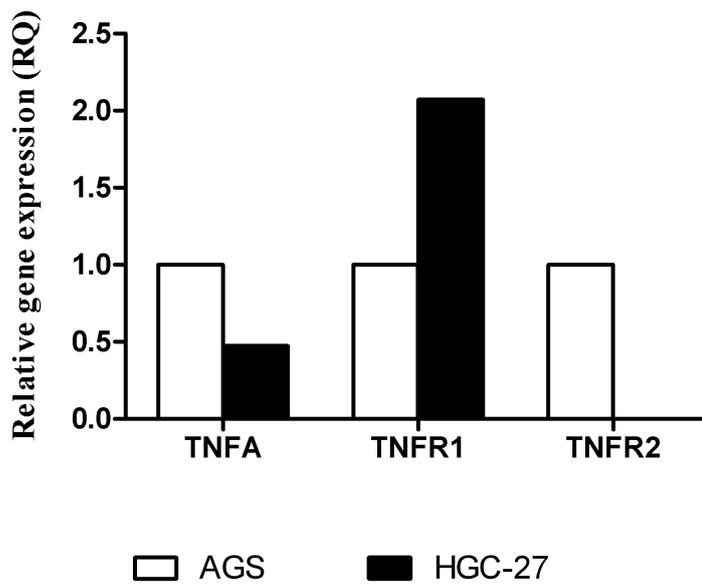
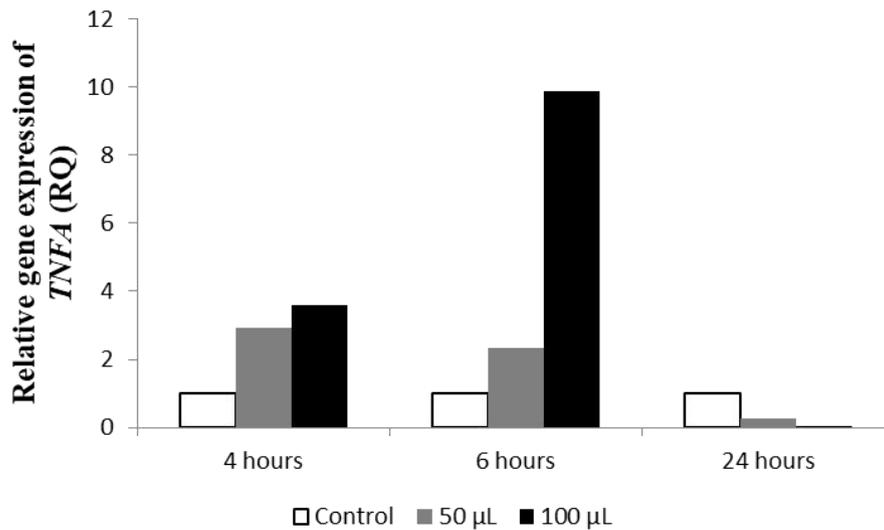


Supplementary materials



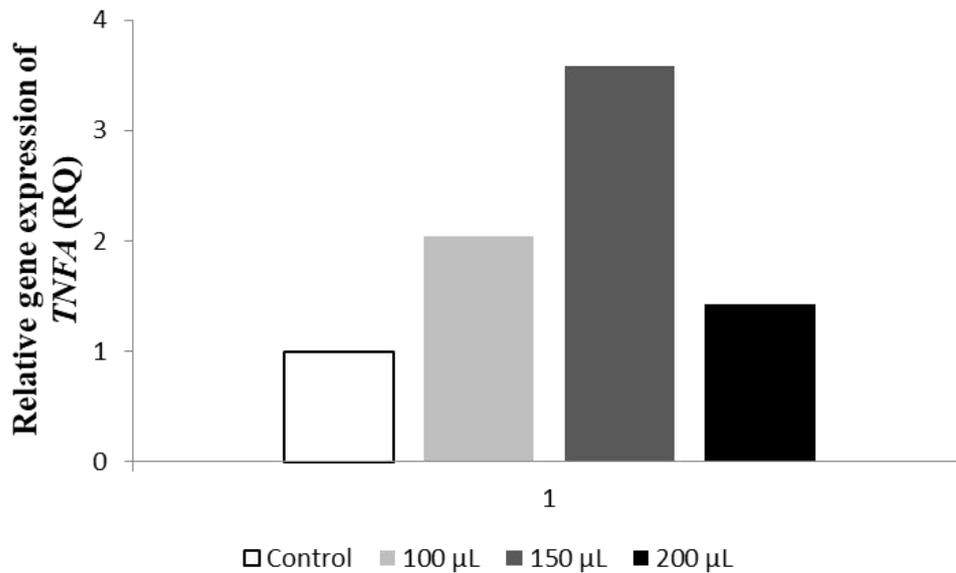
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Supplementary Figure 1 Relative expression of *TNFA*, *TNFR1* and *TNFR2* mRNA in AGS and HGC-27 gastric cancer cell lines. The graph shows that both cell lines express *TNFA* and *TNFR1* mRNA, whereas *TNFR2* expression was very low in the HGC-27 (RQ = 0.0001) relative to AGS cell line (RQ = 1.0). *ACTB* and *GAPDH* were used for normalization of mRNA quantification.



