Electronic Supplementary Information

Novel derivatives of aroylacrylic acid phenylamides as inducers of apoptosis through the ROS-mediated pathway in several cancer cell lines

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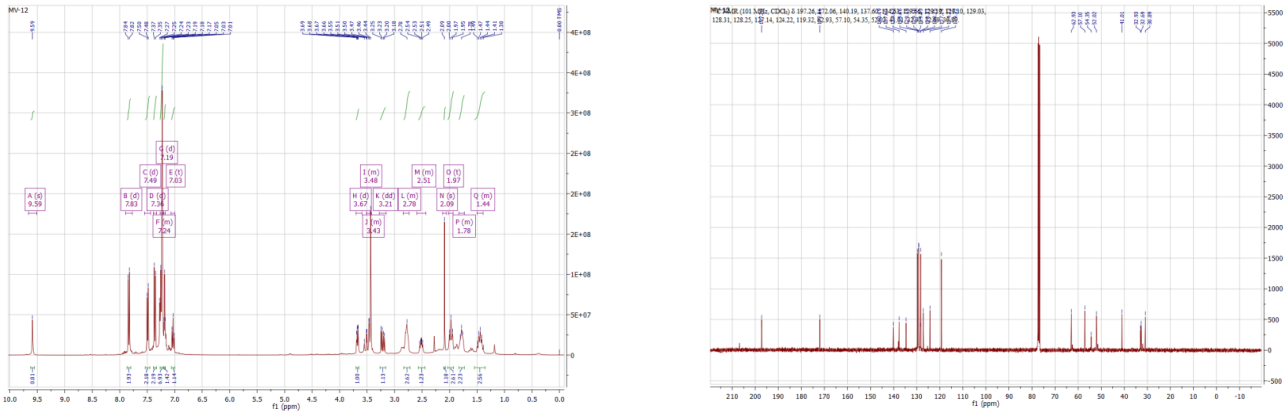


Figure S1. ^{1}H and ^{13}C NMR spectrum of **1**.

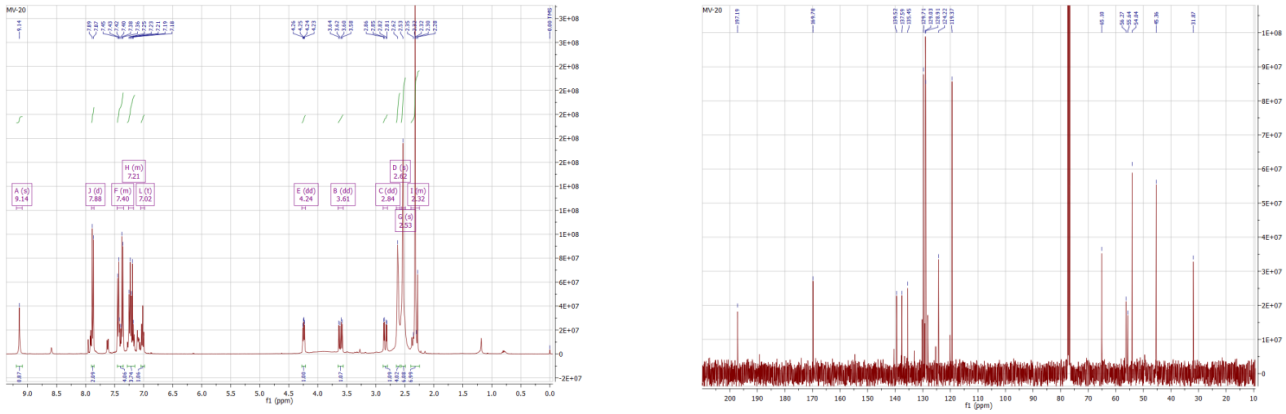


Figure S2. ^{1}H and ^{13}C NMR spectrum of **2**.

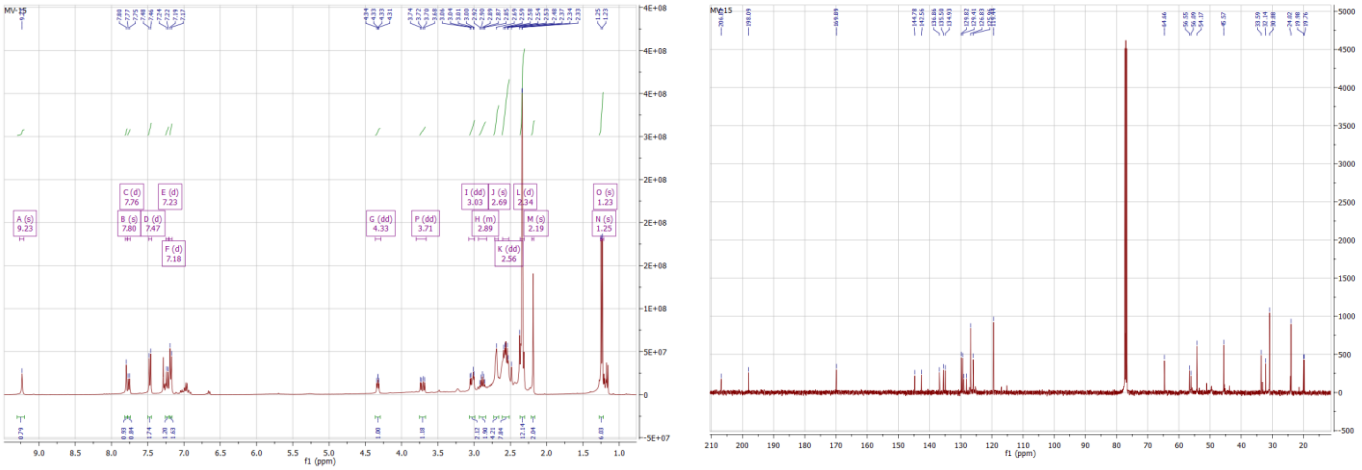


Figure S3. ^{1}H and ^{13}C NMR spectrum of **3**.

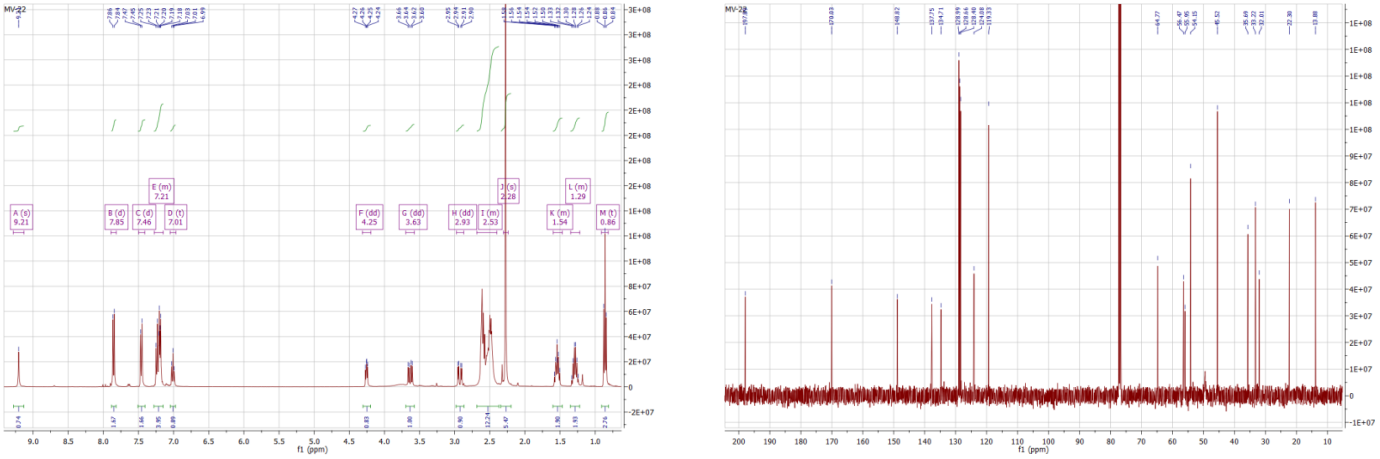


Figure S4. ^{1}H and ^{13}C NMR spectrum of **4**.

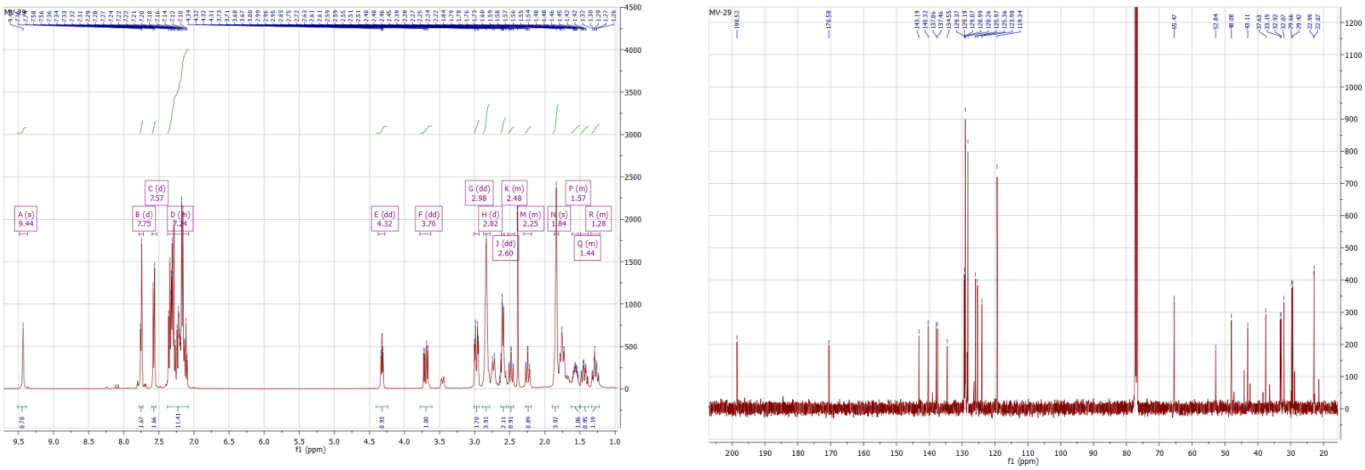
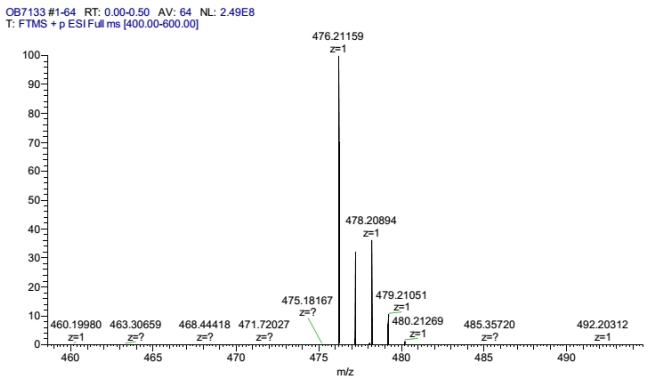
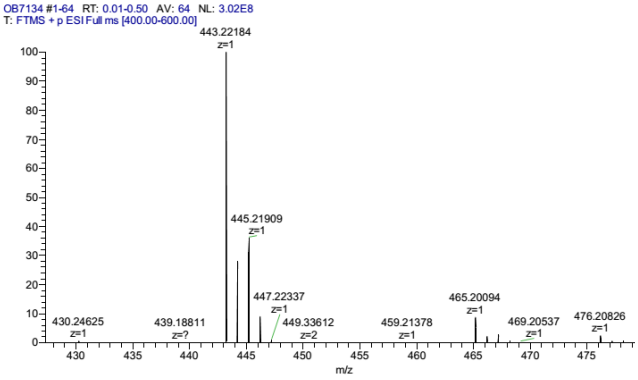


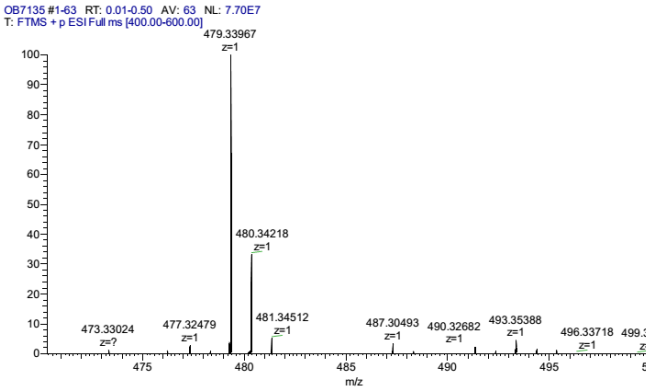
Figure S5. ^{1}H and ^{13}C NMR spectrum of **5**.



