

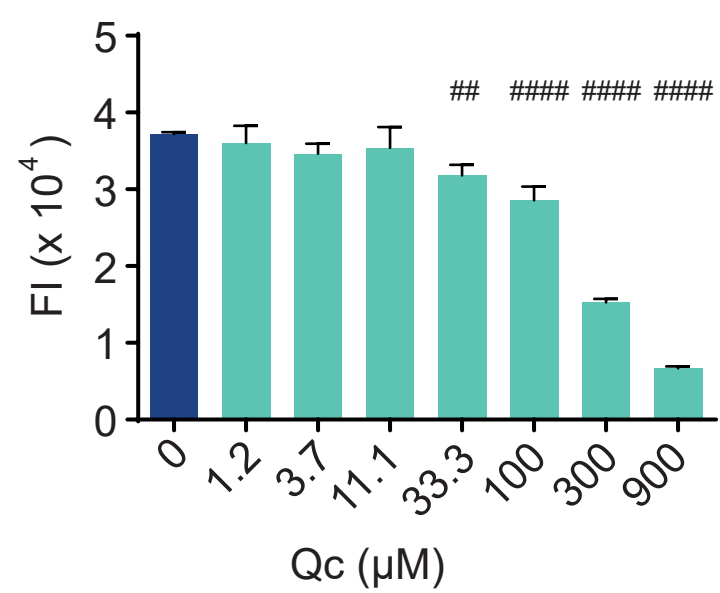
# **Supplementary material**

## **Quercetin's dual mode of action to counteract the Sp1-miR-27a axis in colorectal cancer cells**

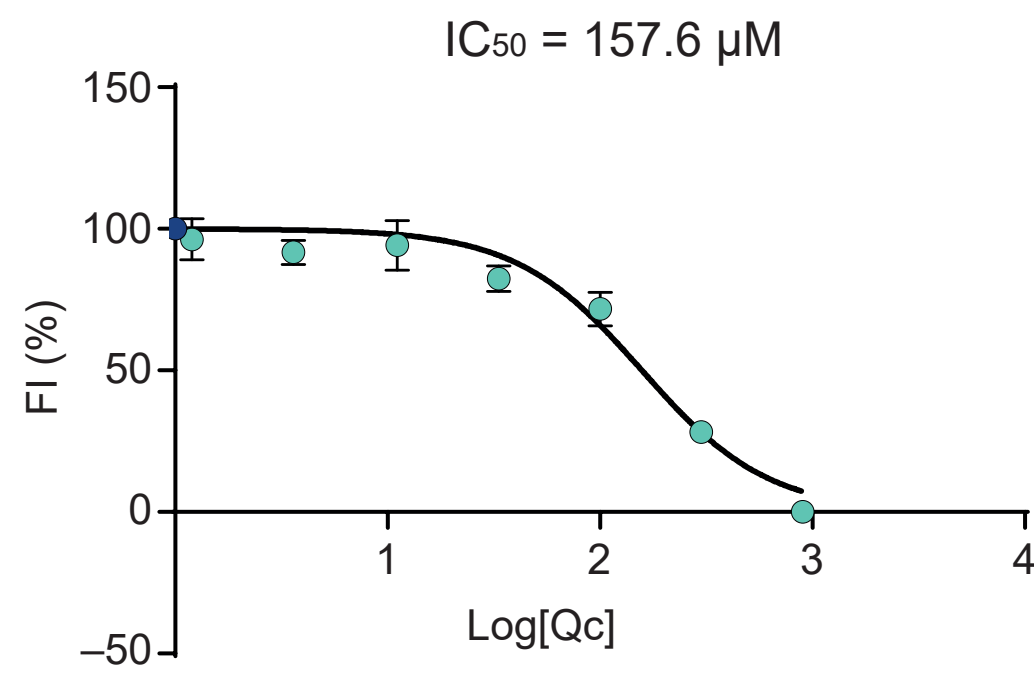
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Supplementary Figure S1