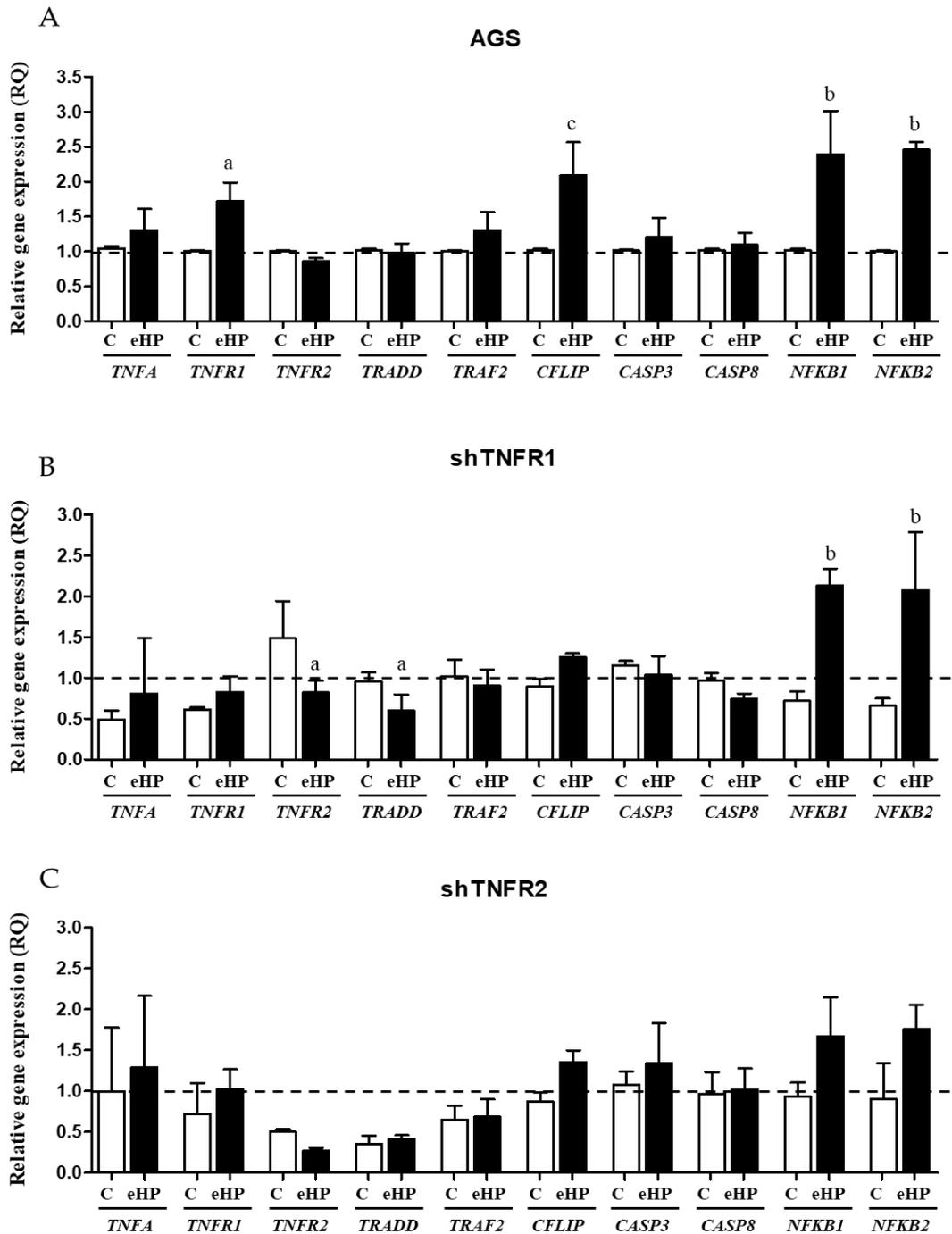
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Supplementary Figure 2 Relative gene expression of *TNFA* in the AGS cell line after treatment with *H. pylori* extract. After the incubation time of 4, 6 and 24 hours and in the *H. pylori* extract (eHP) volumes of 50 and 100 µL, *TNFA* expression was higher for the eHP volume of 100 µL with 6 hours incubation (RQ = 9.56). For 24 hours treatment, *TNFA* expression was less than one. From these data, the incubation time of 6 hours was chosen. *ACTB* and *GAPDH* were used for normalization of mRNA quantification. Control was AGS cell line, maintained with complete culture medium added with water in the same volume used in eHP.