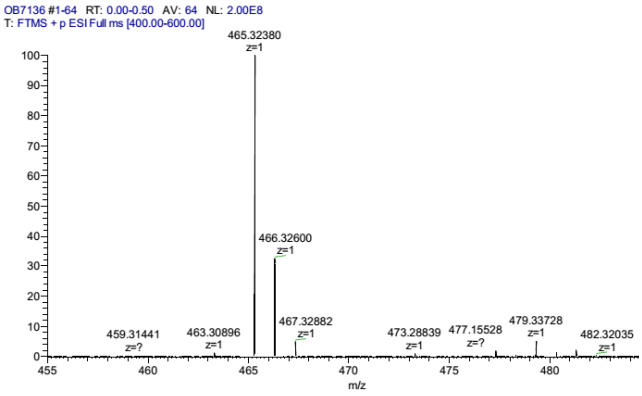
a. HRMS spectra of **1**.



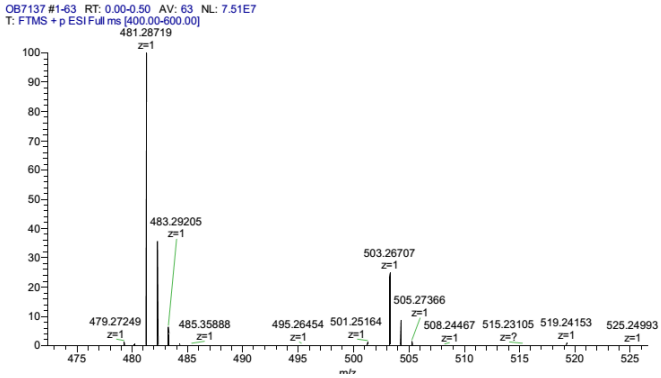
b. HRMS spectra of **2**.



c. HRMS spectra of **3**.



d. HRMS spectra of **4**.



e. HRMS spectra of **5**.

Figure S6. High resolution mass spectra of **1-5**.

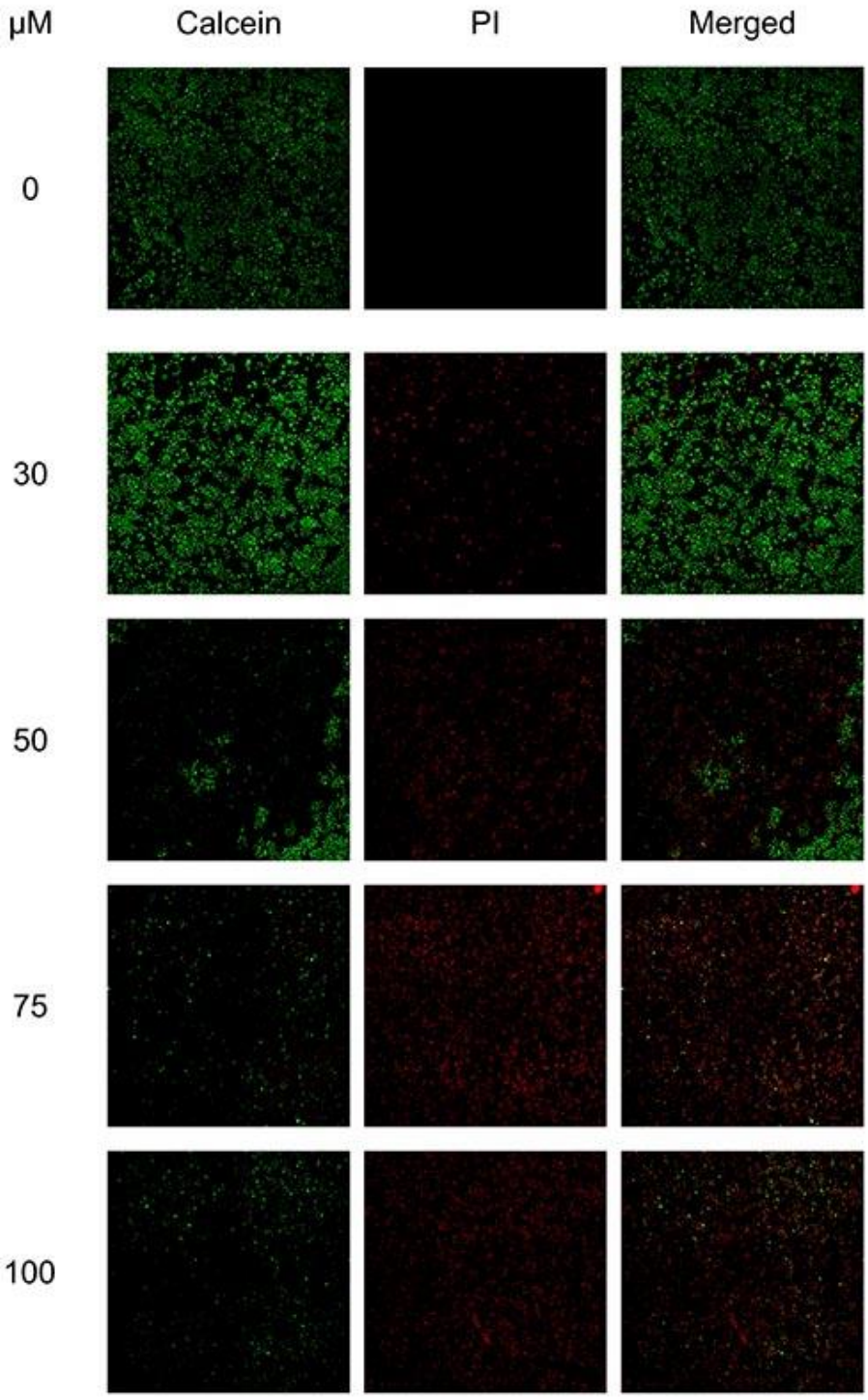


Figure S7. Representative fluorescent microscopic images of A549 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **1**.

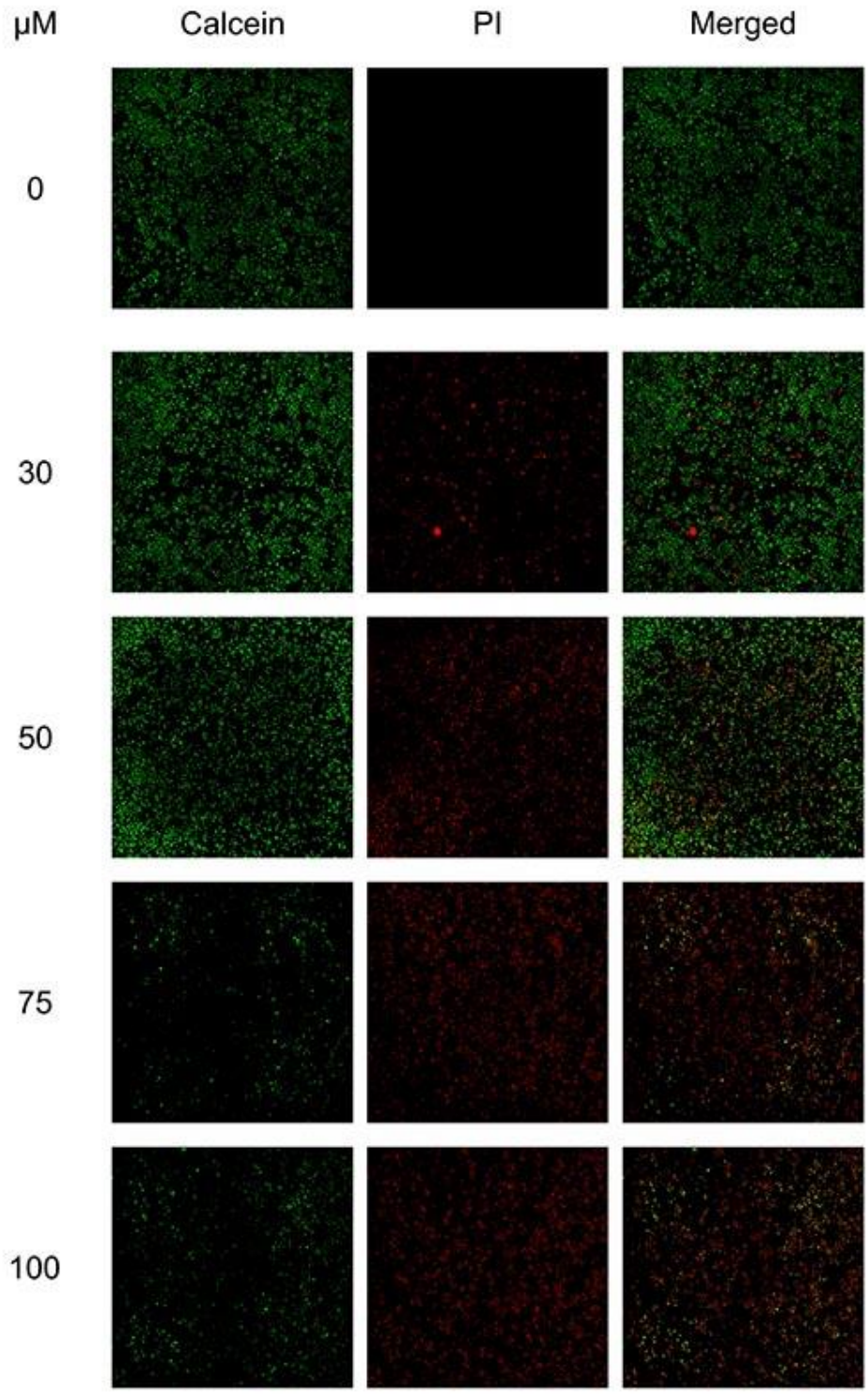


Figure S8. Representative fluorescent microscopic images of A549 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **2**.