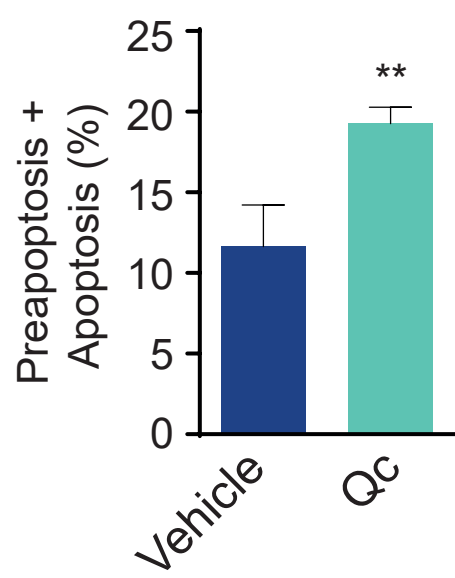
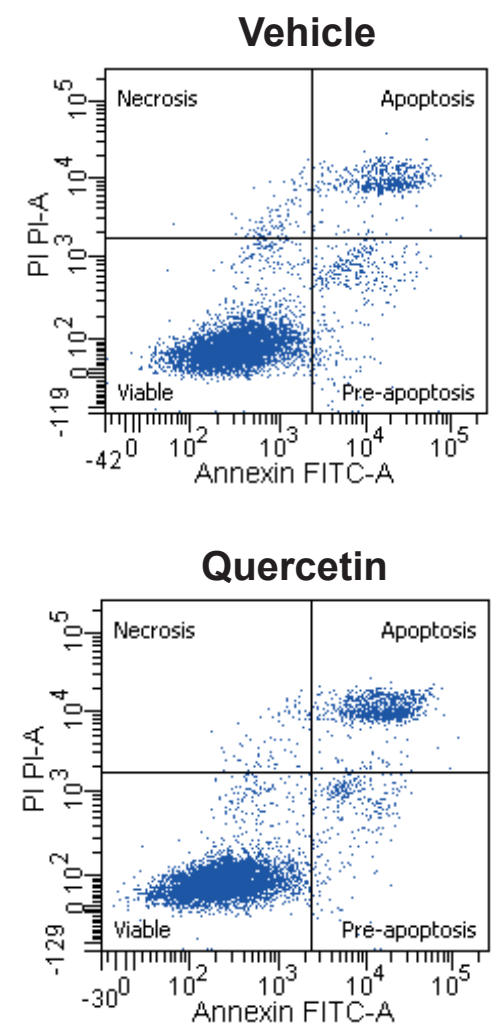
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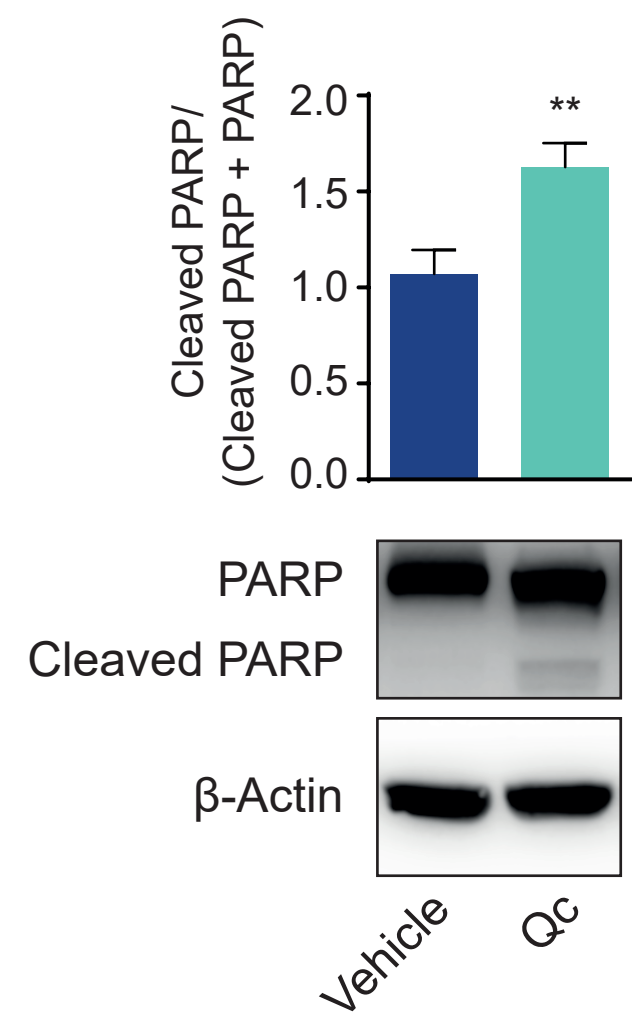
B