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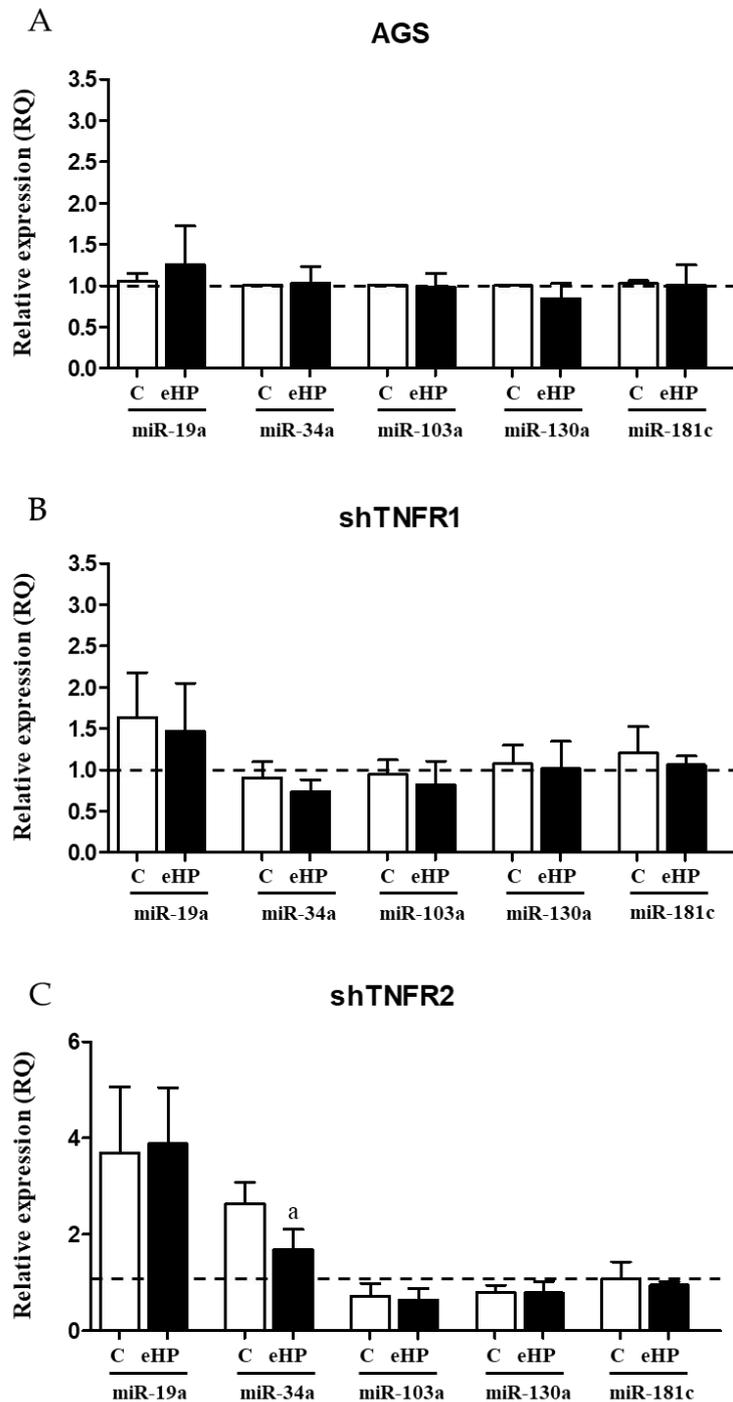
Supplementary Figure 3 Relative gene expression of TNFA in the AGS cell line after treatment with *H. pylori* extract. After the incubation time of 6 hours and in the volumes of 100, 150 and 200 µL the data show a progressive increase in TNFA expression for the eHP volumes of 100 (RQ = 2.04) and 150 µL (RQ = 3.59) compared to control. Reduced expression of TNFA was observed in the treatment with 200 µL of eHP (RQ = 1.42). *ACTB* and *GAPDH* were used for normalization of mRNA quantification. Control was AGS cell line maintained with complete culture medium added, with water in the same volume used in eHP.