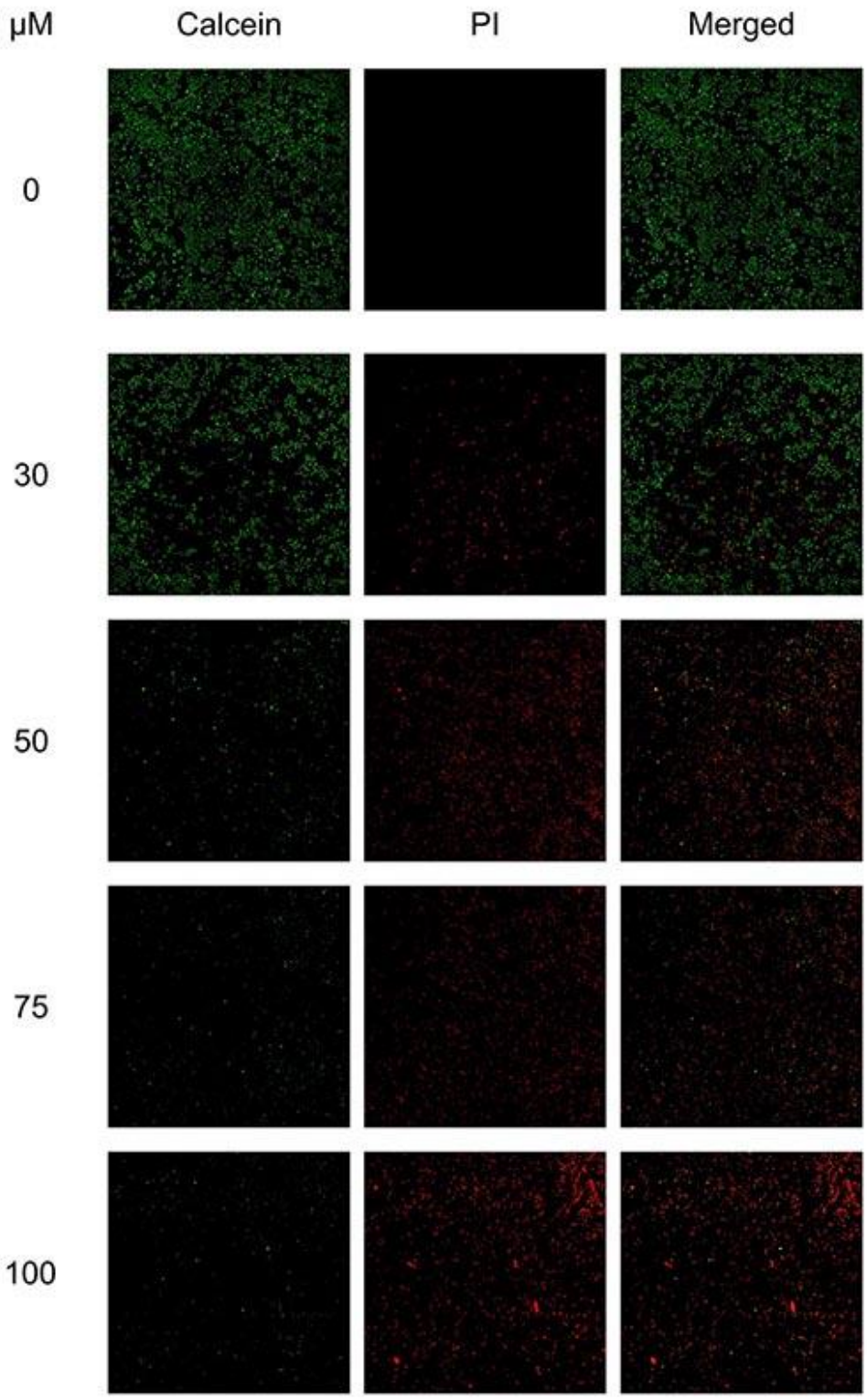


Figure S9. Representative fluorescent microscopic images of A549 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **3**.

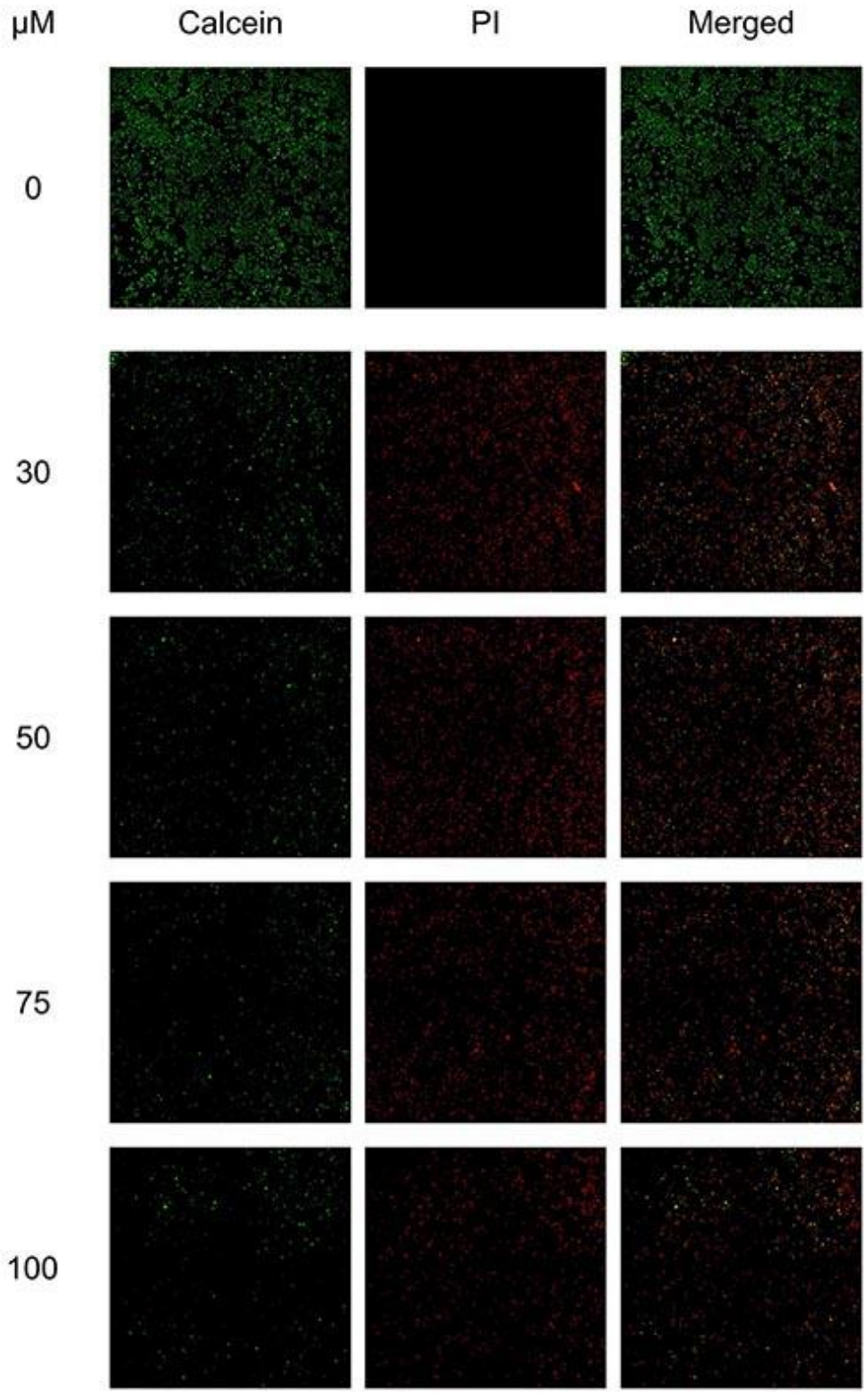


Figure S10. Representative fluorescent microscopic images of A549 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **4**.

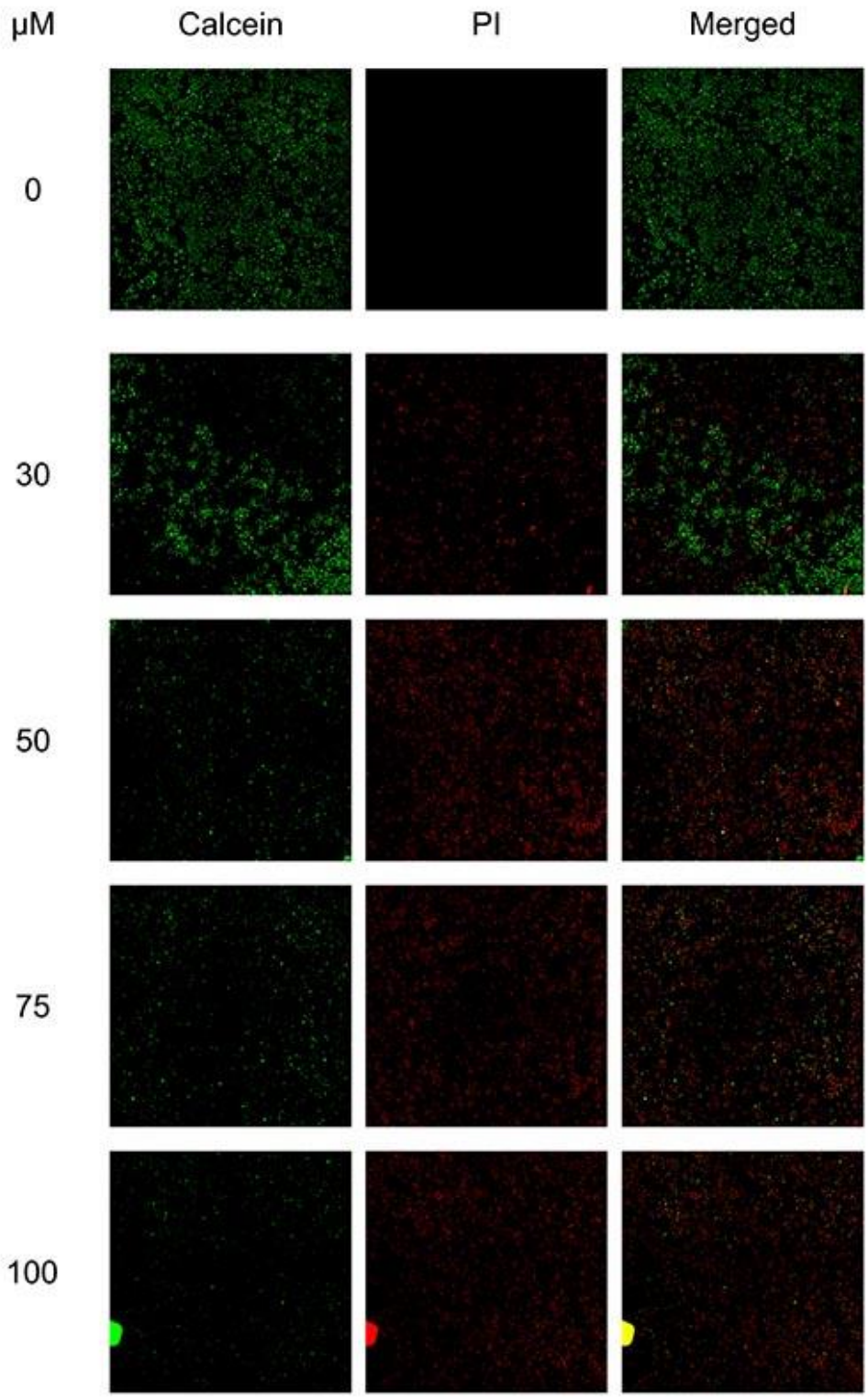


Figure S11. Representative fluorescent microscopic images of A549 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **5**.

