

1 **Figure S1. OXI displays no obvious side effects on mice.** (A) H&E staining of the
2 kidney, liver, lung, spleen and heart in mice treated with OXI (50 mg/kg/day) or
3 vehicle. Scale bar: 50 μ m.

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5 **Figure S2. OXI triggers autophagy in CRC cells.** (A) Time course detection of LC3
6 levels in HCT116 and RKO cells treated with OXI (30 μ M) for 6, 12, 18, 24 h by
7 western blotting analysis. (B) Western blotting analysis of LC3 expression in CRC
8 cells transfected with *siBECN1* or *siScramble* and treated with OXI (30 μ M). (C-E)
9 Immunofluorescent analysis of endogenous LC3B puncta in HCT116 and RKO cells
10 transfected with *siATG5* and treated with OXI (30 μ M), and quantification of LC3
11 puncta. Scale bars, 10 μ m. (F) Co-IP analysis of the interaction between Bcl2 and
12 Beclin1 in HCT116 and RKO cells treated with OXI (30 μ M). All data are means \pm
13 SD.

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15 **Figure S3. OXI promotes the initiation of autophagy by inhibiting Akt/mTOR**
16 **axis.**

17 (A) The phosphorylated mTOR, Akt, 4EBP1 and p70S6K were detected by western
18 blotting in cells treated with OXI for 24 h. (B) HCT116 and RKO cells were
19 transiently transfected with CA-Akt and treated with OXI (30 μ M). Western blotting
20 was used to examine the protein levels of p-Akt and lipidated LC3. (C-D) HCT116
21 and RKO cells were treated as in B, and immunofluorescent analysis of LC3 puncta
22 were performed. All data are means \pm SD.

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24 **Figure S4. Downregulation of PRDX2 triggers autophagy in CRC cells.** (A)
25 Immunofluorescent analysis of LC3B puncta in HCT116 and RKO cells transfected
26 with HA-PRDX2 plasmids and treated with OXI. Scale bars, 10 μ m. (B) Endogenous
27 LC3 puncta in RKO and HCT116 cells transfected with *siPRDX2* for 48 h. Scale bars,
28 10 μ m. (C) The protein levels of PRDX2 and LC3 in HCT116 and RKO cells
29 transfected with *siPRDX2* for 48 h. All data are means \pm SD.

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31 **Figure S5. OXI enhances the anti-CRC efficacy of oxaliplatin.** (A) Cell viability of
32 HCT116 and RKO cells treated with the different concentrations of OXI and
33 oxaliplatin for 24 h. (B-C) The colony formation assay of HCT116 and RKO cells
34 treated with OXI (30 μ M) in combination with oxaliplatin (10 μ M). All data are
35 means \pm SD.

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Figure S1. OXI displays no obvious side effects on mice.

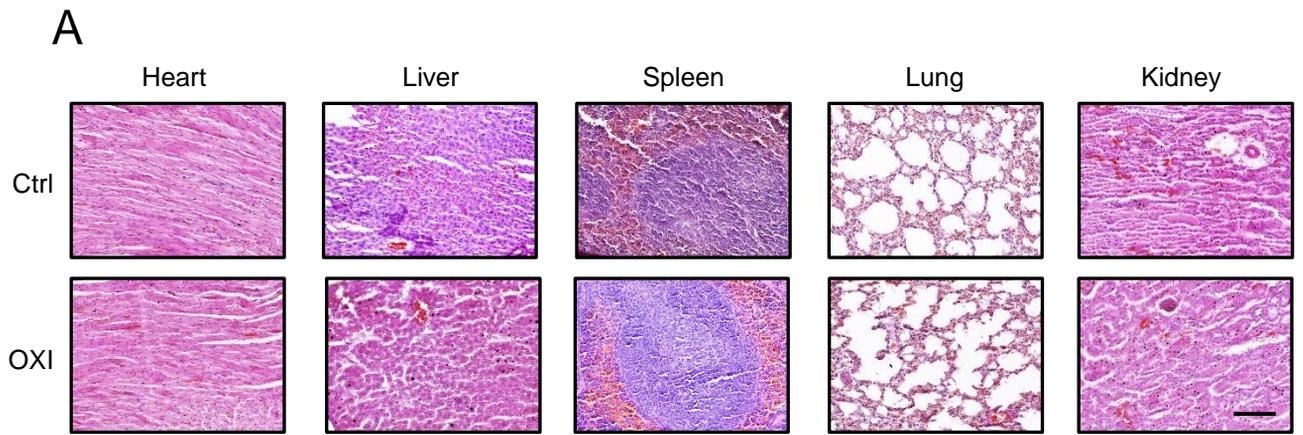


Figure S2. OXI triggers autophagy in CRC cells.

