

Supplementary information

Ricinus communis* L. fruit extract inhibits migration/invasion, induces apoptosis in breast cancer cells and arrests tumor progression *in vivo

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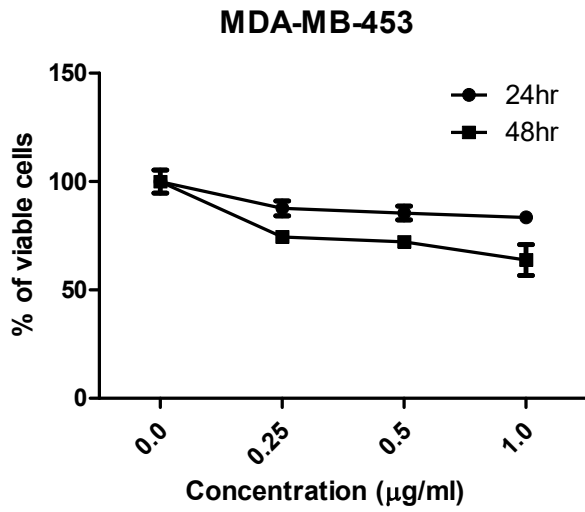
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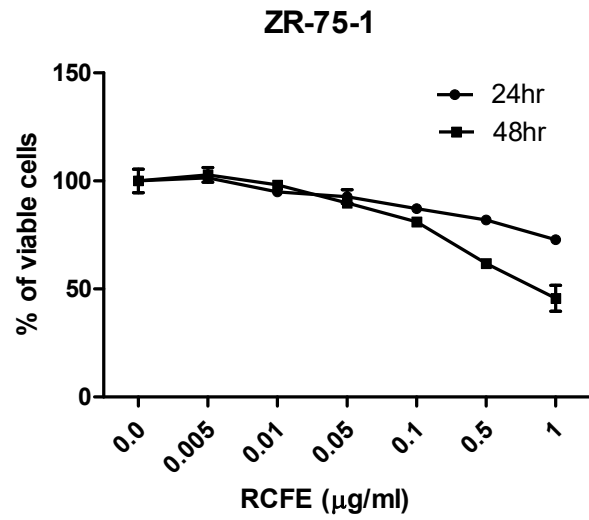
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Figure S1:

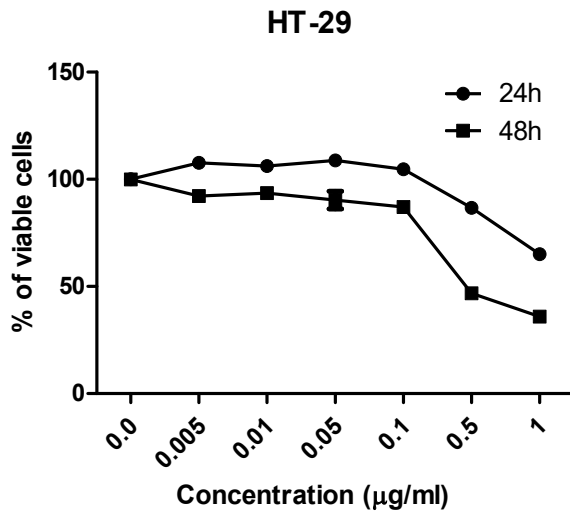
(A)



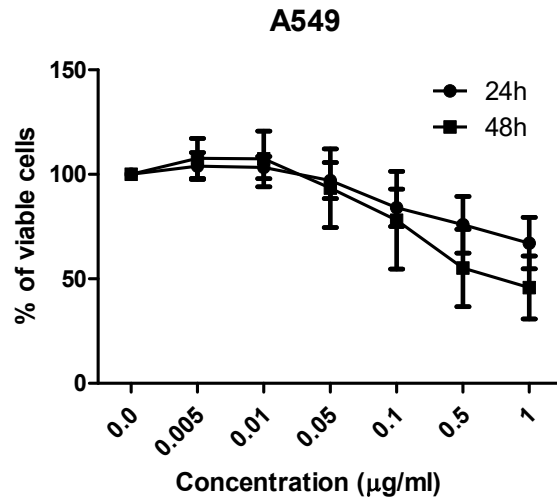
(B)