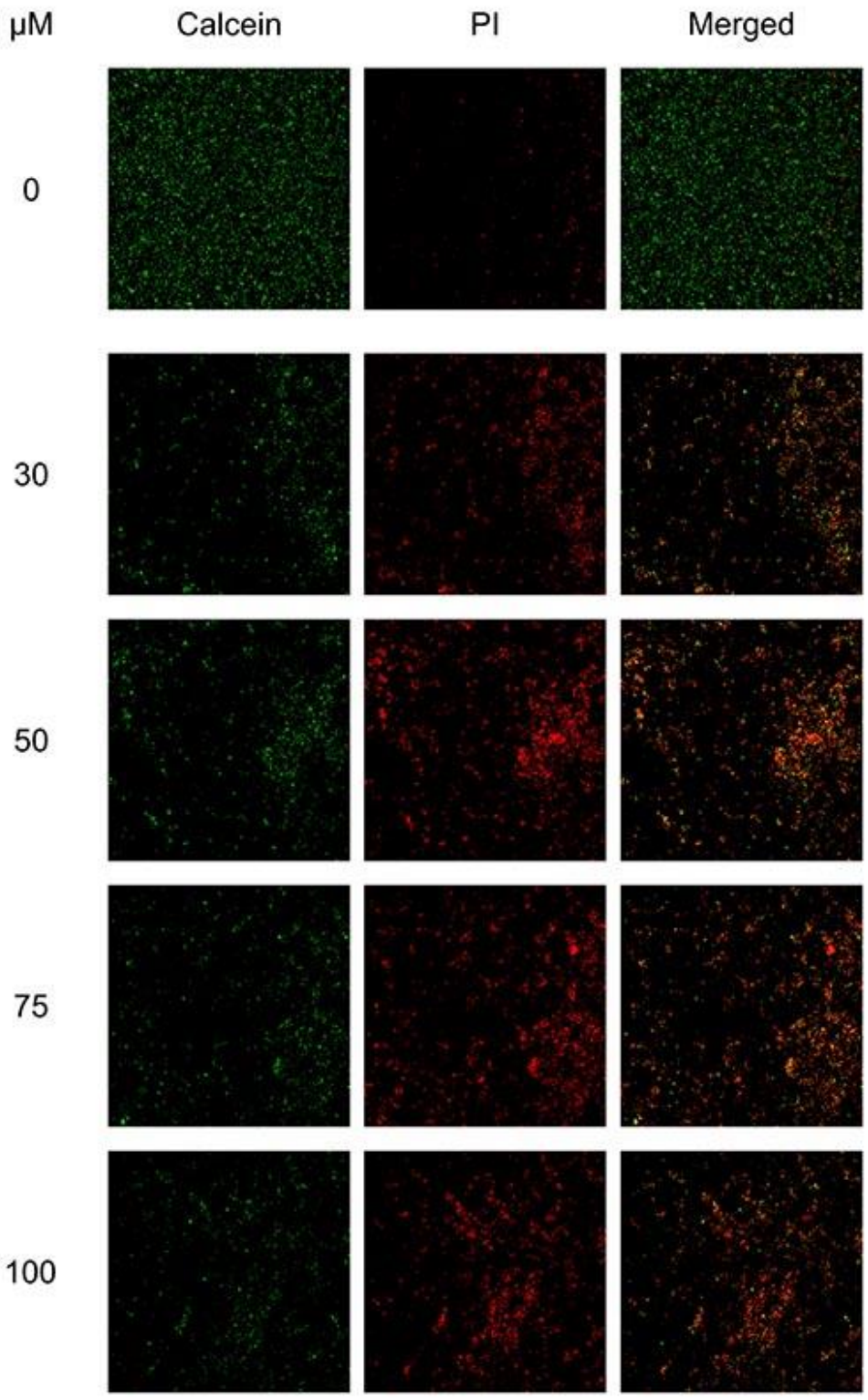


Figure S12. Representative fluorescent microscopic images of AsPC1 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **1**.

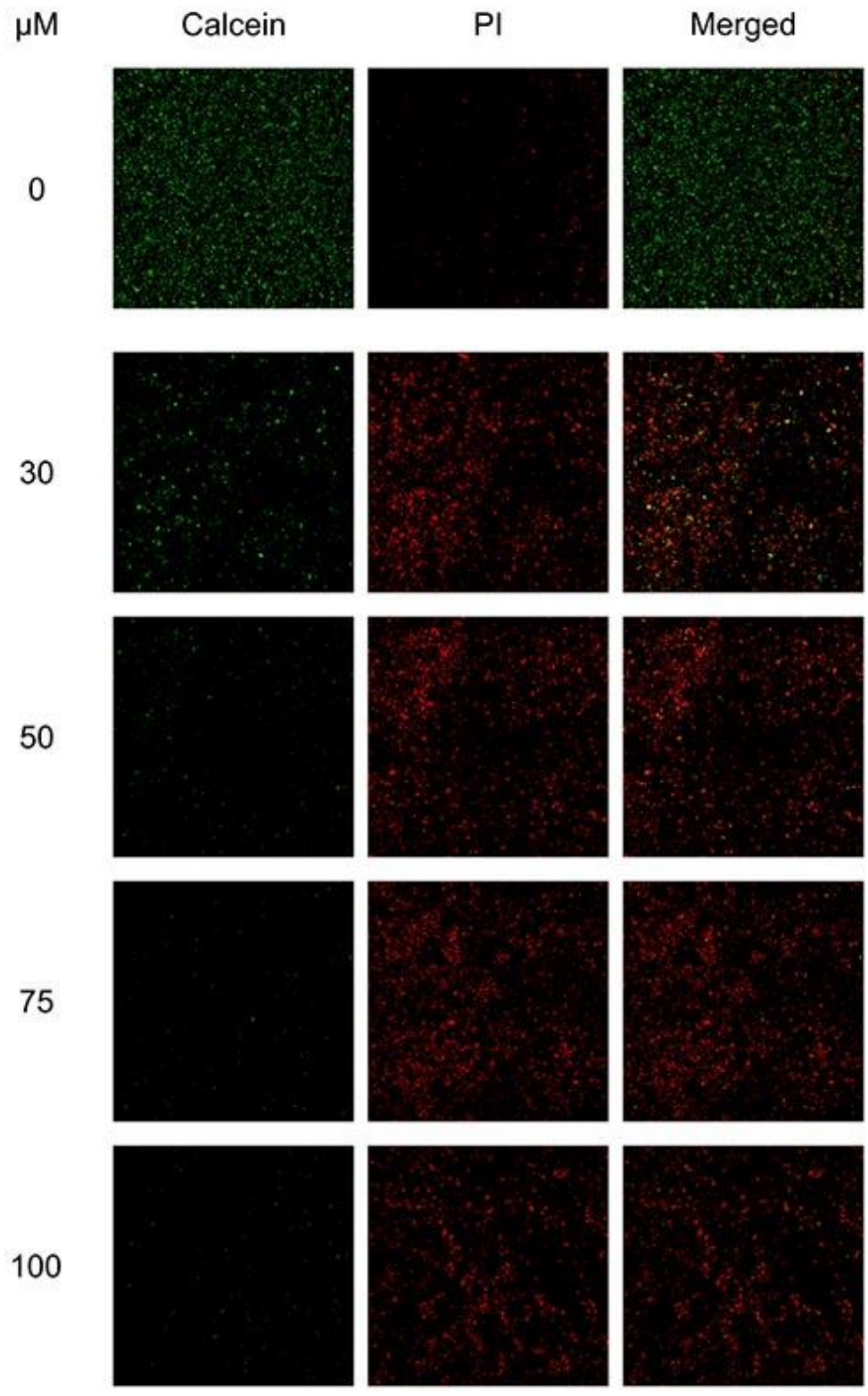


Figure S13. Representative fluorescent microscopic images of AsPC1 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **2**.

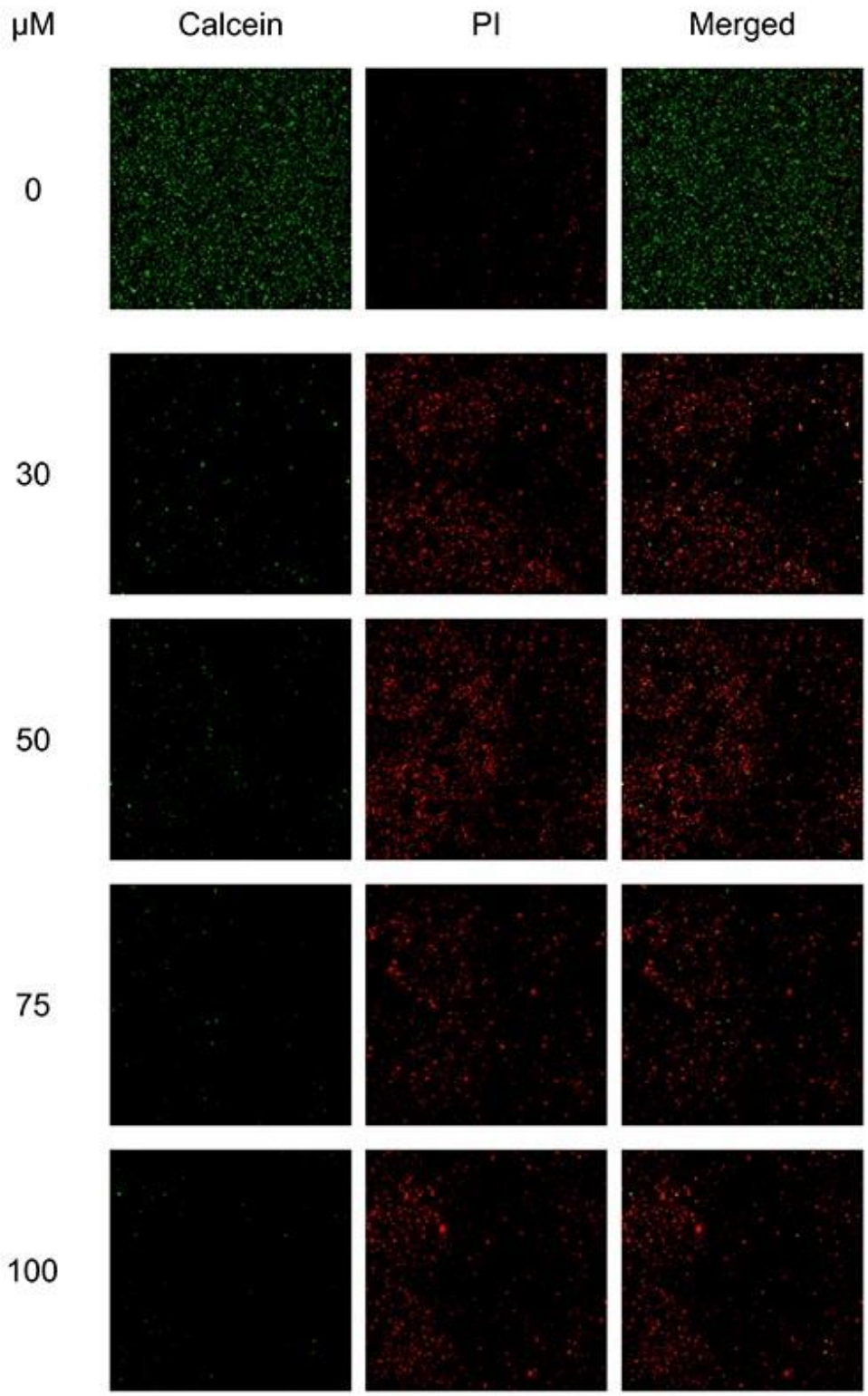


Figure S14. Representative fluorescent microscopic images of AsPC1 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **3**.