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Supplementary Figure 4 Relative expression of TNF- α signaling pathway genes. Expression levels in non-silenced AGS, downregulated AGS for TNFR1 (shTNFR1) and downregulated AGS for TNFR2 (shTNFR2) comparing the conditions without treatment (control-C) and treated with extract of *H. pylori* (eHP). A: Expression levels in non-silenced AGS; B: Downregulated AGS for TNFR1 (shTNFR1); C: Downregulated AGS for TNFR2 (shTNFR2). Bars

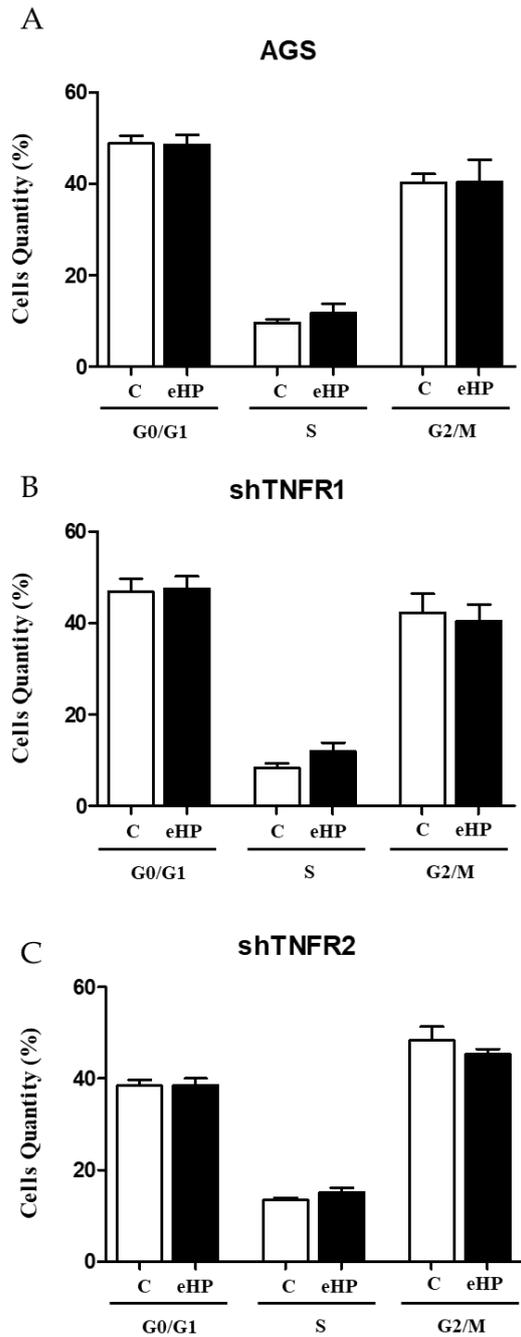
represent the mean \pm SD from three independent events. Dotted line indicates relative quantification: RQ = 1.0. Statistically significant difference: ^a $P \leq 0.05$; ^b $P \leq 0.01$; ^c $P \leq 0.001$.



