

lncRNA MALAT1 participates in metformin inhibiting the proliferation of breast cancer cell

Running Title: MALAT1 in metformin treatment

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Figure S1. Expression of Wnt signaling genes in metformin treated cells. (A) mRNA expression as determined by qPCR (mean  $\pm$  SEM of duplicate experiments). (B) Protein expression as examined by Western blot analysis. (C) Densitometry of (B) was calculated by comparing with internal protein  $\beta$ -actin. \* $p$ <0.05 versus control, and \*\* $p$ <0.01 versus control.

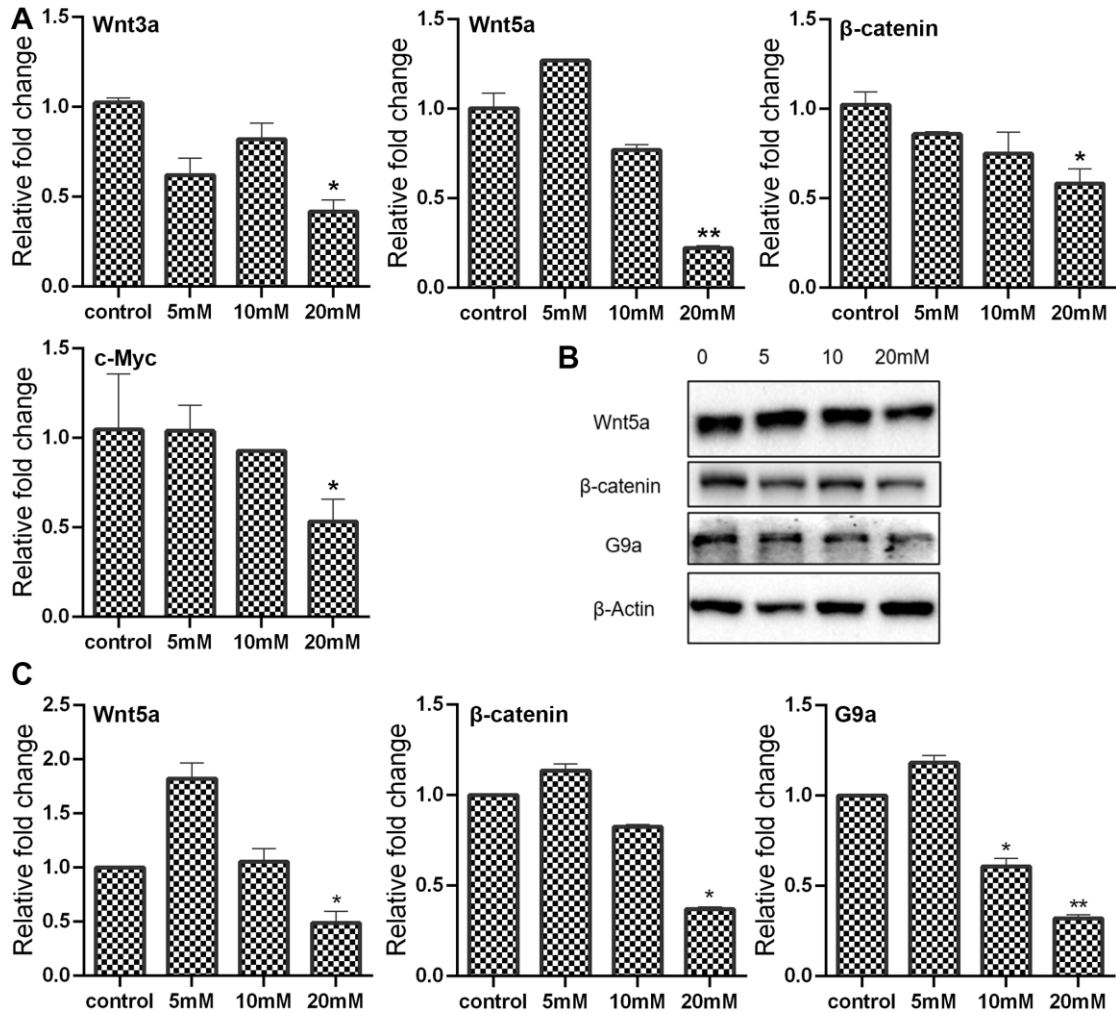


Figure S2. Expression of epigenetic genes in metformin treated cells. (A) mRNA expression as determined by qPCR (mean  $\pm$  SEM of duplicate experiments). (B) Protein expression as examined by Western blot analysis. (C) Densitometry of (B) was calculated by comparing with internal protein H3. \* $p$ <0.05 versus control, \*\* $p$ <0.01 versus control and \*\*\* $p$ <0.001 versus control.