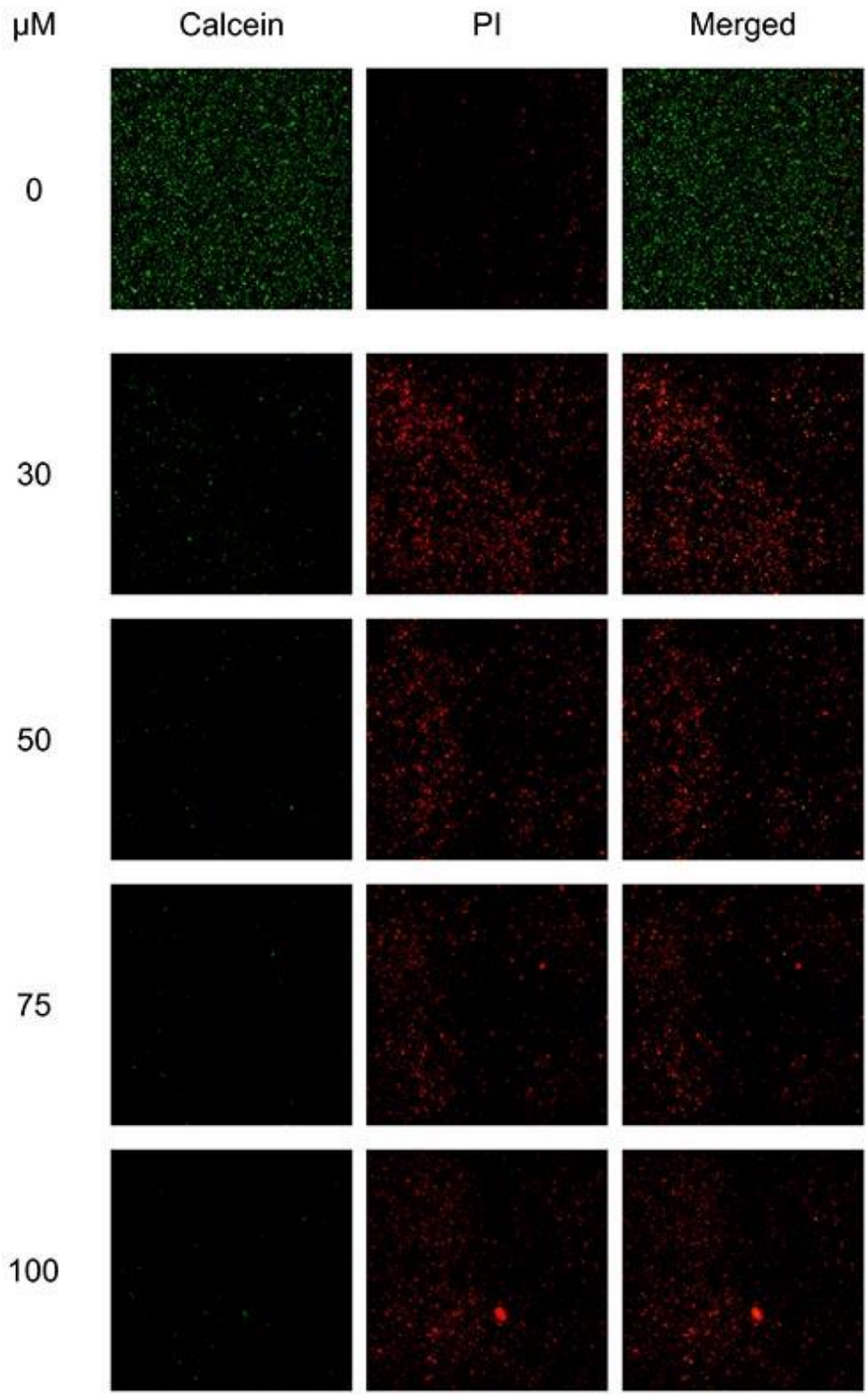


Figure S15. Representative fluorescent microscopic images of AsPC1 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **4**.

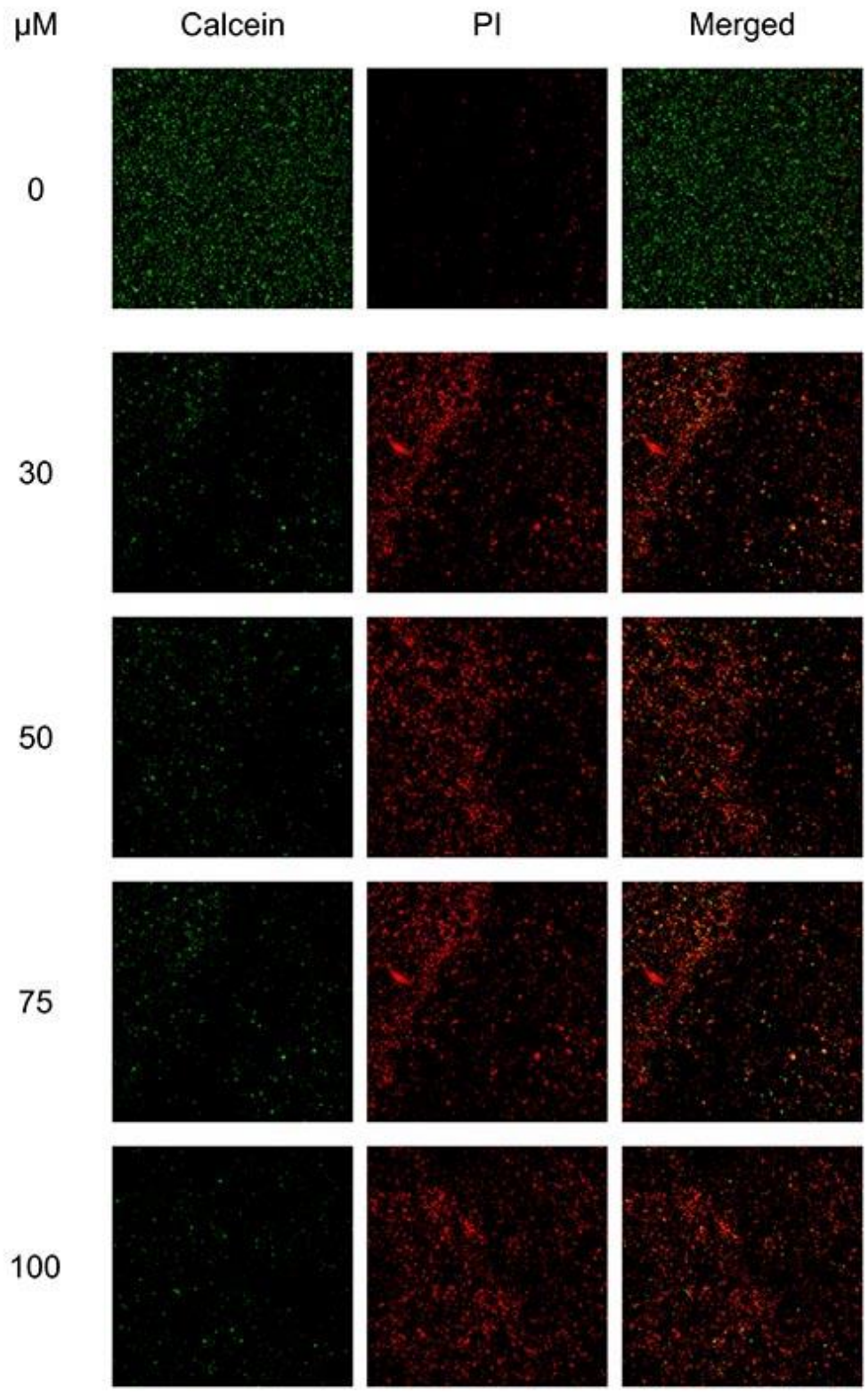


Figure S16. Representative fluorescent microscopic images of AsPC1 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **5**.