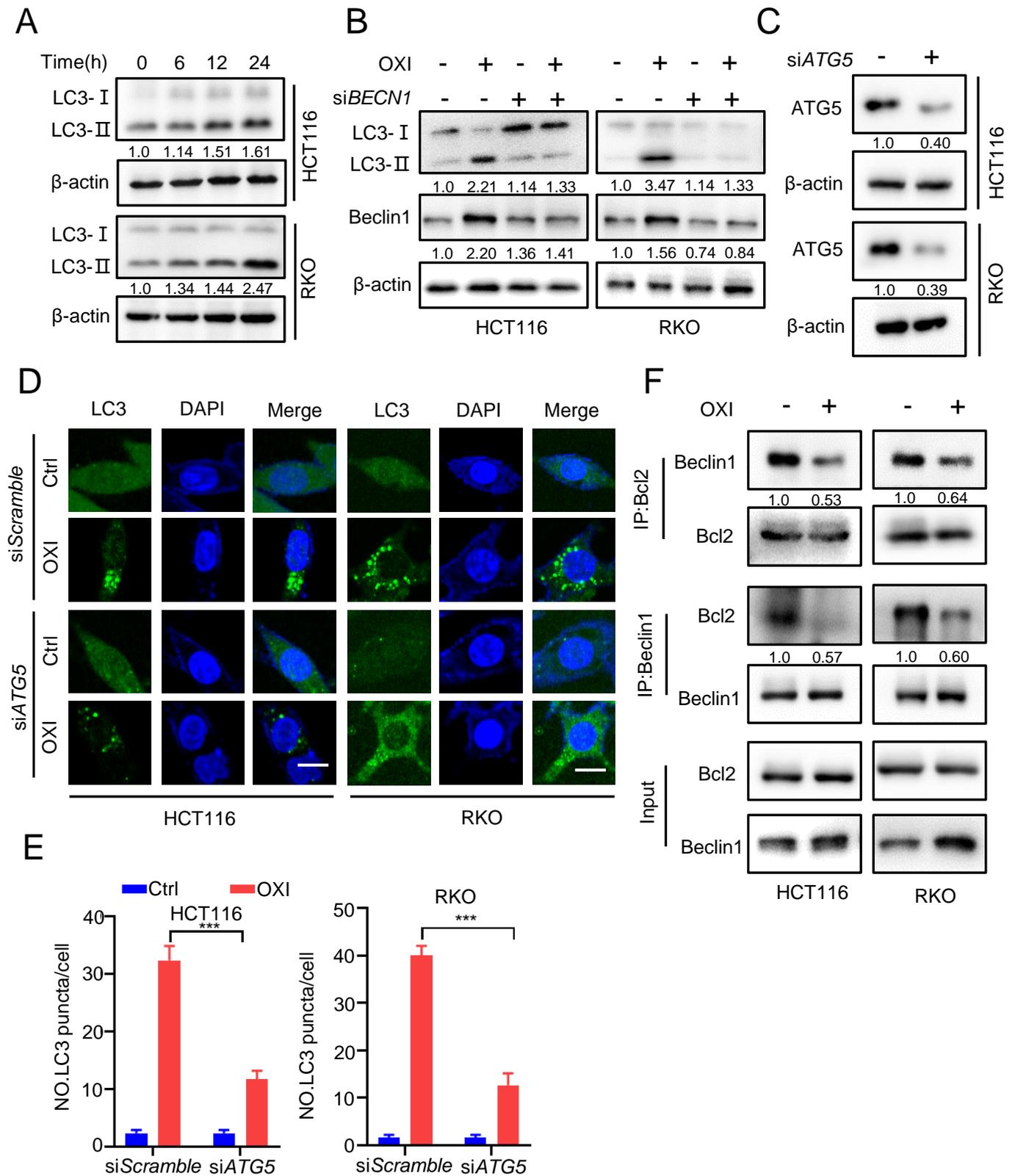


Figure S3. OXI promotes the initiation of autophagy by inhibiting Akt/mTOR axis.