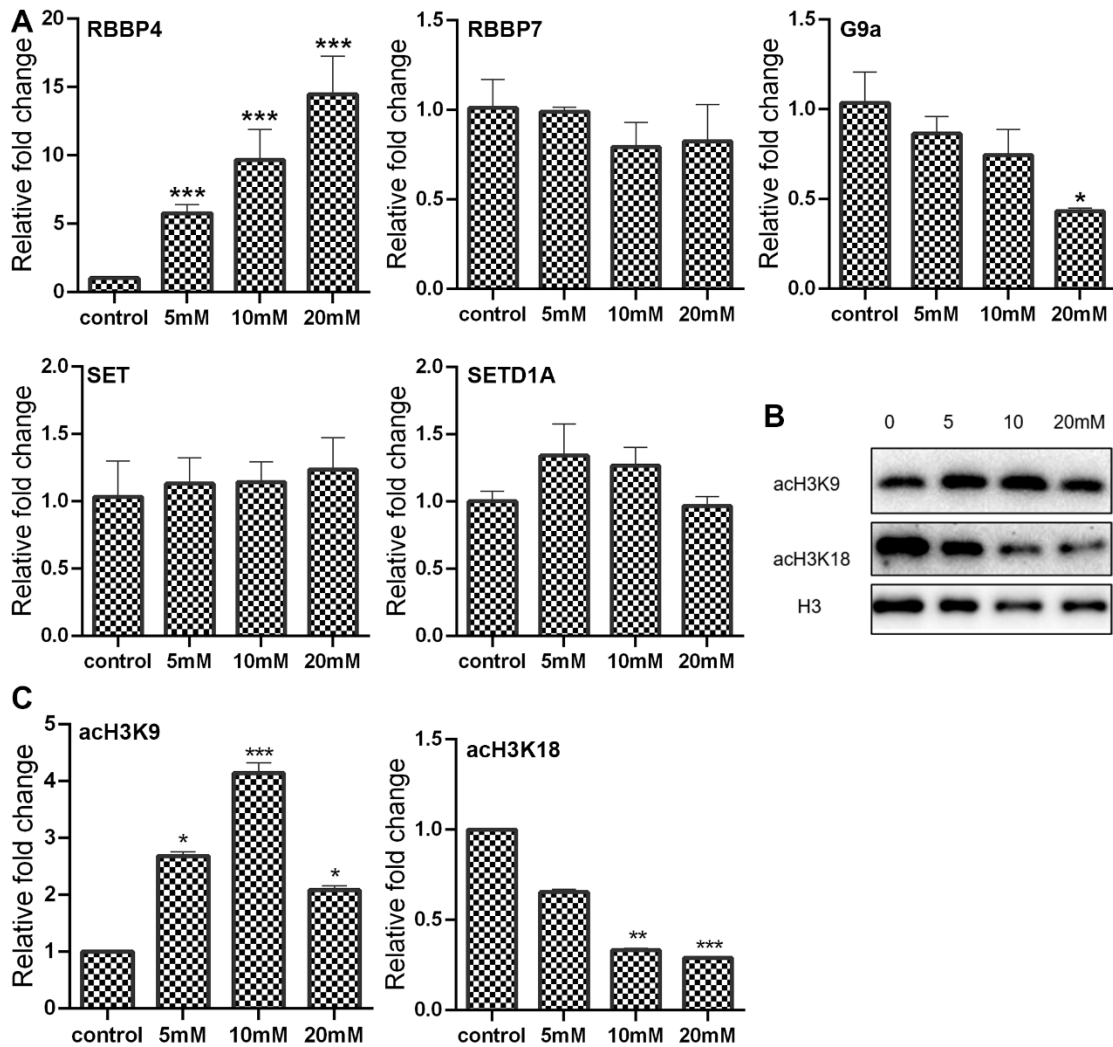


Figure S3. Expression of ER stress related genes in metformin treated cells in combination with MALAT1 knockdown. (A) mRNA expression as accessed by qPCR (mean  $\pm$  SEM of duplicate experiments). (B) Protein expression as measured by Western blot analysis. (C) Densitometry of (B) was calculated by comparing with internal protein GAPDH. \* $p$ <0.05 versus control, \*\* $p$ <0.01 versus control and \*\*\* $p$ <0.001 versus control. siNeg, cells treated with negative control siRNA; siMALAT1, cells treated with MALAT1 siRNA; siNeg+Met, cells treated with negative control siRNA in combination with metformin; siMALAT+Met, cells treated with MALAT1 siRNA in combination with metformin.