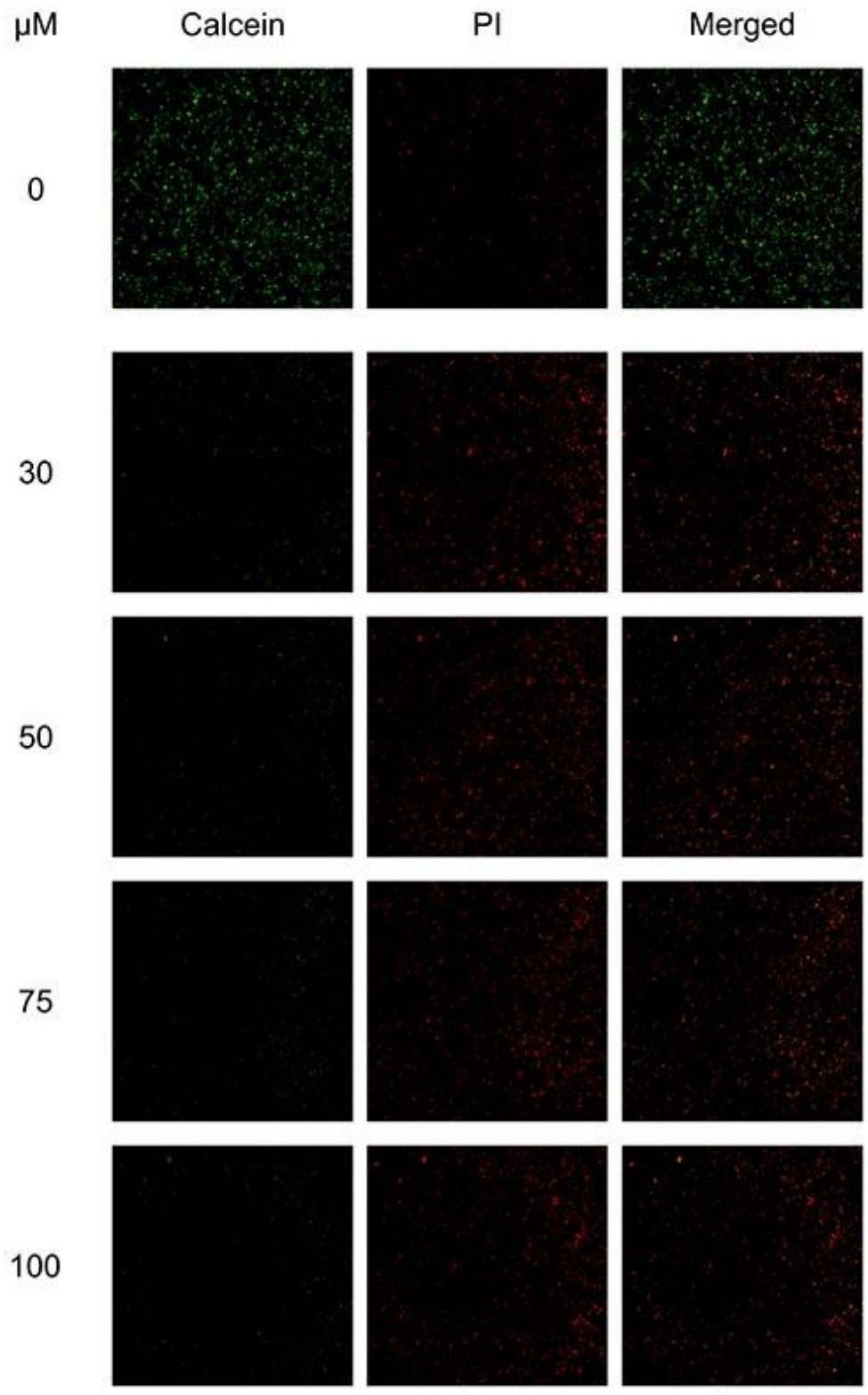


Figure S17. Representative fluorescent microscopic images of LoVo cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **1**.

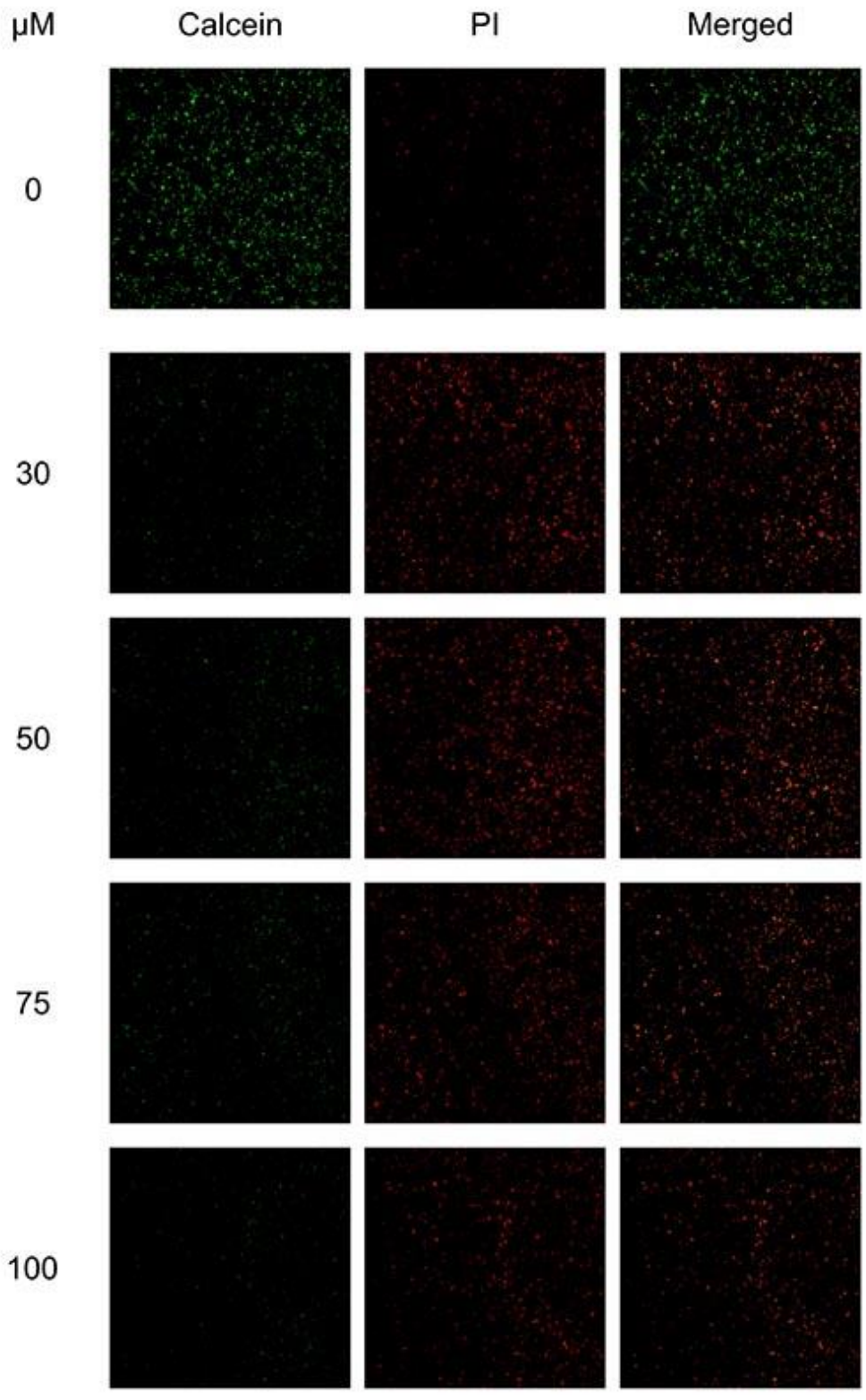


Figure S18. Representative fluorescent microscopic images of LoVo cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **2**.

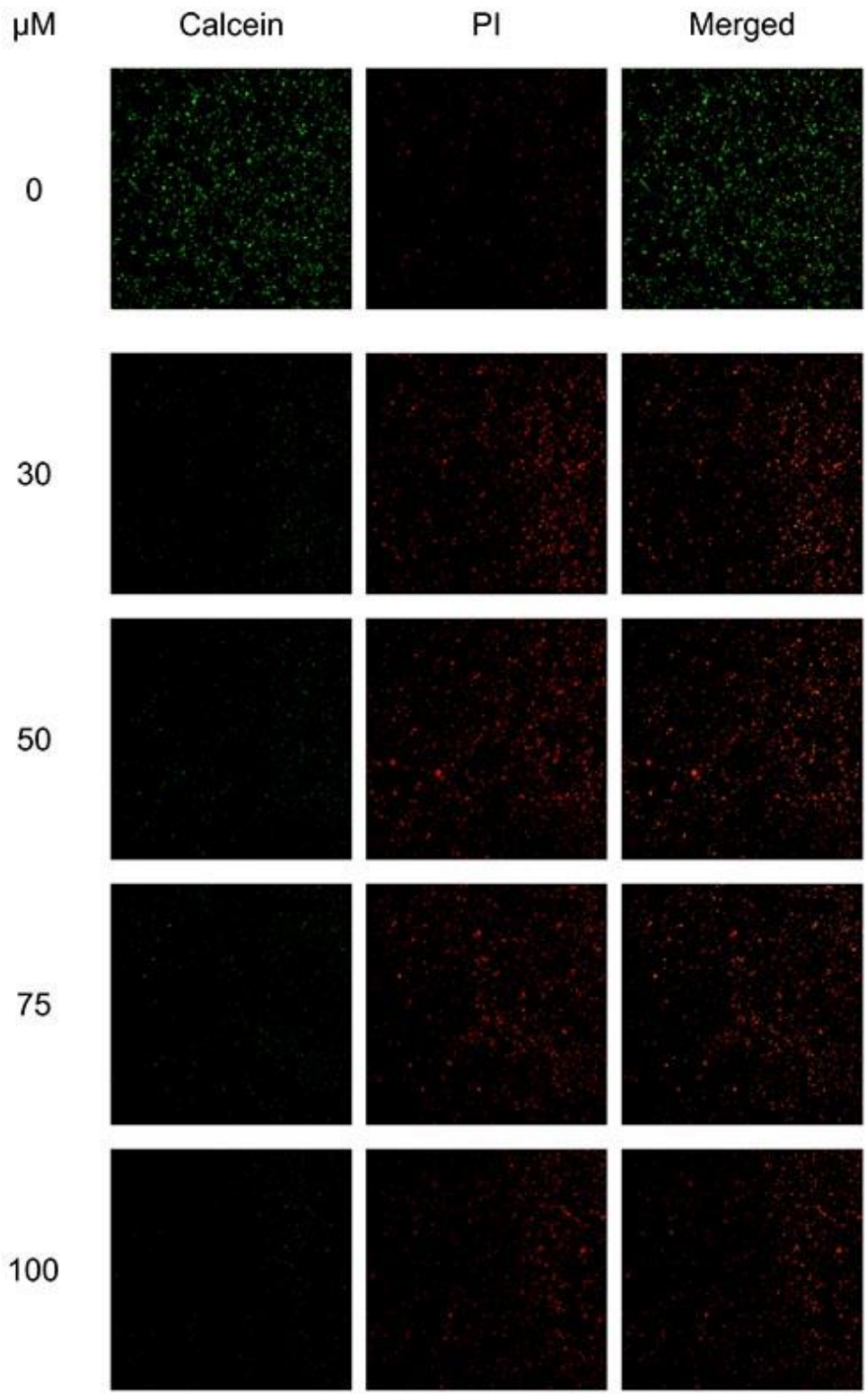


Figure S19. Representative fluorescent microscopic images of LoVo cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **3**.