C



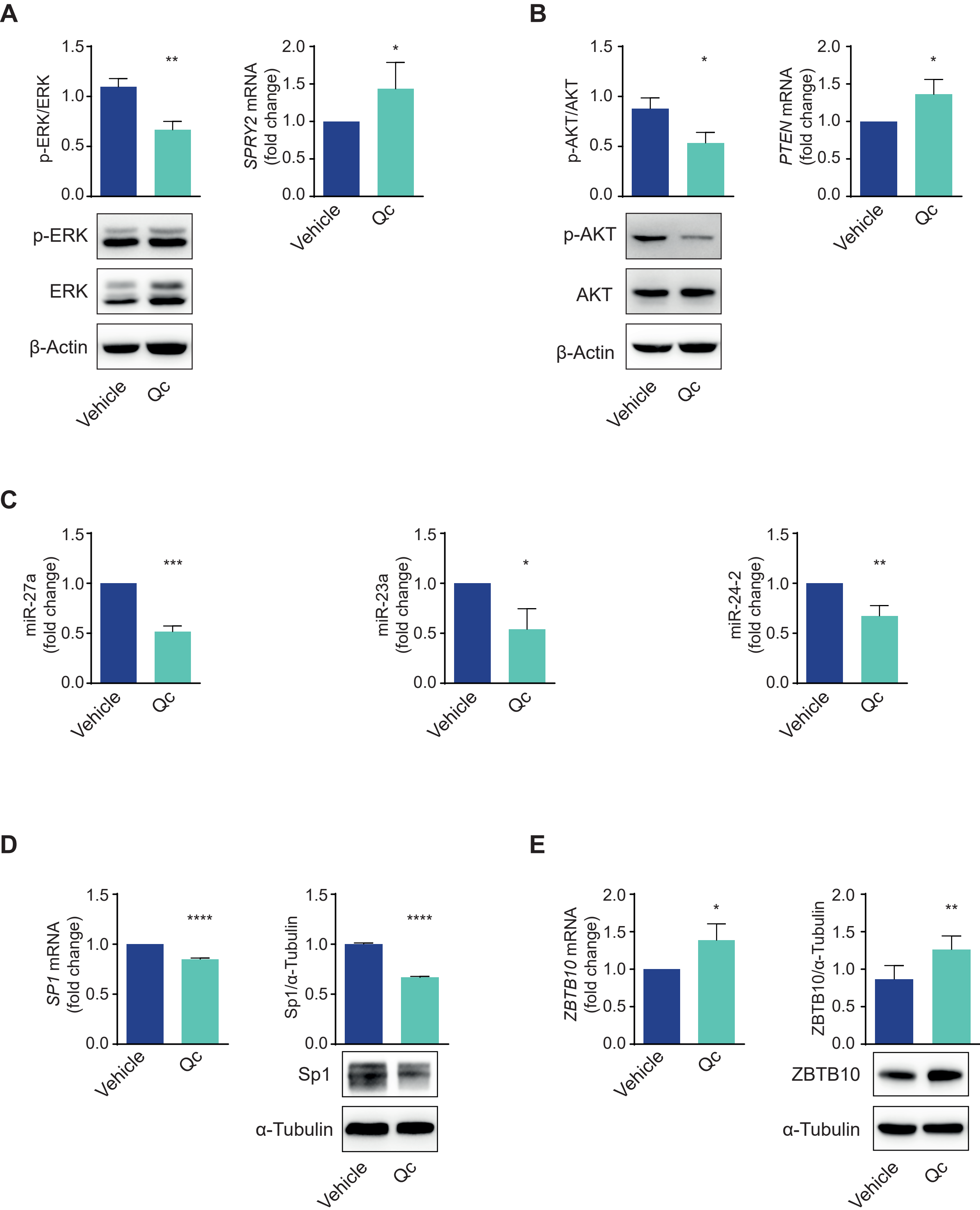
D



Supplementary Figure S1. Quercetin influences viability and apoptosis of HT-29 CRC cells

(A) Cell viability of HT-29 cells treated with increasing doses of Qc (from 0 to 900 μM) for 24 h assessed by FI. (B) Calculation of IC<sub>50</sub> value in HT-29 cells treated with Qc as in (A). (C) A flow cytometry analysis of HT-29 cells treated with 150 μM Qc for 24 h and assayed with the annexin V/propidium iodide test. The histogram reports the percentages corresponding to the sum of pre and apoptotic cells. (D) A western blot analysis of the cleaved form of PARP normalized to the total form in HT-29 cells treated as in (C) and referred to vehicle-treated cells. β-Actin is shown as loading control. Statistical significance is considered when ## p < 0.01, and #### p < 0.0001 (ANOVA with Dunnett's post-test) or \*\* p < 0.01 (t-test).

Supplementary Figure S2



**Supplementary Figure s2. Quercetin influences the same pathways observed/studied in HCT116 cells. (A)** A western blot analysis of ERK phosphorylation (left panel) and a qRT-PCR of *SPRY2* (right panel) in HT-29 cells treated with 150 μM Qc for 24 h with respect to vehicle treated cells. **(B)** A western blot analysis of AKT phosphorylation (left panel) and qRT-PCR of *PTEN* (right panel) in HT-29 cells treated as in (A) compared to vehicle-treated cells. **(C)** a qRT-PCR of miR-27a, miR-23a, and miR24-2 in HT-29 cells treated as in (A) and compared to vehicle-treated cells. A western blot (left panel) and a qRT-PCR (right panel) analysis of **(D)** Sp1 and **(E)** ZBTB10 in HT-29 cells treated as above with respect to vehicle-treated cells.

Statistical significance is considered when \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ , and \*\*\*\*  $< 0.0001$  (t-test).