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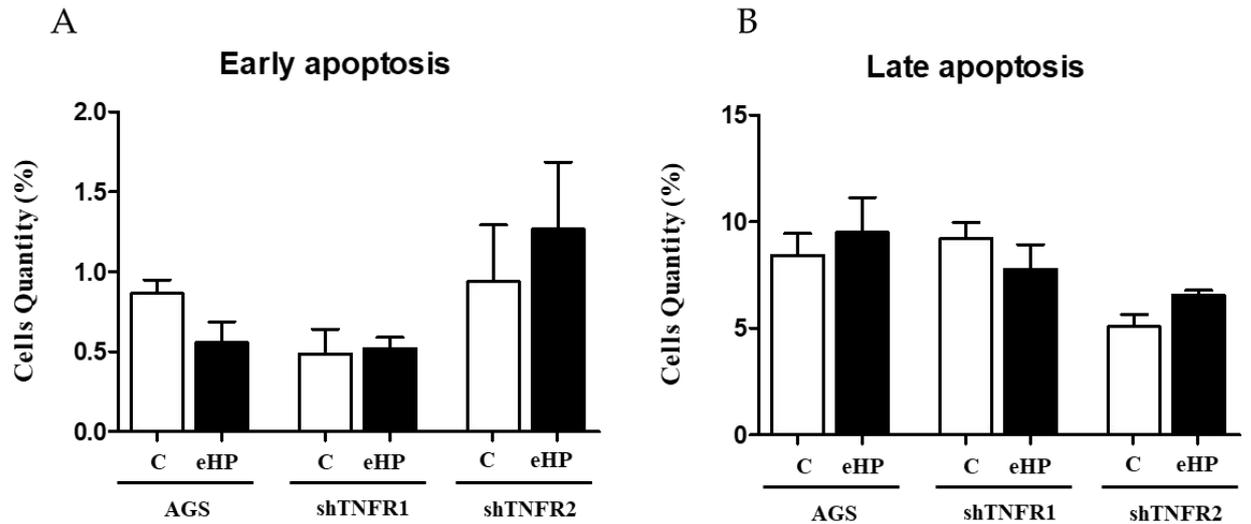
Supplementary Figure 5 Relative expression of miRNAs miR-19a, miR-34a, miR-103a, miR-130a and miR-181c. Expression levels in non-silenced AGS, downregulated AGS for TNFR1 (shTNFR1) and downregulated AGS for TNFR2 (shTNFR2) comparing the conditions without treatment (control-C) and treated with extract of *H. pylori* (eHP). A: Expression levels in non-silenced AGS; B: Downregulated AGS for TNFR1 (shTNFR1); C: Downregulated AGS for TNFR2

(shTNFR2). Bars represent the mean \pm SD from three independent events. Dotted line indicates relative quantification: RQ = 1.0. Statistically significant difference: $^aP \leq 0.05$.



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Supplementary Figure 6 Cell cycle distribution analysis. Number of cells in the G0/G1, S and G2/M phases of the cell cycle in non-silenced AGS, downregulated AGS for TNFR1 (shTNFR1) and downregulated AGS for TNFR2 (shTNFR2) comparing the conditions without treatment (control-C) and treated with extract of *H. pylori* (eHP). A: cell cycle in non-silenced AGS; B: Downregulated AGS for TNFR1 (shTNFR1); C: Downregulated AGS for TNFR2 (shTNFR2). Bars represent the mean \pm SD from three independent events.



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Supplementary Figure 7 Apoptosis distribution analysis. Number of cells in the early apoptosis and late apoptosis in non-silenced AGS, downregulated AGS for TNFR1 (shTNFR1) and downregulated AGS for TNFR2 (shTNFR2) comparing the conditions without treatment (control-C) and treated with extract of *H. pylori* (eHP). A: Number of cells in the early apoptosis; B: Late apoptosis. Bars represent the mean \pm SD from three independent events.