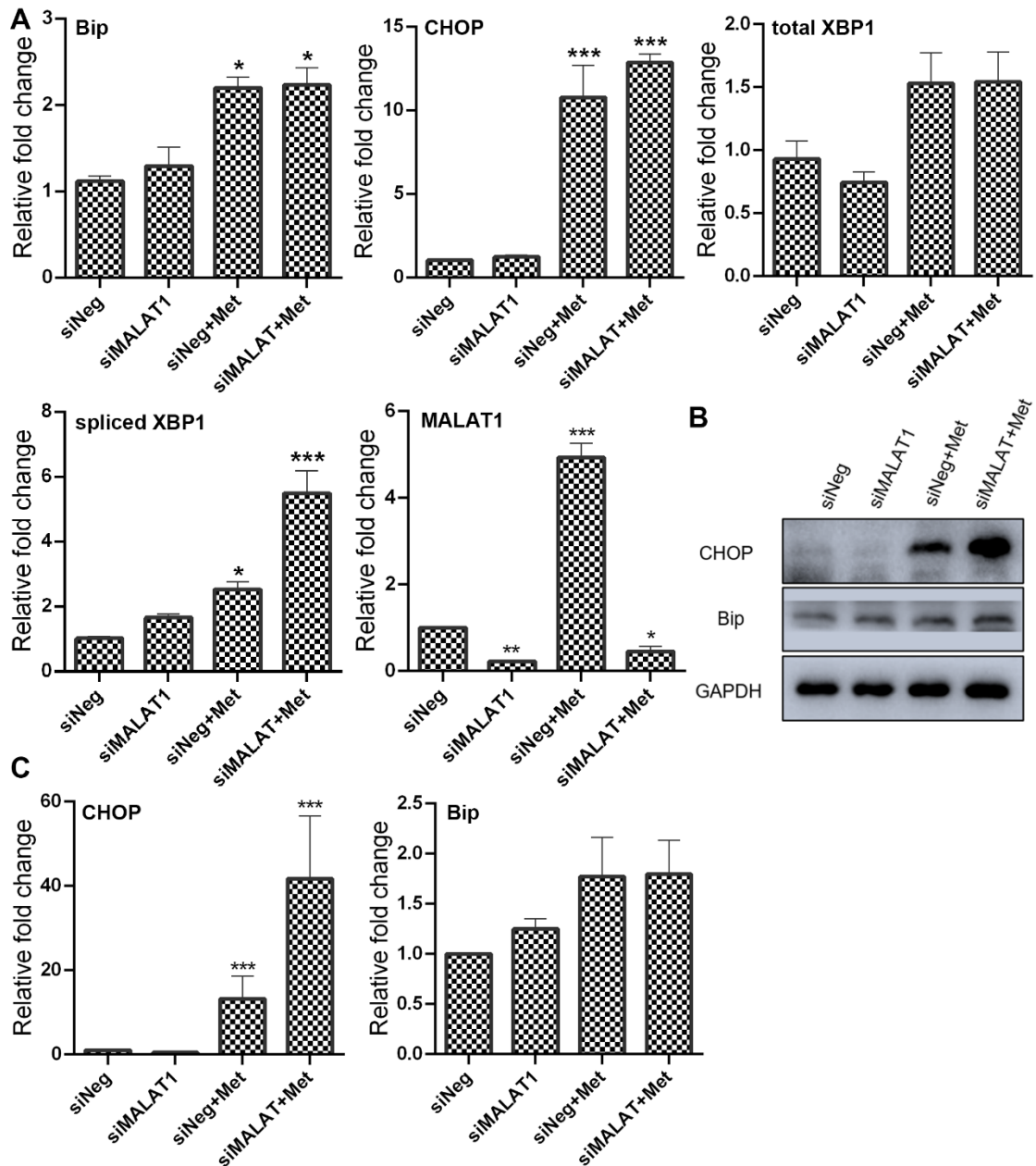


Figure S4. Densitometry in Western blot analysis was calculated by comparing with internal protein  $\beta$ -actin or GAPDH. \* $p$ <0.05 versus control, \*\* $p$ <0.01 versus control and \*\*\* $p$ <0.001 versus control.

