

MiR-4458-loaded gelatin nanospheres target COL11A1 for DDR2/SRC signaling pathway inactivation to suppress progression of estrogen receptor-positive breast cancer

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The authors declare no conflict of interest.

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Table S1. Sequences of RNAs.

Gene name	Sequences
COL11A1 siRNA	F-GAACGUGGGUCAGCAGGUAUU R-UACCUGCUGACCCACGUUCUU
miR-4458 mimic	F-AGAGGUAGGUGUGGAAGAA R-CUUCCACACCUACCUCUUU
miR-4458 inhibitor	UUCUUCCACACCUACCUCU
negative control RNA	F-UUCUCCGAACGUGUCACGUTT R-ACGUGACACGUUCGGAGAATT

Table S2. Sequences of primers.

Gene name	Sequences
COL11A1	F-AATGGAGCTGATGGACCACA R-TCCTTTGGGACCGCCTAC
CDH1	F-GCCTCCTGAAAAGAGAGTGGAAG R-TGGCAGTGTCTCTCCAAATCCG
CDH2	F-CCTCCAGAGTTTACTGCCATGAC R-GTAGGATCTCCGCCACTGATTC
VIM	F-AGGCAAAGCAGGAGTCCACTGA R-ATCTGGCGTTCCAGGGACTCAT
miR-4458 Stem-loop RT primer	GTCGTATCCAGTGCAGGGTCCGAGGTATTTCGCA CTGGATACGACTTCTTC
miR-4458	F-CGCGCGAGAGGTAGGTGTG R-CAGTGCAGGGTCCGAGGTAT
GAPDH	F-CTGACTTCAACAGCGACACC R-TAGCCAAATTCGTTGTCATACC
DDR2	F-CTGTGCACCCCTGGATGAAA R-CCTGGGAGGCATATCAACGG
U6	F-CTCGCTTCGGCAGCACA R-AACGCTTCACGAATTTGCGT
SRC	F-TGGCAAGATCACCAGACGG R-GGCACCTTTCGTGGTCTCAC
COL11A1-3'UTR WT	F-CCGCTCGAGTTCTGATGACTCTAAG R-AGCTTTGTTTAAACAGGAGATGAGATAAC
COL11A1-3'UTR mut	F-TTCAAGGCTATACtcCAAACTTTTT R-AAGAAAAAGTTTggaGTATAGCCTTG

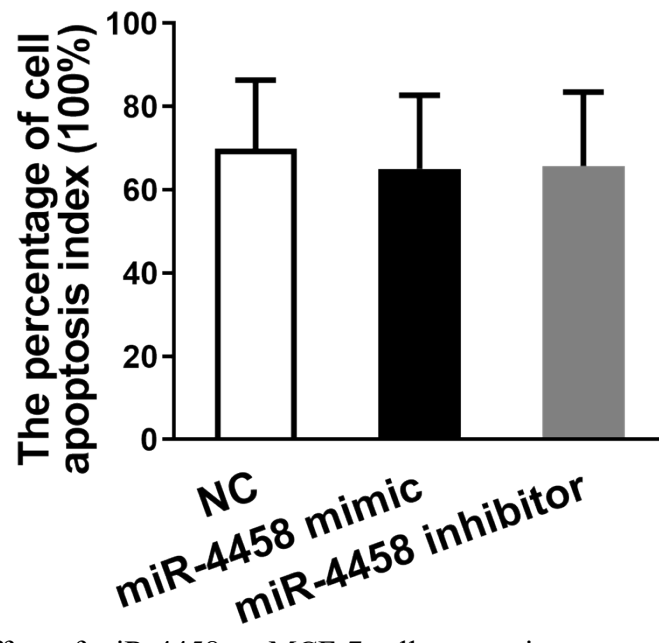


Figure S1. The effect of miR-4458 on MCF-7 cell apoptosis.