(C)



(D)



(E)

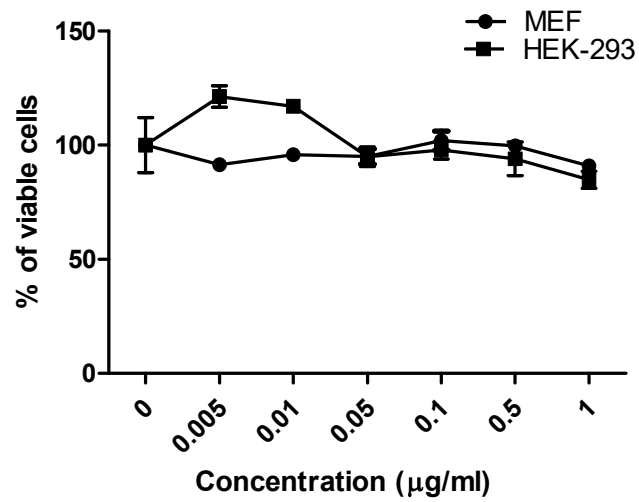


Figure S1. RCFE induced cytotoxicity in several cancer cell lines. Cytotoxicity assay performed with (A) MDA-MB-453 (B) ZR-75-1 (C) HT-29 and (D) A549 cells treated with various concentrations of RCFE for 24 and 48hr. Treatment of HEK-293 and MEF cells with various concentration of RCFE for 24 h (E). Data represent the mean \pm SEM of three independent experiments.

Figure S2:

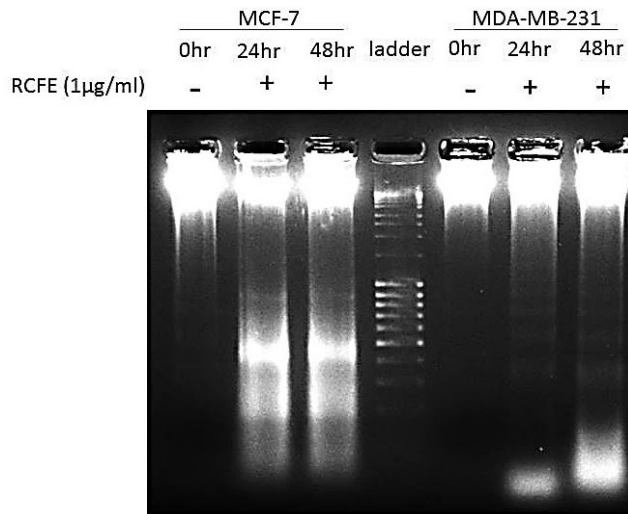


Figure S2. RCFE induced DNA fragmentation in MCF-7 and MDA-MB-231 cells. Genomic DNA isolated from MCF-7 and MDA-MB-231 cells treated with RCFE (1 μ g/ml) for 24 and 48hr.

Figure S3:

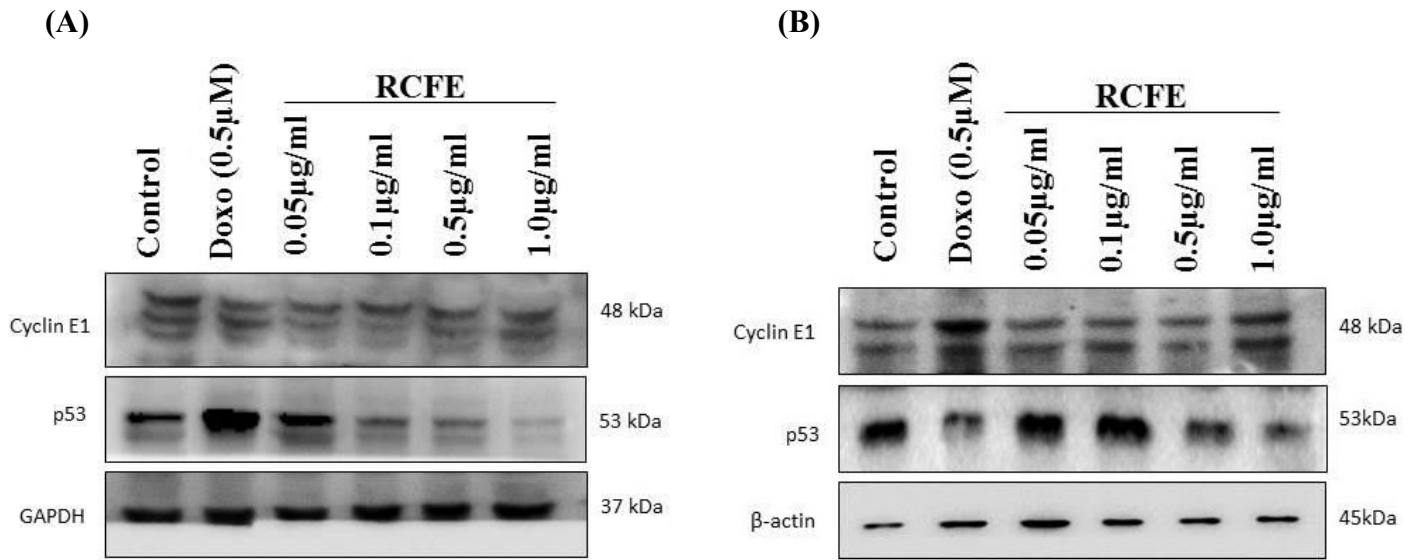


Figure S3. Effect of RCFE on Cyclin E1 and p53 expression. (A) MCF-7 and **(B)** MDA-MB-231 cells were treated with various concentrations of RCFE and expression of Cyclin E1 and p53 were studied using western blots.

Figure S4:

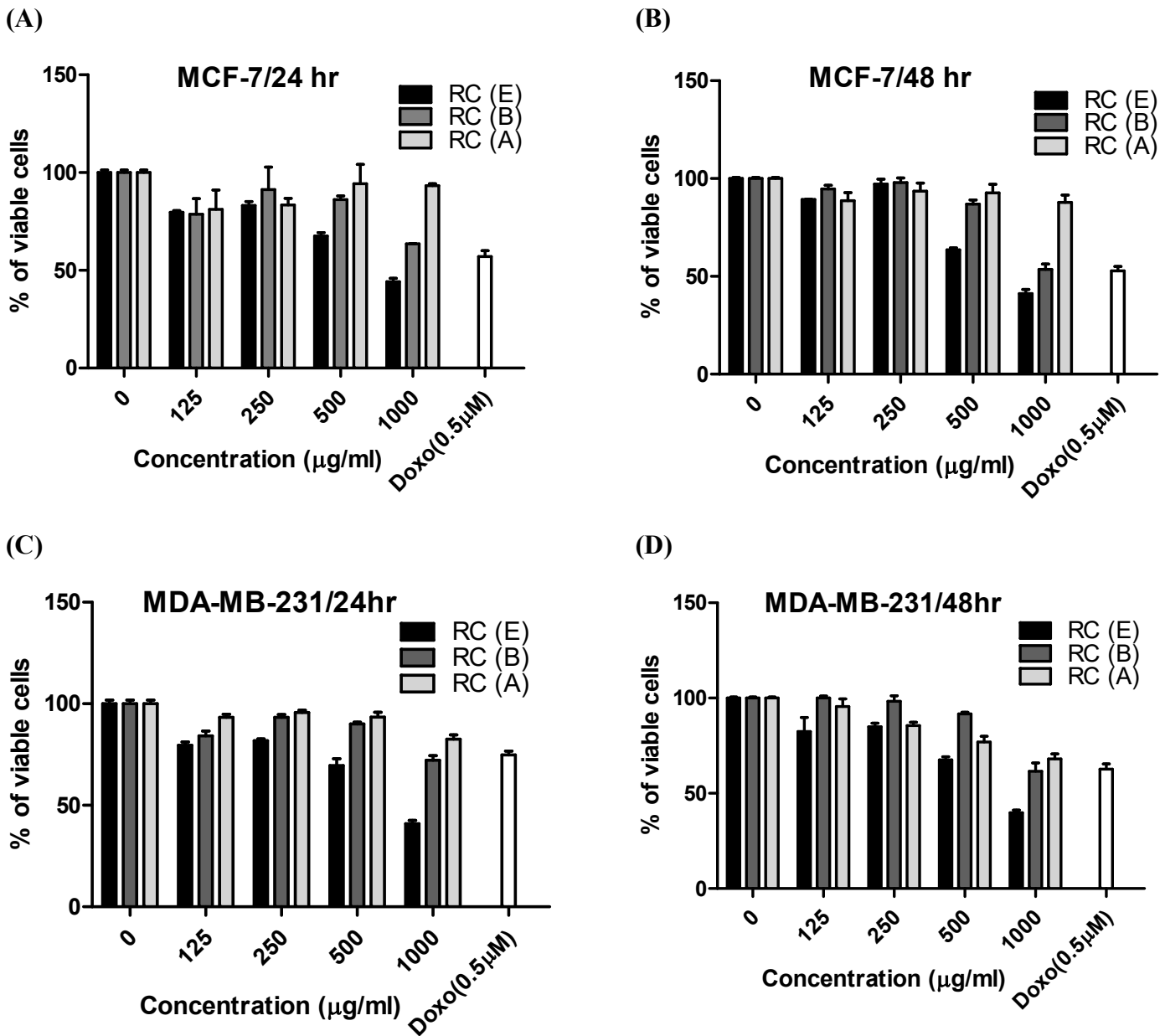


Figure S4. Cytotoxic effect of various fractions of RCFE on human breast cancer cells. Cytotoxic effect on MCF-7 and MDA-MB-231 cells were studied after treatment with three different fractions RC(E) (Ethyl acetate fraction), RC(B) (n-Butanol fraction) and RC(A) (Aqueous fraction) of RCFE for 24 and 48hr. Figure (A) and (B) represented data of MCF-7 and figure (C) and (D) represented data of MDA-MB-231 after treatment with each fraction for 24 and 48hr, respectively. Data represent the mean ± SEM of three independent experiments.

Figure S5:

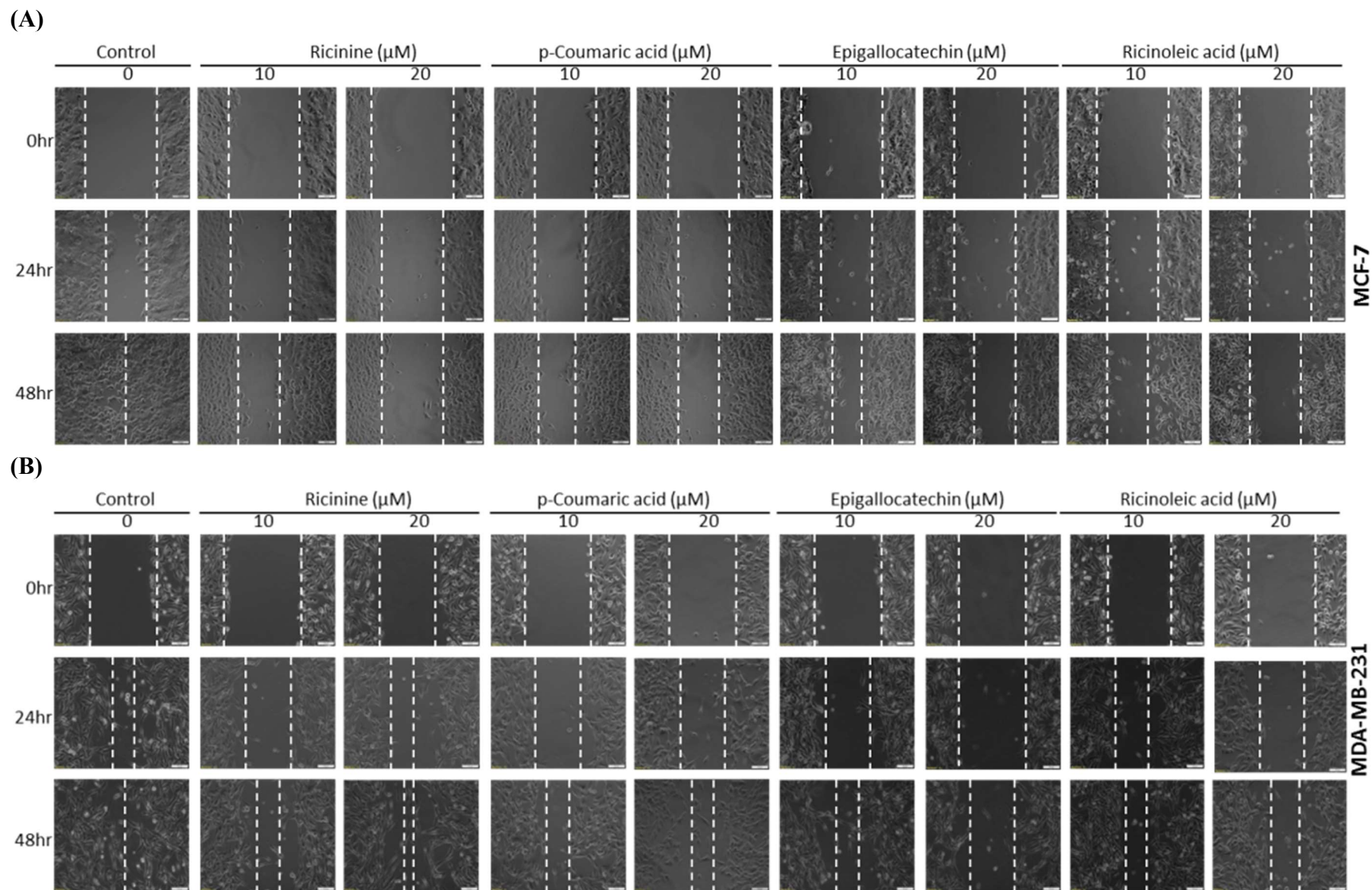


Figure S5. Pure compounds identified from active fraction of RCFE showed inhibition of migration of MCF-7 and MDA-MB-231 cells. Effect of the four compounds Ricinine, p-Coumaric acid, Epigallocatechin and Ricinoleic acid at concentrations of 10 and 20 μM on migration of MCF-7 and MDA-MB-231 cells are shown by wound healing assay in MCF-7 (A) and MBA-MB-231(B).

Figure S6:

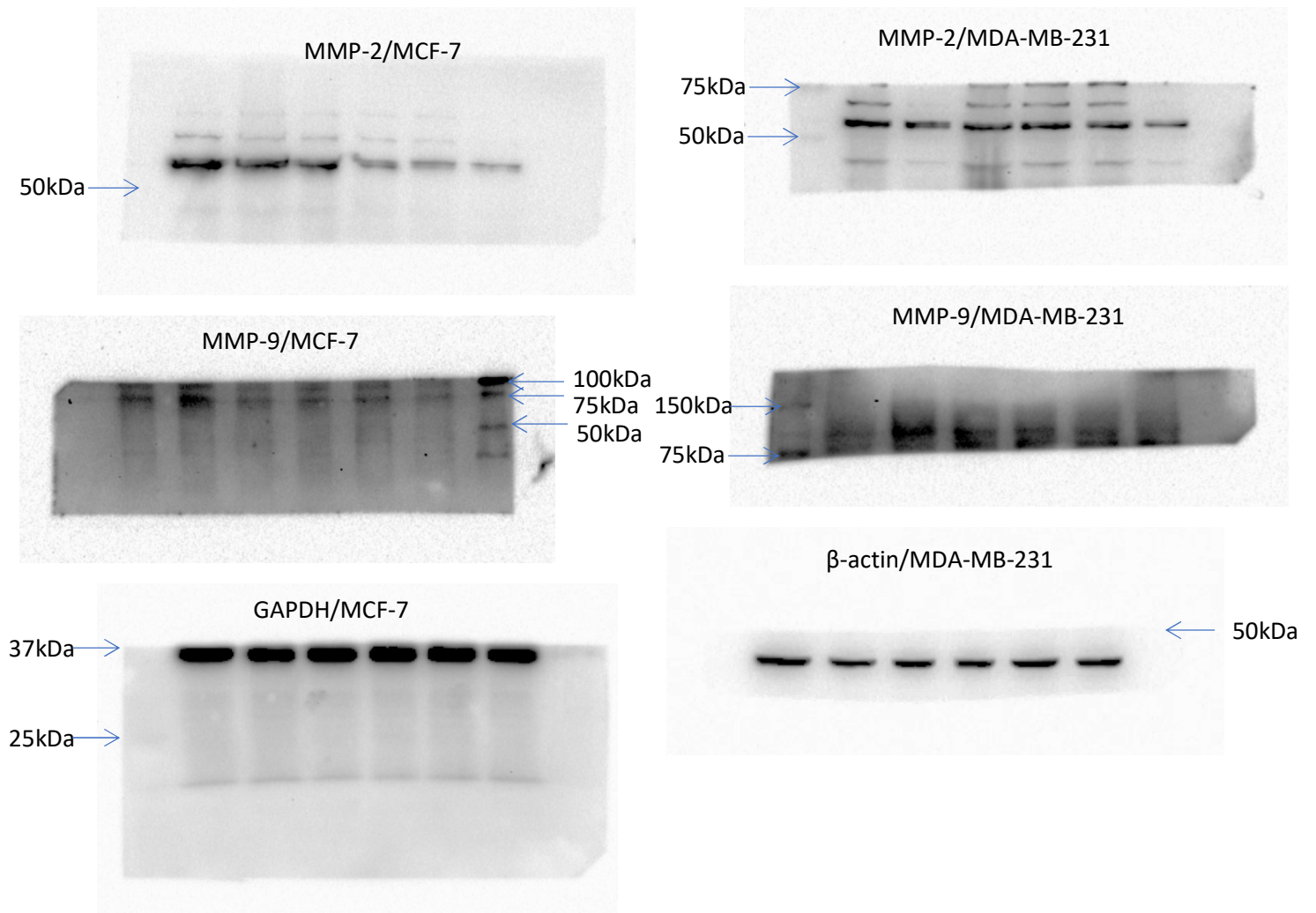


Figure S6: Full-length blots for Figure 2

Figure S7:

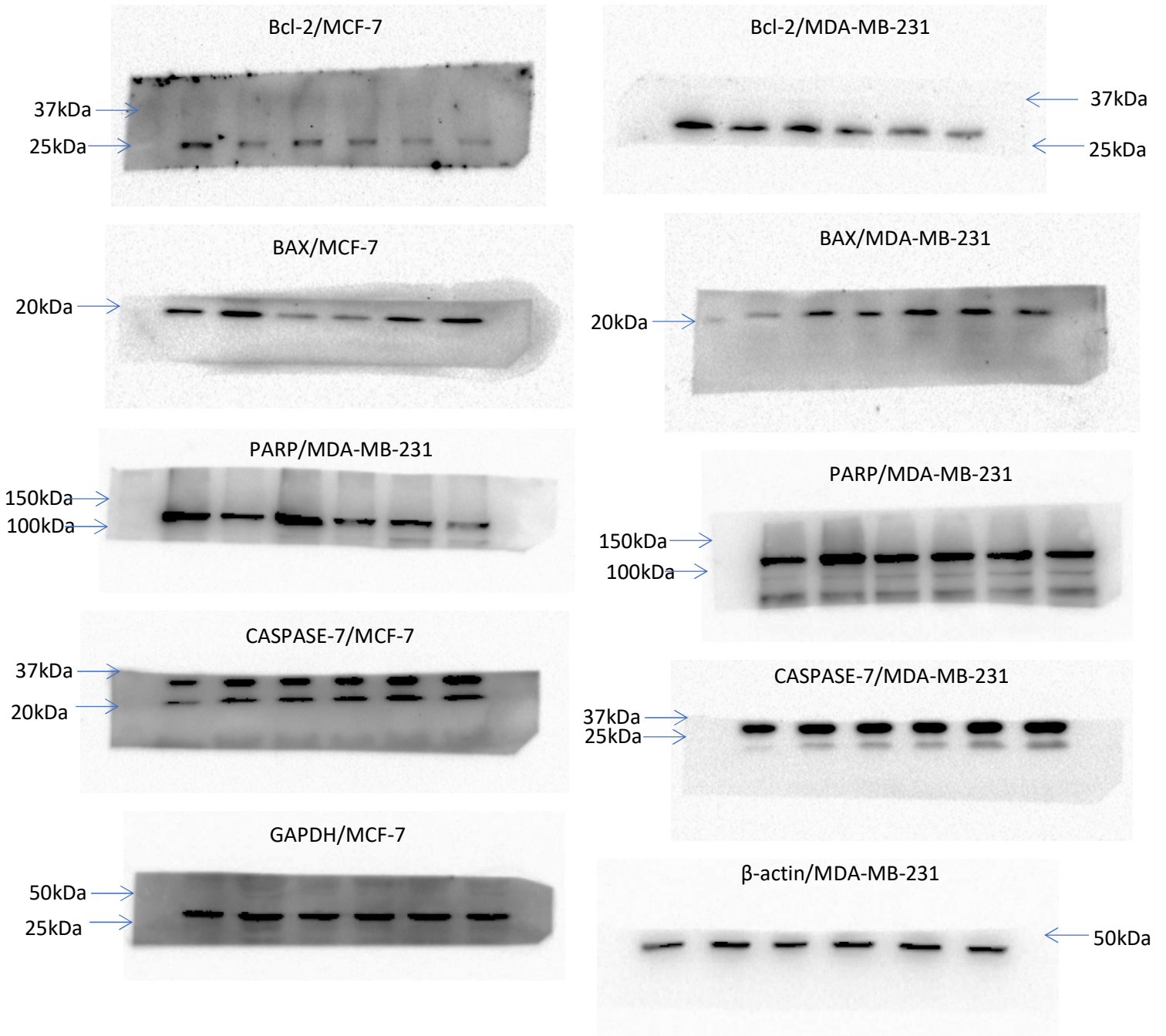


Figure S7: Full-length blots for Figure 3

Figure S8:

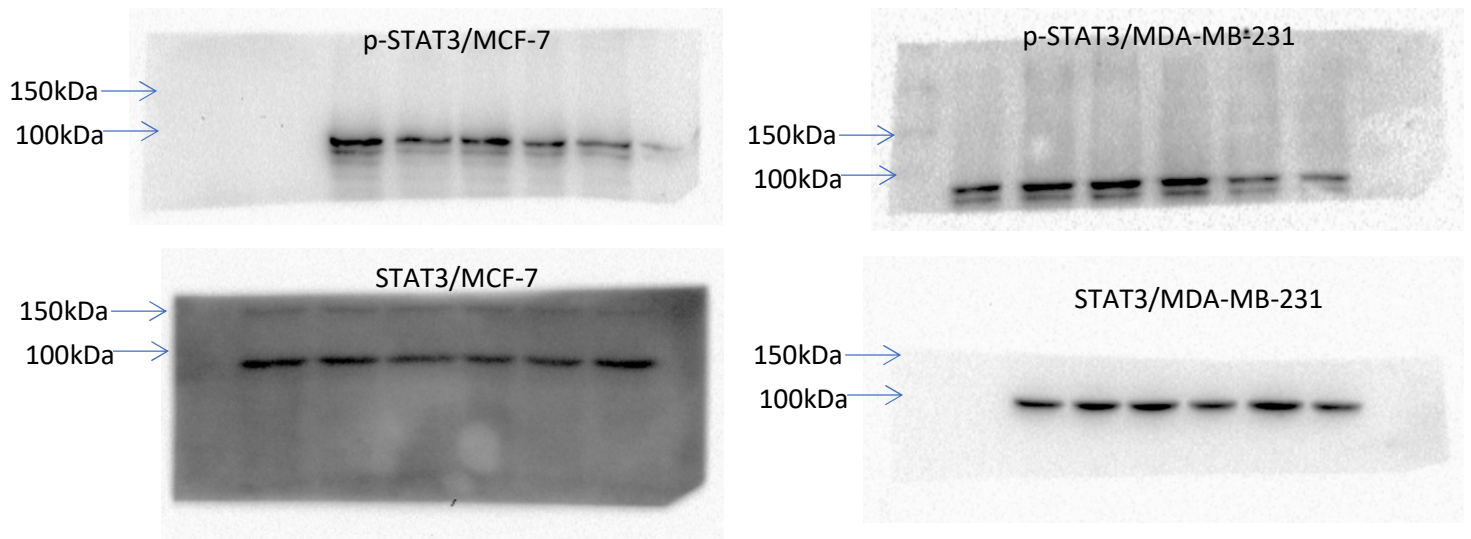


Figure S8: Full-length blots for Figure 4

Figure S9:

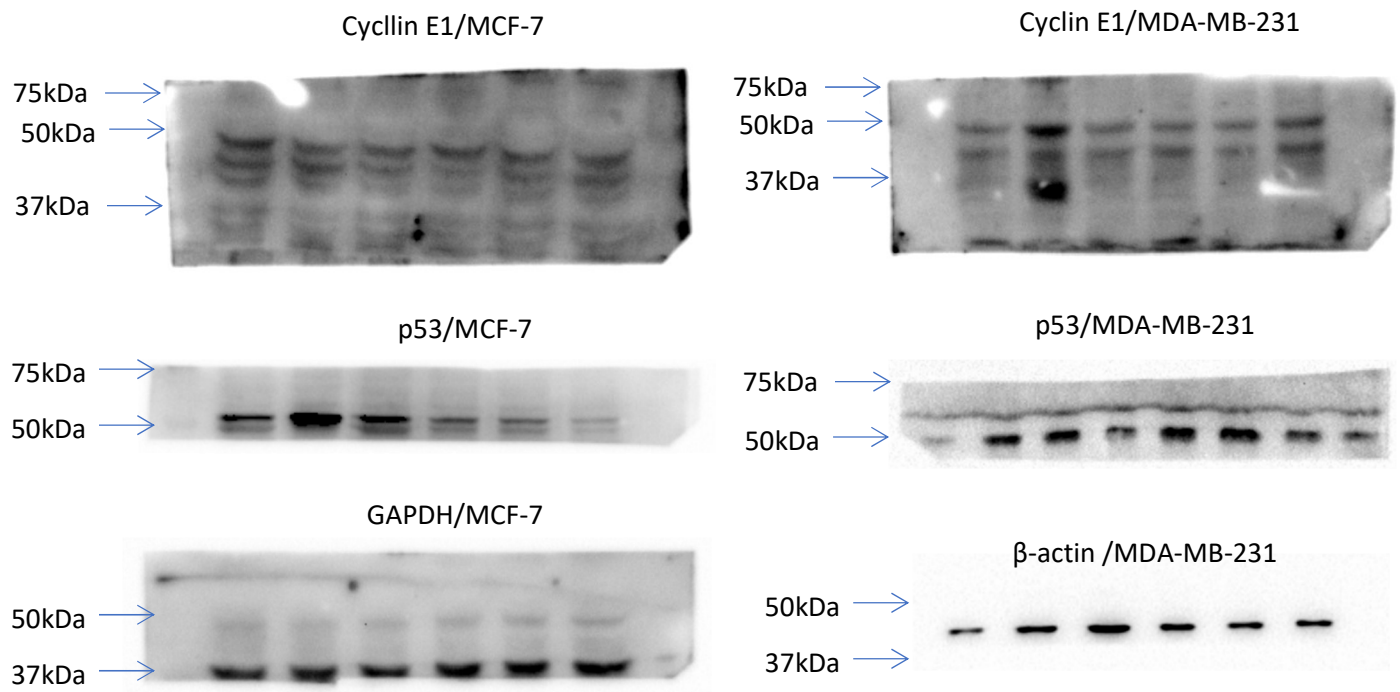


Figure S9: Full-length blots for Figure S3