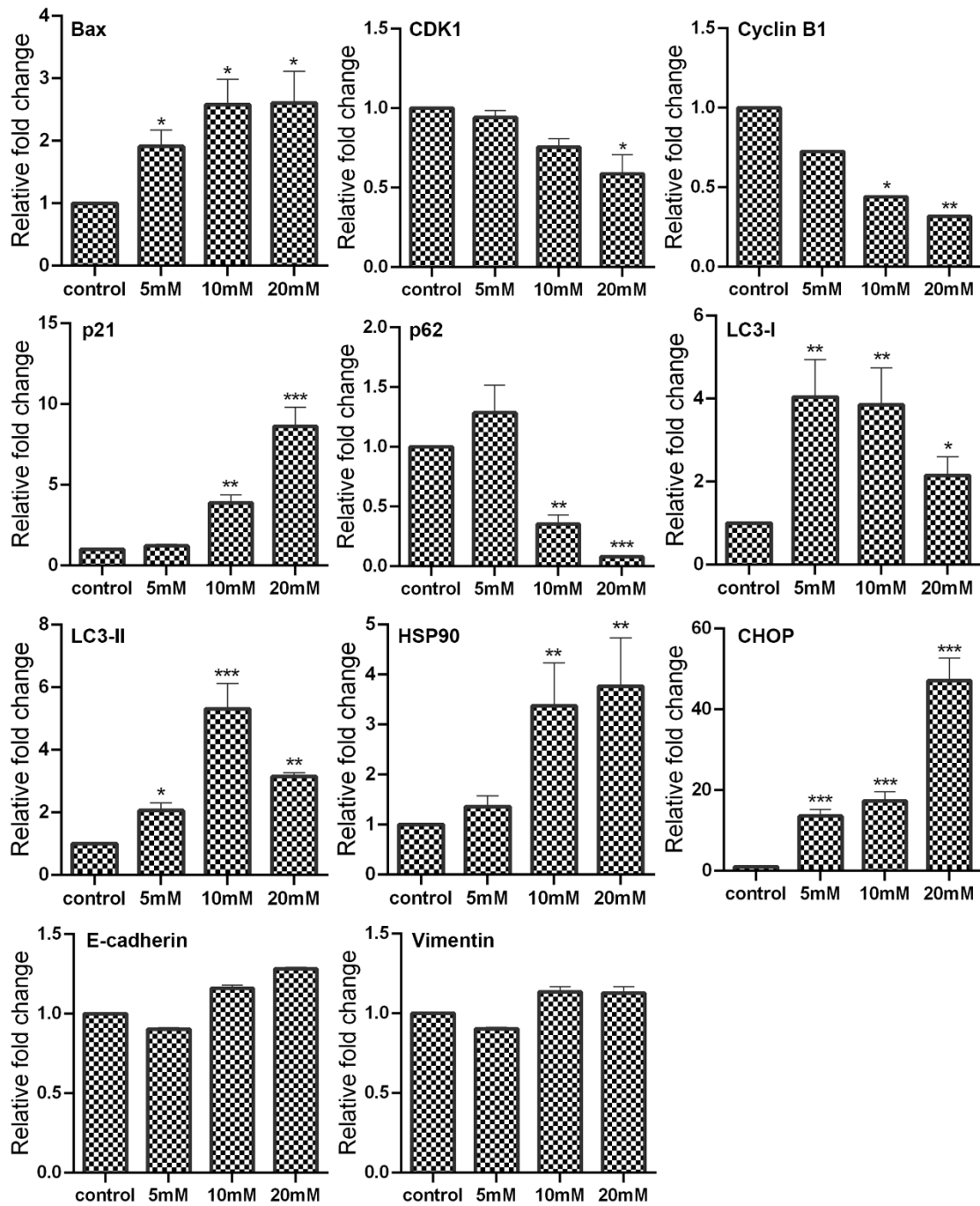


Figure S5. Densitometry in Western blot analysis was calculated by comparing with internal protein  $\beta$ -actin or GAPDH. \* $p$ <0.05 versus control, \*\* $p$ <0.01 versus control and \*\*\* $p$ <0.001 versus control. siNeg, cells treated with negative control siRNA; siMALAT1, cells treated with MALAT1 siRNA; siNeg+Met, cells treated with negative control siRNA in combination with metformin; siMALAT1+Met, cells treated with MALAT1 siRNA in combination with metformin.