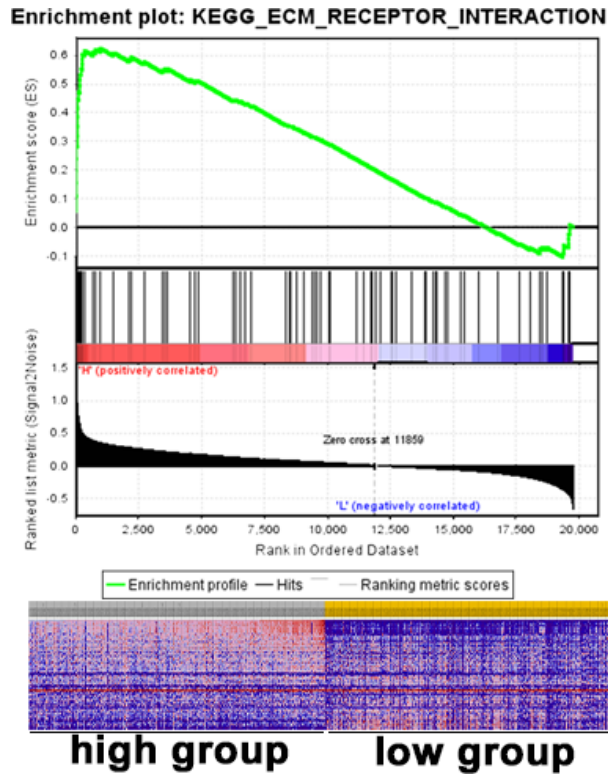


Figure S2. The GESA results of COL11A1.

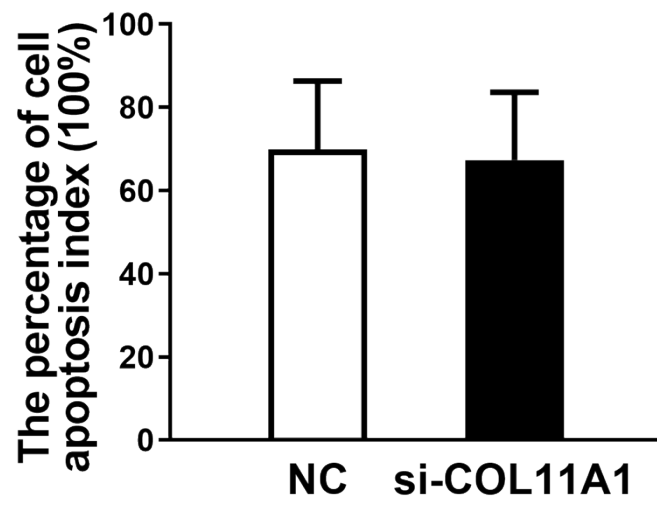


Figure S3. The effect of COL11A1 siRNA on MCF-7 cell apoptosis.

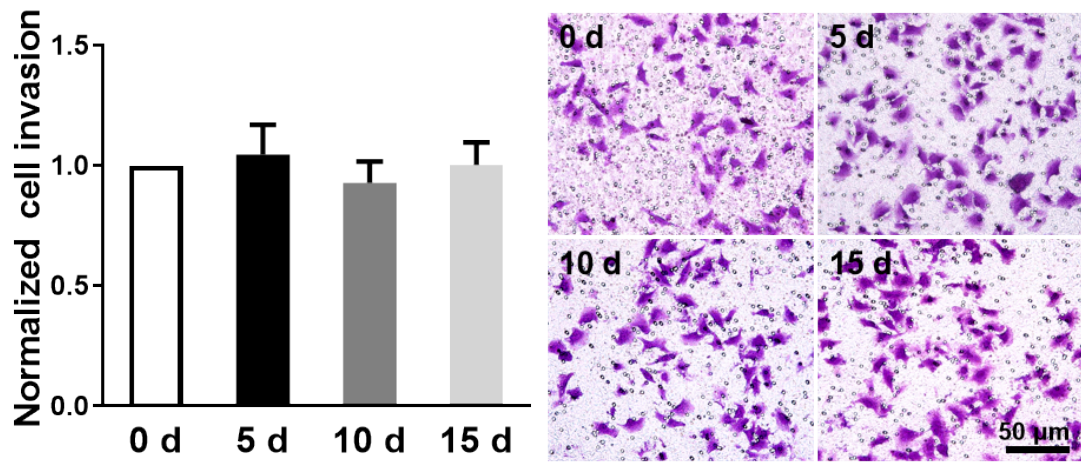


Figure S4. Effect of supernatant of GNs on MCF-7 cell invasion at different time points.