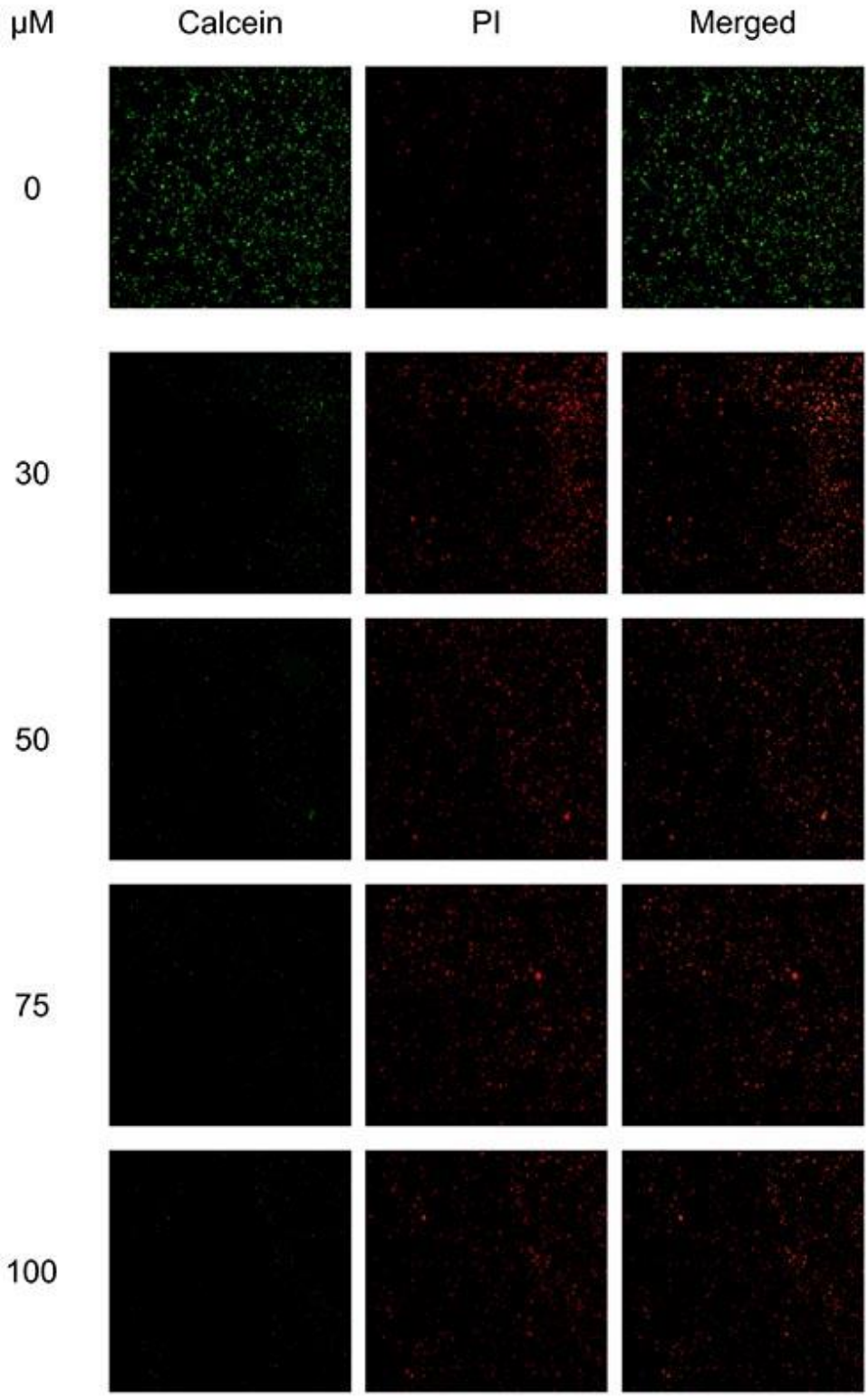


Figure S20. Representative fluorescent microscopic images of LoVo cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **4**.

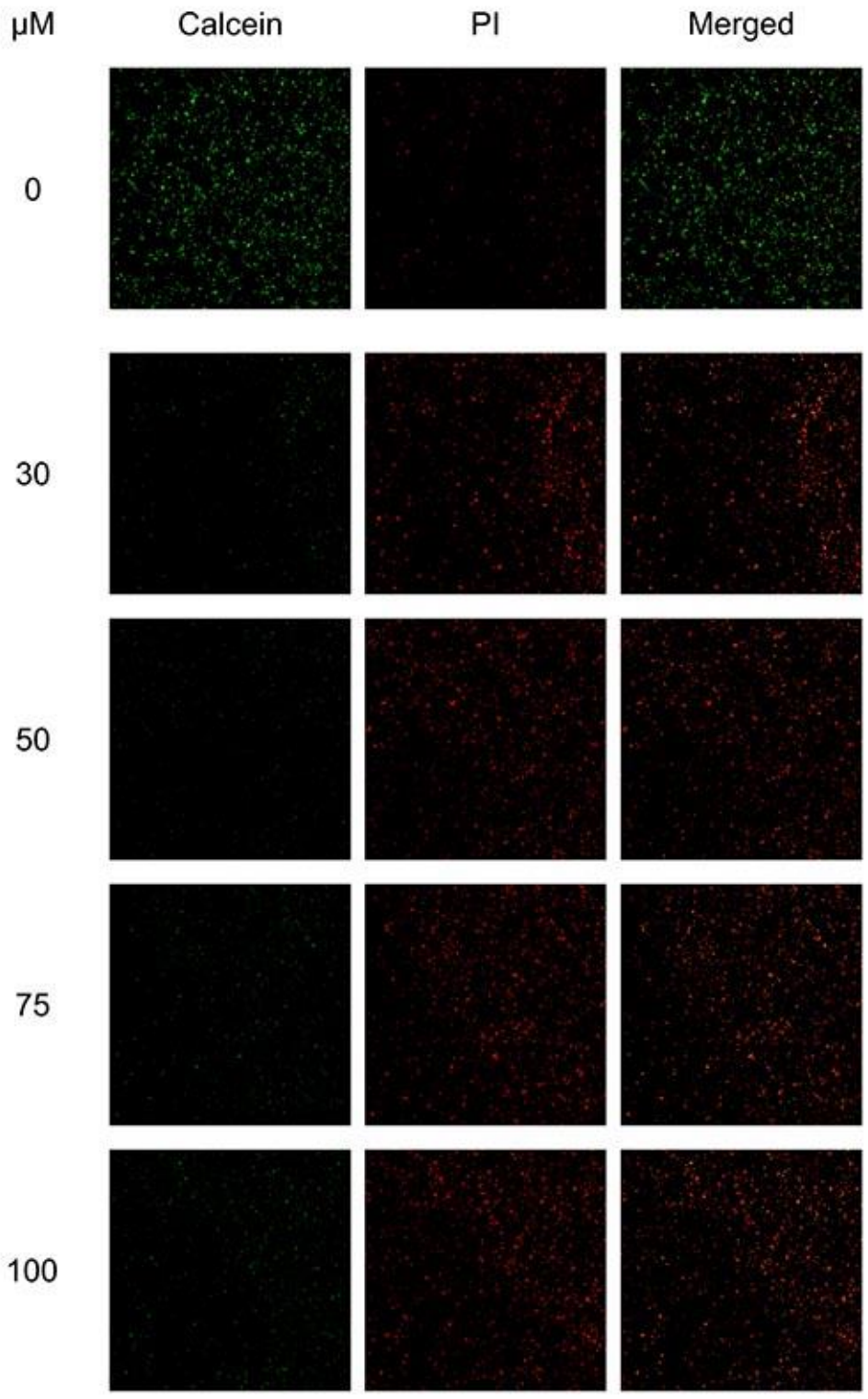


Figure S21. Representative fluorescent microscopic images of LoVo cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **5**.

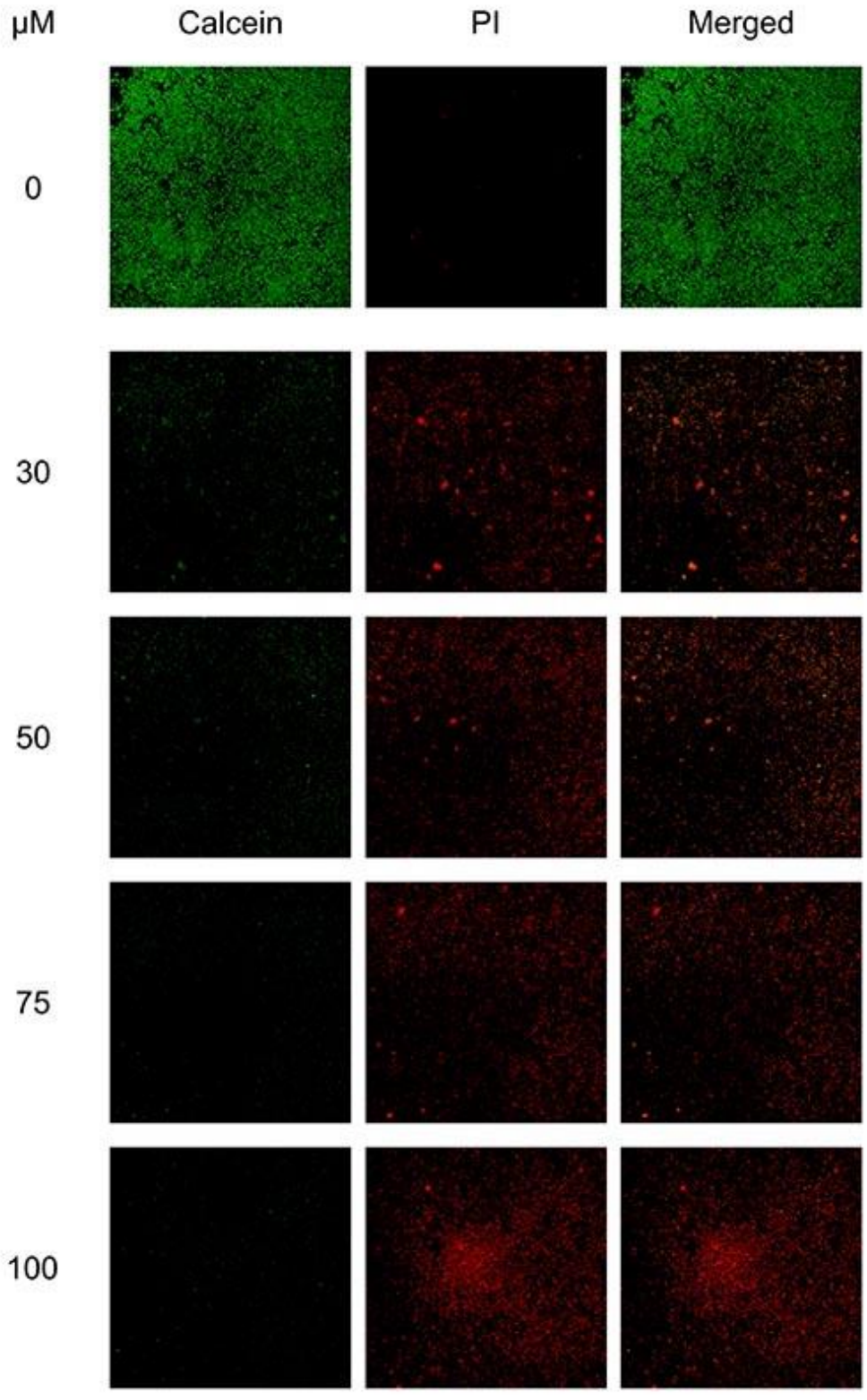


Figure S22. Representative fluorescent microscopic images of MCF7 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **1**.