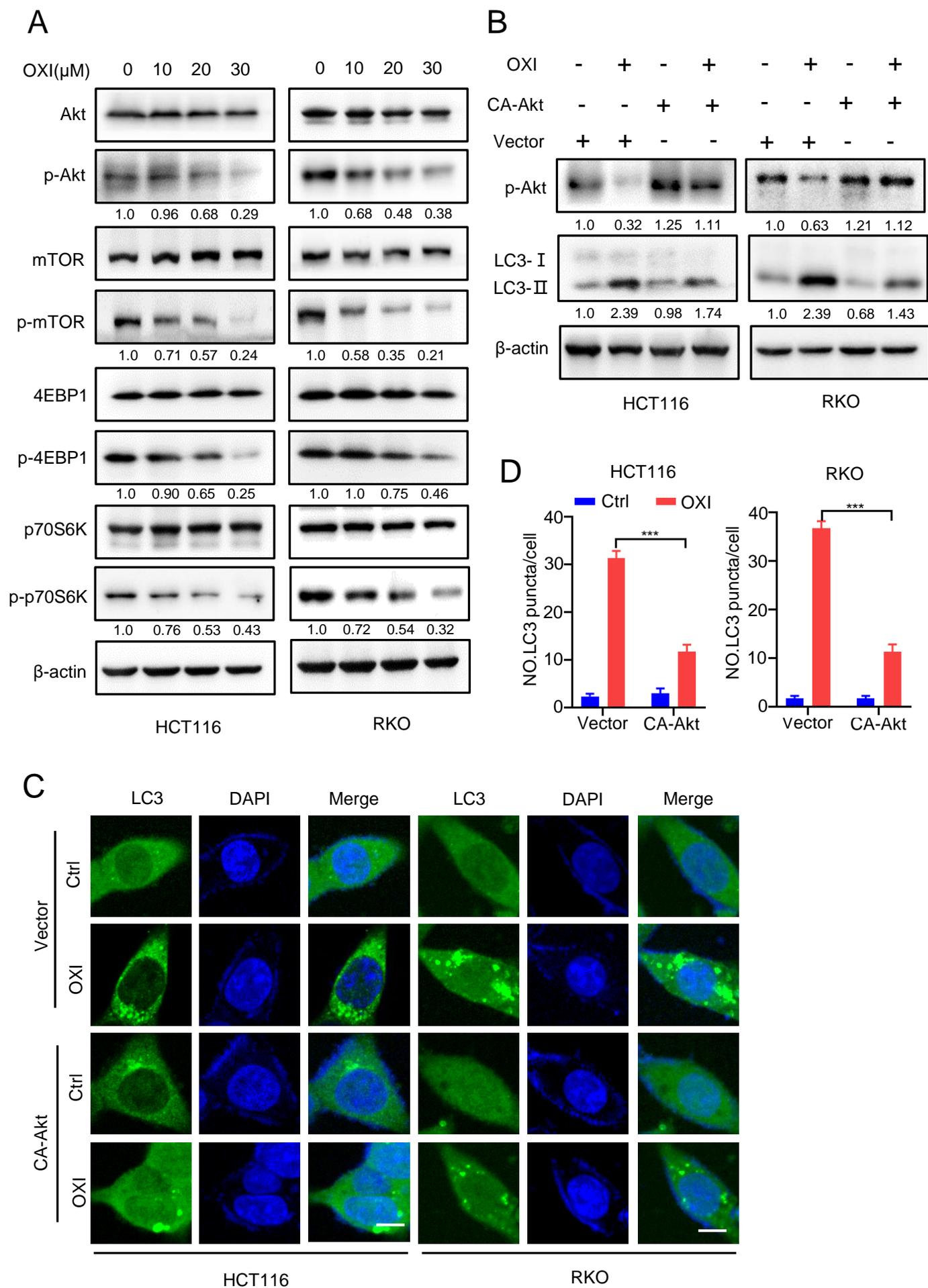


Figure S4. Downregulation of PRDX2 triggers autophagy in CRC cells.