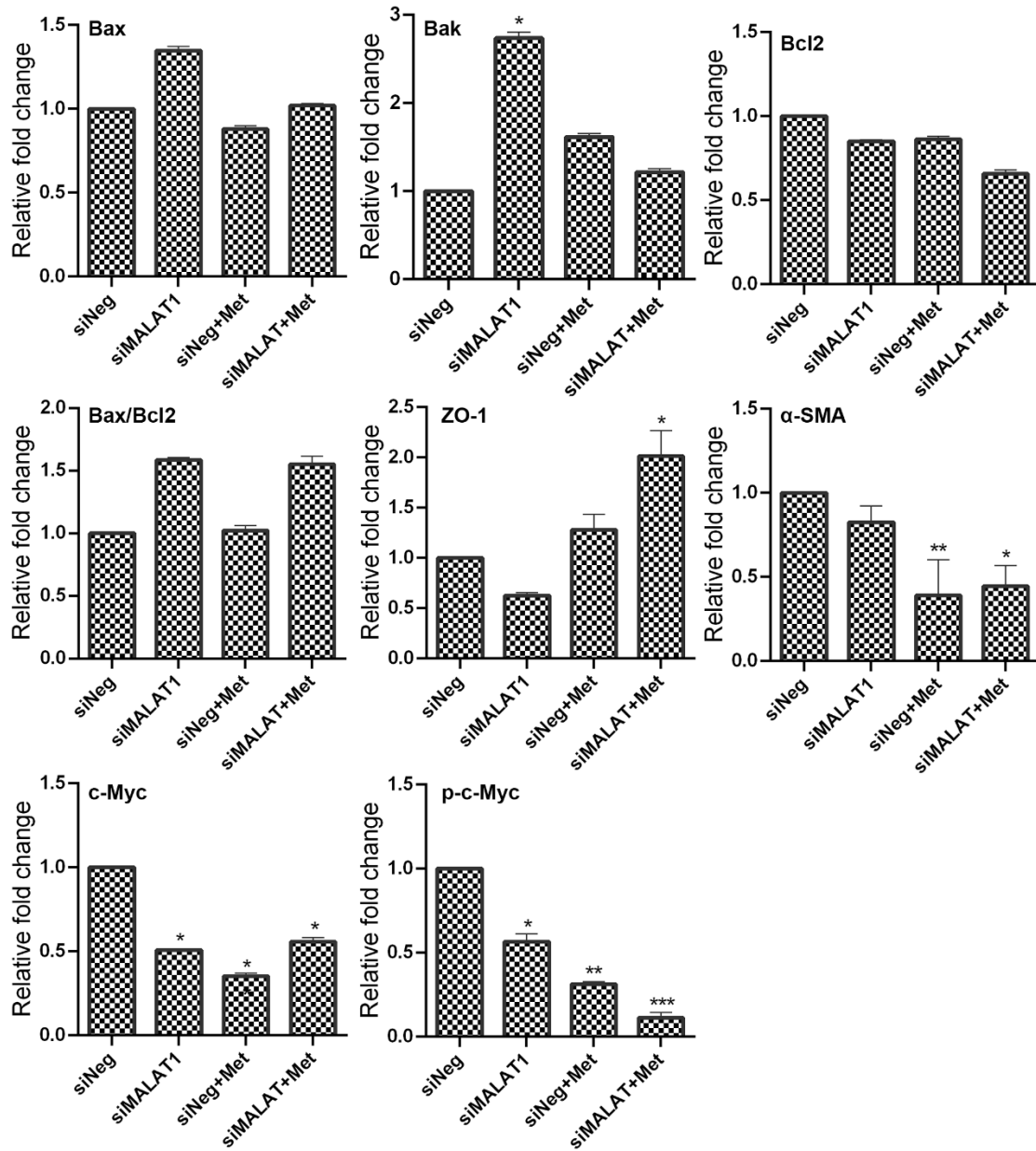


Figure S6. Densitometry in Western blot analysis was calculated by comparing with internal protein  $\beta$ -actin or GAPDH. \* $p < 0.05$  versus control, \*\* $p < 0.01$  versus control and \*\*\* $p < 0.001$  versus control. siNeg, cells treated with negative control siRNA; siMALAT1, cells treated with MALAT1 siRNA; siNeg+Met, cells treated with negative control siRNA in combination with metformin; siMALAT1+Met, cells treated with MALAT1 siRNA in combination with metformin.

