**Appendix A. Supplementary data**

**Figure S1.** (A) Cell viability of different cell lines treated with sorafenib (5 μmol/ml, 24 h), as determined using the MTT assay. (B) Western blotting was performed to measure levels of autophagy-related proteins in HepG2 cells treated with various concentrations of sorafenib. (C) The effect of sorafenib on relative green fluorescent LC3 puncta in HepG2 cells was evaluated using immunofluorescence. Data are expressed as mean ± SD of three independent experiments. The p-values represent comparisons between groups (\*\*\*P < 0.001).

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**Figure S2.** (A) The relative viability of HepG2 cells treated with sorafenib following treatment with Baf-A1 and ULK1 silencing was determined using the MTT assay. (B) Colony formation assay was performed to determine the proliferation ability of HepG2 cells co-transfected with miR-375 mimics and ATG14 and treated with sorafenib. (C) The levels of sorafenib-induced LC3 puncta were evaluated using immunofluorescence following treatment with miR-375 mimics in HepG2 cells.

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**Figure S3.** (A) The sensitivity of HepG2 cells co-transfected with miR-375 mimics and ATG14 to sorafenib was determined using the MTT assay. (B,C) Western blotting was used to determine the levels of the apoptosis-related proteins and autophagy-related proteins in HepG2 cells co-transfected with miR-375 mimics and ATG14 and treated with sorafenib.

**Supplementary Table 1.** The primer sequences used in this study.

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| Gene name | Forward primer | Reverse primer |
| miR-375 | 5’-CACAAAATTTGTTCGTTCGGCT-3’ | 5’-GTGCAGGGTCCGAGGT-3’ |
| miR-146b | 5’-TGACCCATCCTGGGCCTCAA-3’ | 5’-CCAGTGGGCAAGATGTGGGCC-3’ |
| miR-221 | 5’-CGCAGCTACATTGTCTGCTGG-3’ | 5’-GTGCAGGGTCCGAGGT-3’ |
| miR-99b | 5’-GCCGAGCACCCGTAGAACCG-3’ | 5’-CTCAACTGGTGTCGTGGA-3’ |
| ATG14 | 5’-AAAGACGGGTGTGAGAGACC-3’ | 5’-GGTGTCTCCGTTGTGATCGT-3’ |
| ATG7 | 5’-CAGTTTGCCCCTTTTAGTAGTGC-3’ | 5’-CCAGCCGATACTCGTTCAGC-3’ |
| ATG10 | 5’-AATGGAAGGGCGACAGTGAG -3’ | 5’-AGTCCTACACGCCACTTGAC-3’ |
| ATG2B | 5’-AACTGCTGACGAATCCTCAGG -3’ | 5’-GGGGTTCCAGCTAGGTGAGA-3’ |
| RNU6B | 5’-GCTTCGGCAGCACATATACTAT-3’ | 5’-CGCTTCACGAATGCCTCTCAT-3’ |
| GAPDH | 5’-GGTCTCCTCTGACTTCAACA-3’ | 5’-GTGAGGGTCTCTCTCTTCCT-3’ |