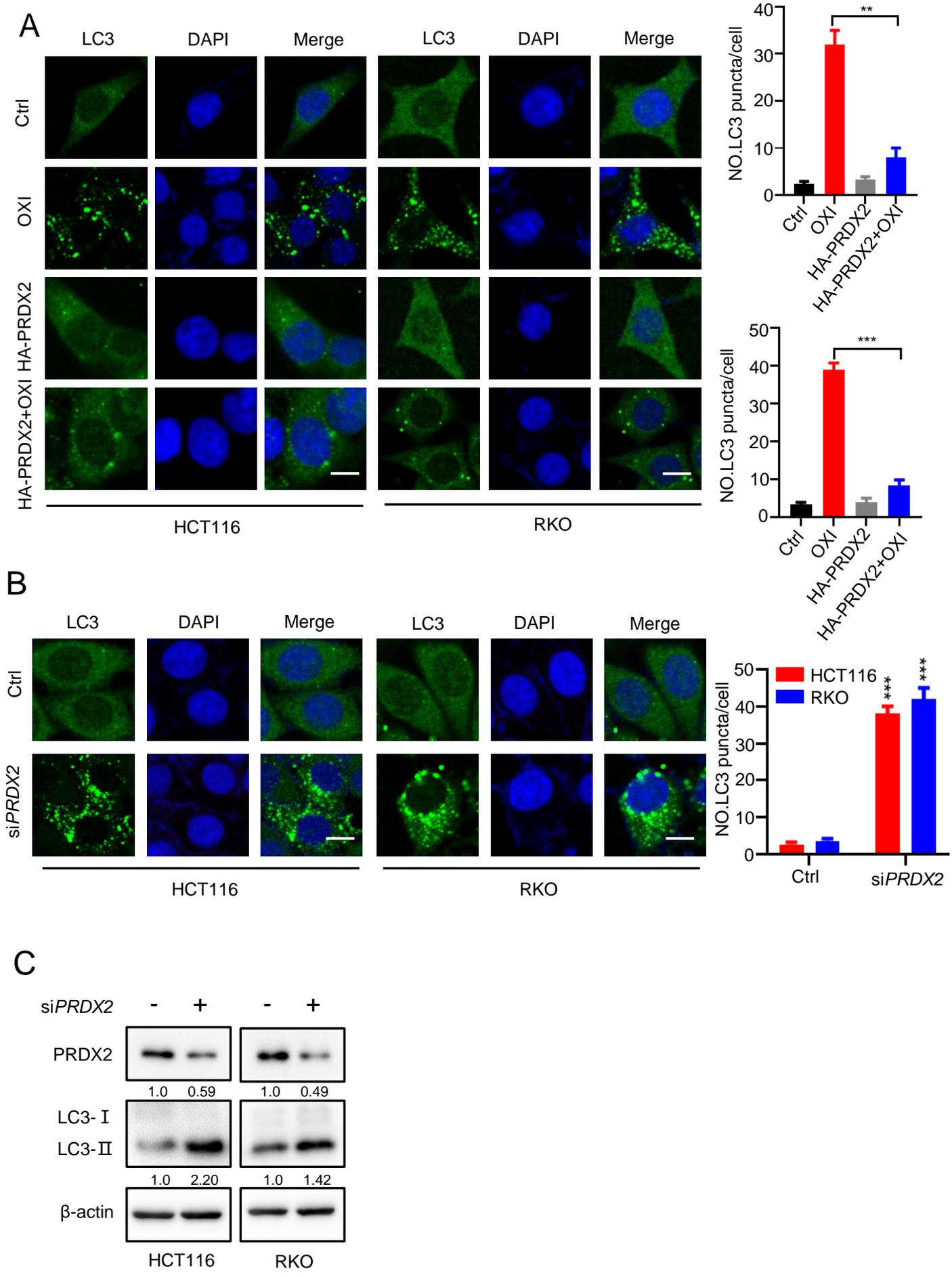


Figure S5. OXI enhances the anti-CRC efficacy of oxaliplatin.