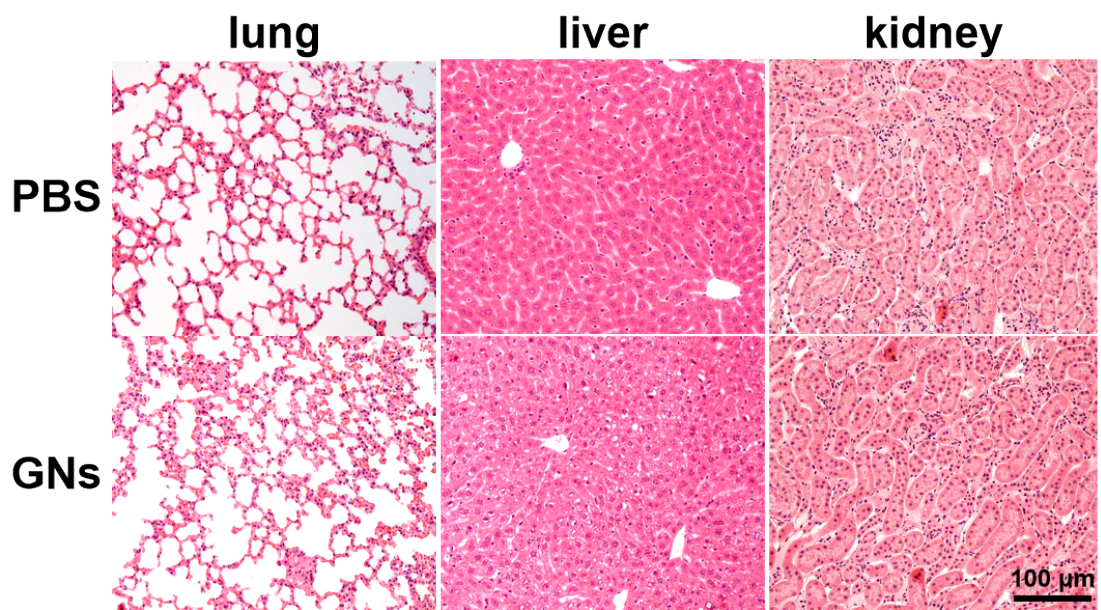


Figure S5. HE images of lung, liver and kidney of mice treated with or without GNs.

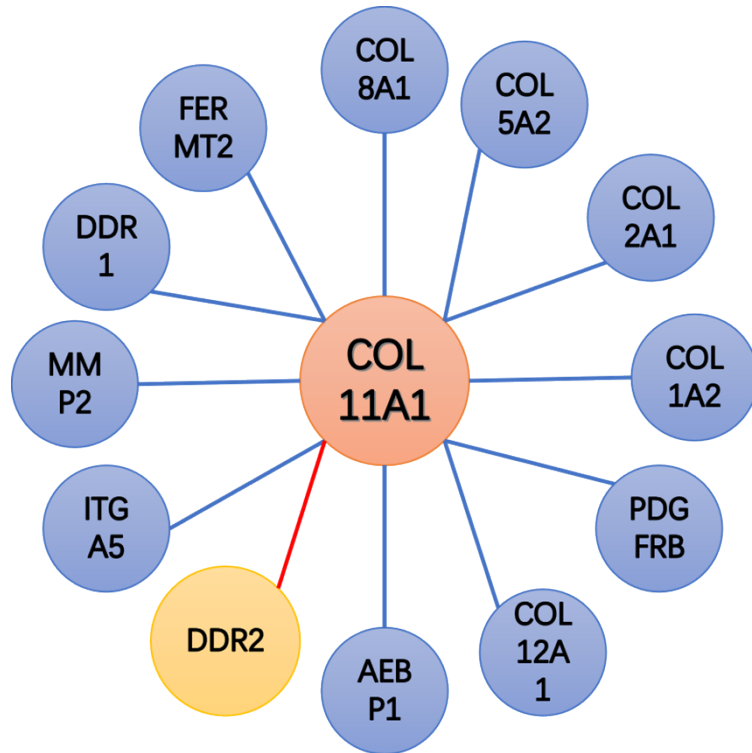


Figure S6. The predicted interacted genes of COL11A1 by Genemania website.

