | 0.76532347 | -            | -        | -       |
| FAS    | 1.16693931  | 1.89196524 | 0.05849561 | -            | -        | -       |
| PRKCD  | 1.16153179  | 1.51380892 | 0.03877741 | -            | -        | -       |
| TP73   | 2.02128687  | 0.04325008 | 0.04325008 | 0.04325008  | 0.04325008 |
| TMEM74 | 1.02652779  | 0.43315698 | 0.66490073 | -            | -        | -       |
| MAPK9  | 1.11804113  | 0.81646607 | 0.41423362 | -            | -        | -       |
| ITPR1  | 1.21698874  | 1.86942202 | 0.06156412 | -            | -        | -       |
| CX3CL1 | 0.99173975  | -0.0990952 | 0.92106272 | -            | -        | -       |
| IKBKE  | 1.0262973   | 1.64515448 | 0.0993796 | -            | -        | -       |
| HIF1A  | 0.93383523  | -0.7361781 | 0.4616223 | -            | -        | -       |
| TUSC1  | 1.12449246  | 1.6239062  | 0.10439583 | -            | -        | -       |
|ULK2    | 1.0903667   | 0.79924586 | 0.42414787 | -            | -        | -       |
| CAMKK2 | 1.01383881  | 0.71073959 | 0.47724562 | -            | -        | -       |
| CDKN2A | 0.96348157  | -1.178491 | 0.23860092 | -            | -        | -       |
| DAPK1  | 0.96689091  | -0.0375145 | 0.97007475 | -            | -        | -       |
| BAK1   | 0.93815456  | -0.4304121 | 0.66689588 | -            | -        | -       |
| NAMPT  | 1.12745712  | 1.8547772 | 0.06362805 | -            | -        | -       |
| TSC1   | 0.96762564  | -0.3495673 | 0.72666347 | -            | -        | -       |
| EIF4EBP1| 1.0262793   | 0.20731651 | 0.83576268 | -            | -        | -       |
| TP53   | 0.92835436  | -0.8075141 | 0.41937034 | -            | -        | -       |
| MAP1LC3A| 1.39894856  | 3.17692527 | 0.00148845 | 1.30823622  | 2.46357359 | 0.01375597 |
| CASP8  | 1.08199498  | 0.71583924 | 0.47409062 | -            | -        | -       |
| RGS19  | 1.21061651  | 1.30953568 | 0.19035296 | -            | -        | -       |
| CCR2   | 1.11426965  | 1.70918135 | 0.08741736 | -            | -        | -       |
| PRKAR1A| 1.1494814   | 1.06072757 | 0.28881373 | -            | -        | -       |
| GABARAPL1| 1.13059973  | 1.18350566 | 0.23608811 | -            | -        | -       |
| P4HB   | 1.35062977  | 2.14162036 | 0.03222404 | -            | -        | -       |
| PTK6   | 0.95966931  | -0.6245504 | 0.53226621 | -            | -        | -       |
| BAX    | 1.06447347  | 0.52869632 | 0.59701613 | -            | -        | -       |
| TP63   | 1.12260577  | 2.22352058 | 0.02618072 | -            | -        | -       |
Please browse Full Text version to see the data of Supplementary Tables 2 and 3.

**Supplementary Table 2.** GSEA reports for high ITGA3, MAP1LC3A, and NRG1 expression groups in TCGA-GBM cohort.

**Supplementary Table 3.** GSEA reports for ATG-based high-risk and low-risk group in TCGA-GBM cohort.