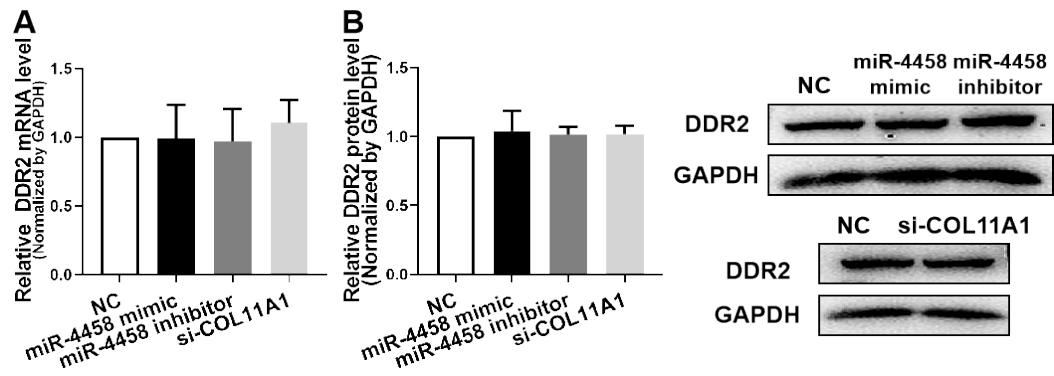


Figure S7. Relative mRNA (A) and protein (B) levels of DDR2 in MCF-7 cell after transfection with miR-4458 mimic, inhibitor or COL11A1 siRNA.

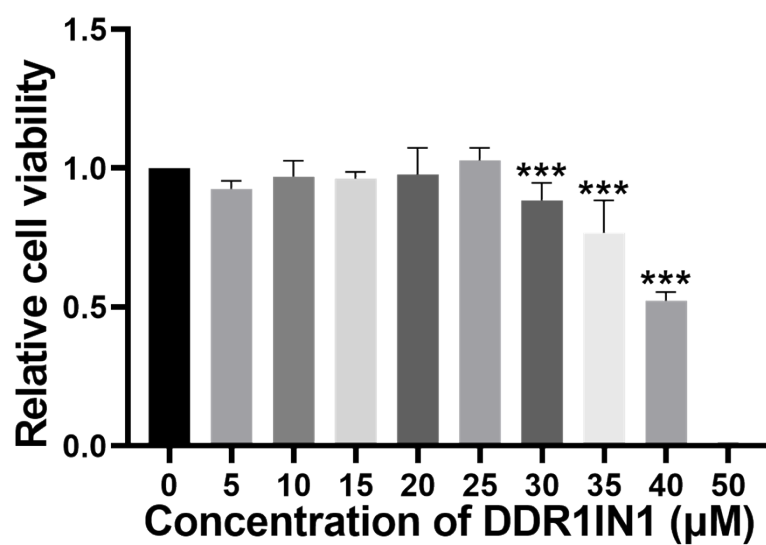


Figure S8. Relative cell viability in MCF-7 cells treated with different concentration of DDR1IN1. Data are shown as the mean \pm SD. One-way ANOVA were used for statistical analysis followed by post-hoc tests. $p < 0.001$ indicated by ***.

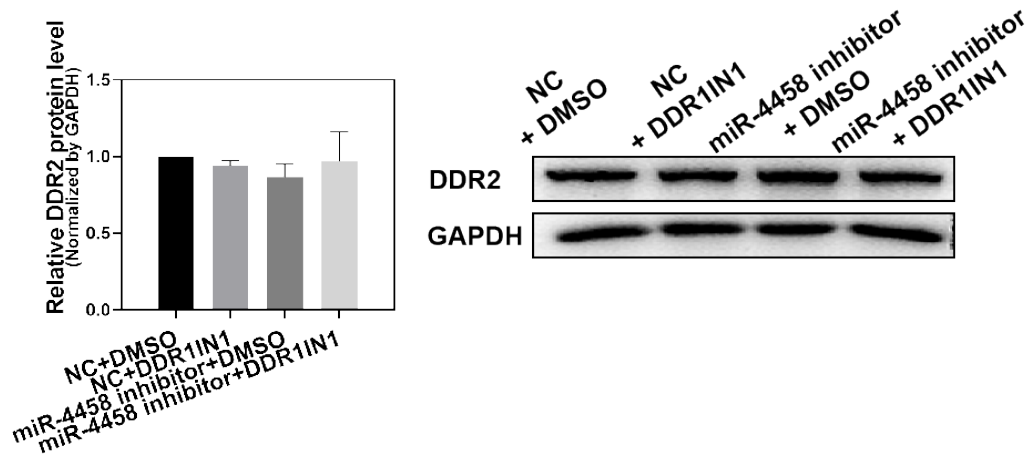


Figure S9. Western blot results of DDR2 in MCF-7 cell after treated with miR-4458 inhibitor and then cultured with 15 μ M DDR1IN1.