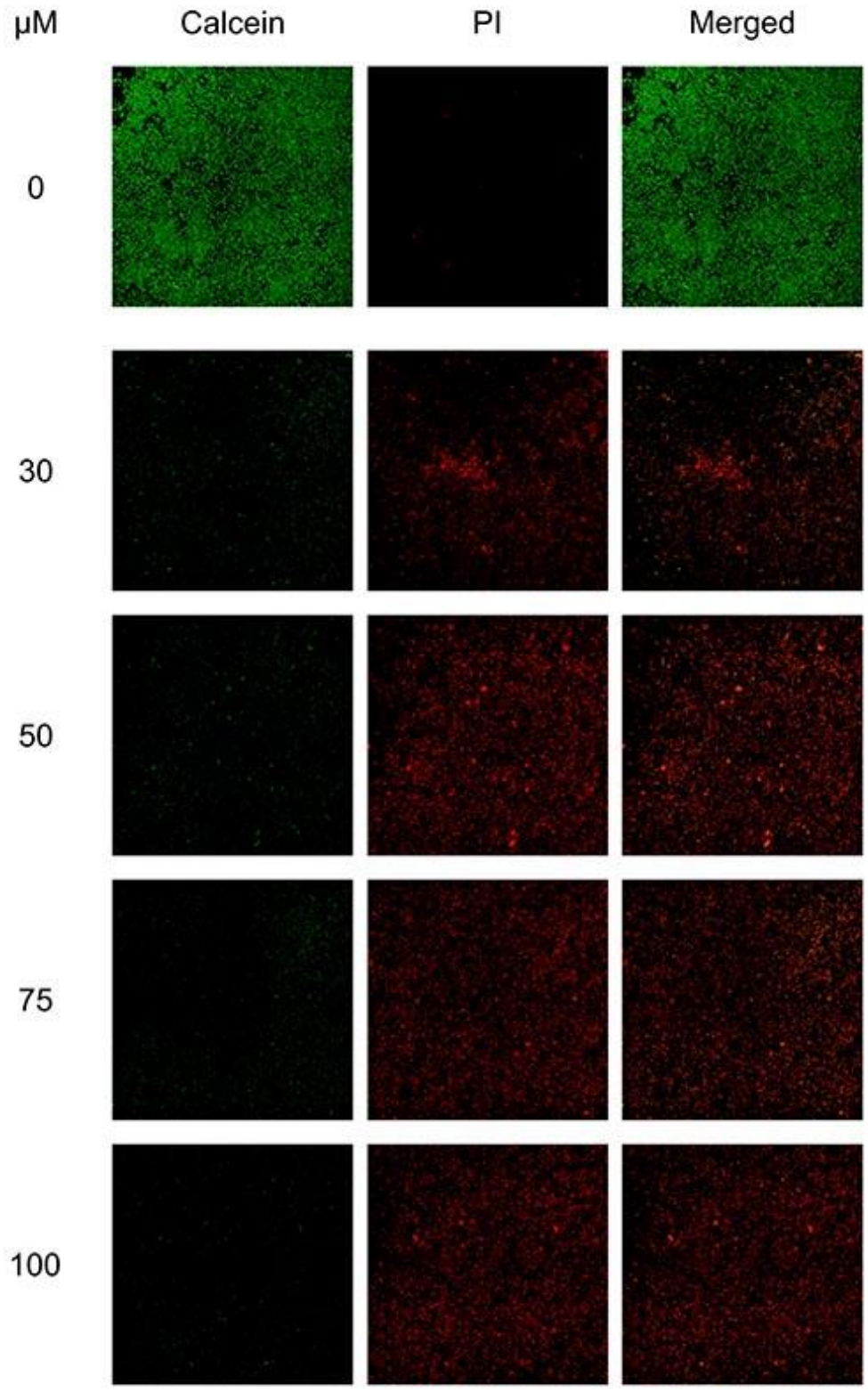


Figure S23. Representative fluorescent microscopic images of MCF7 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **2**.

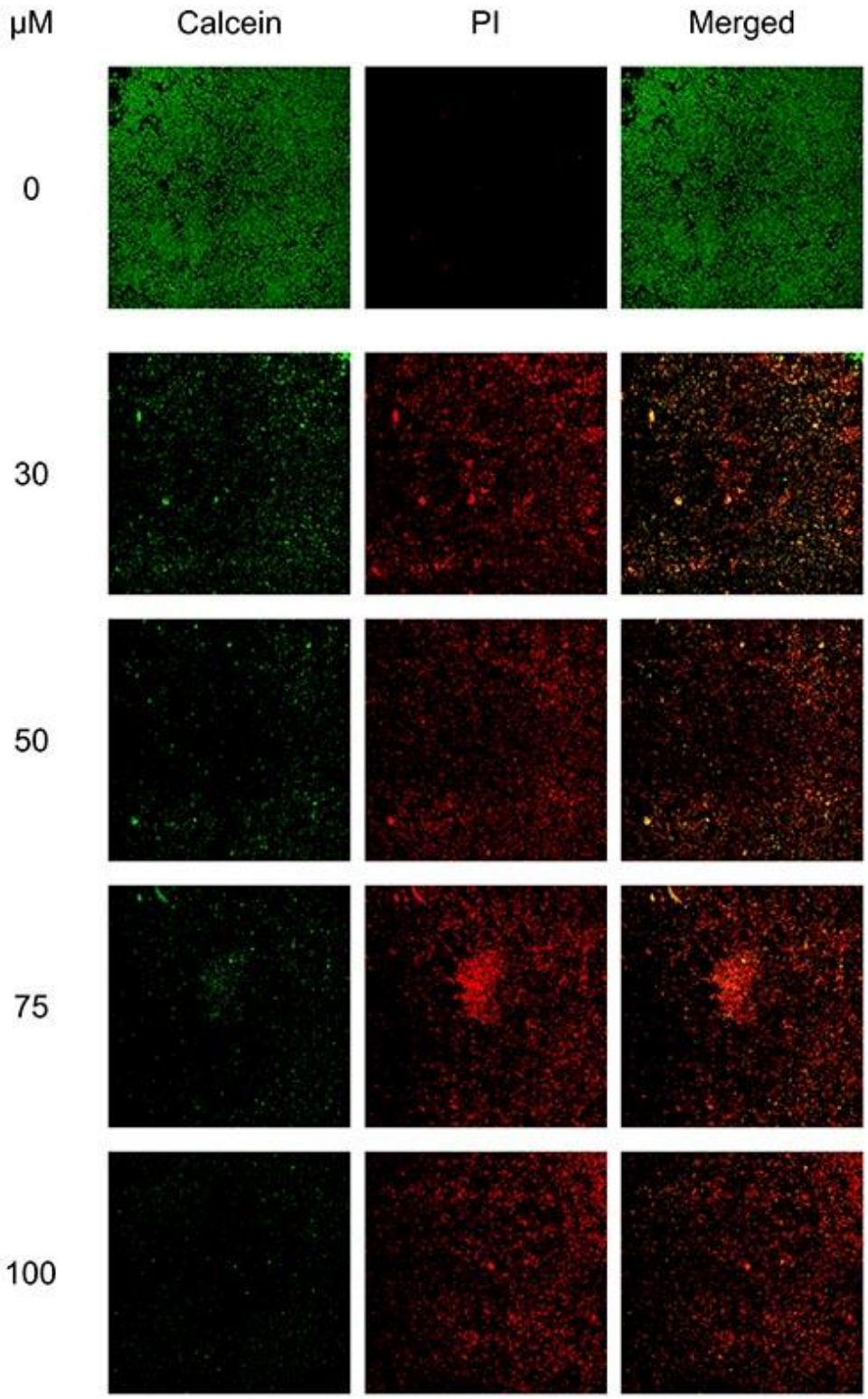


Figure S24. Representative fluorescent microscopic images of MCF7 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **3**.

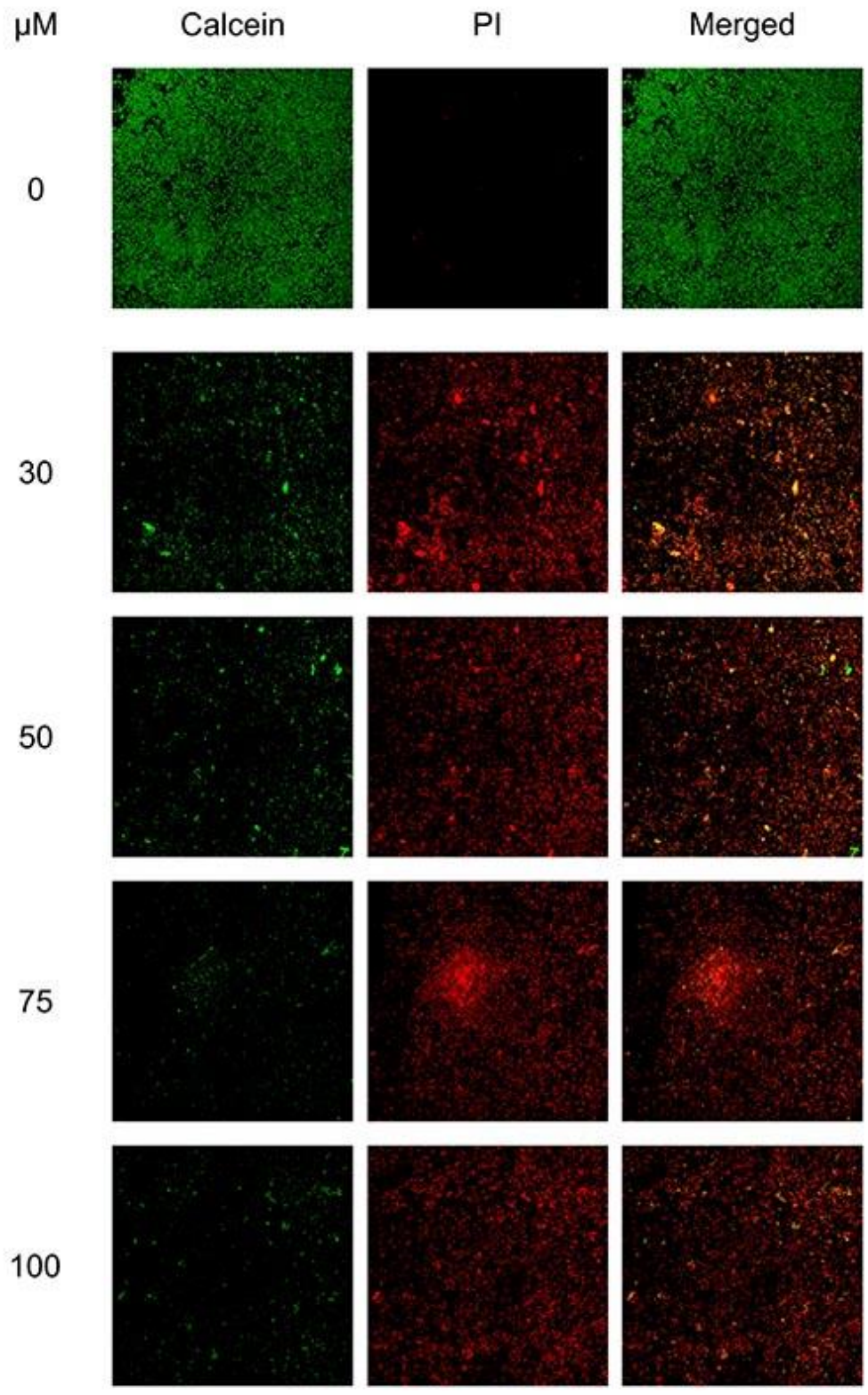


Figure S25. Representative fluorescent microscopic images of MCF7 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **4**.

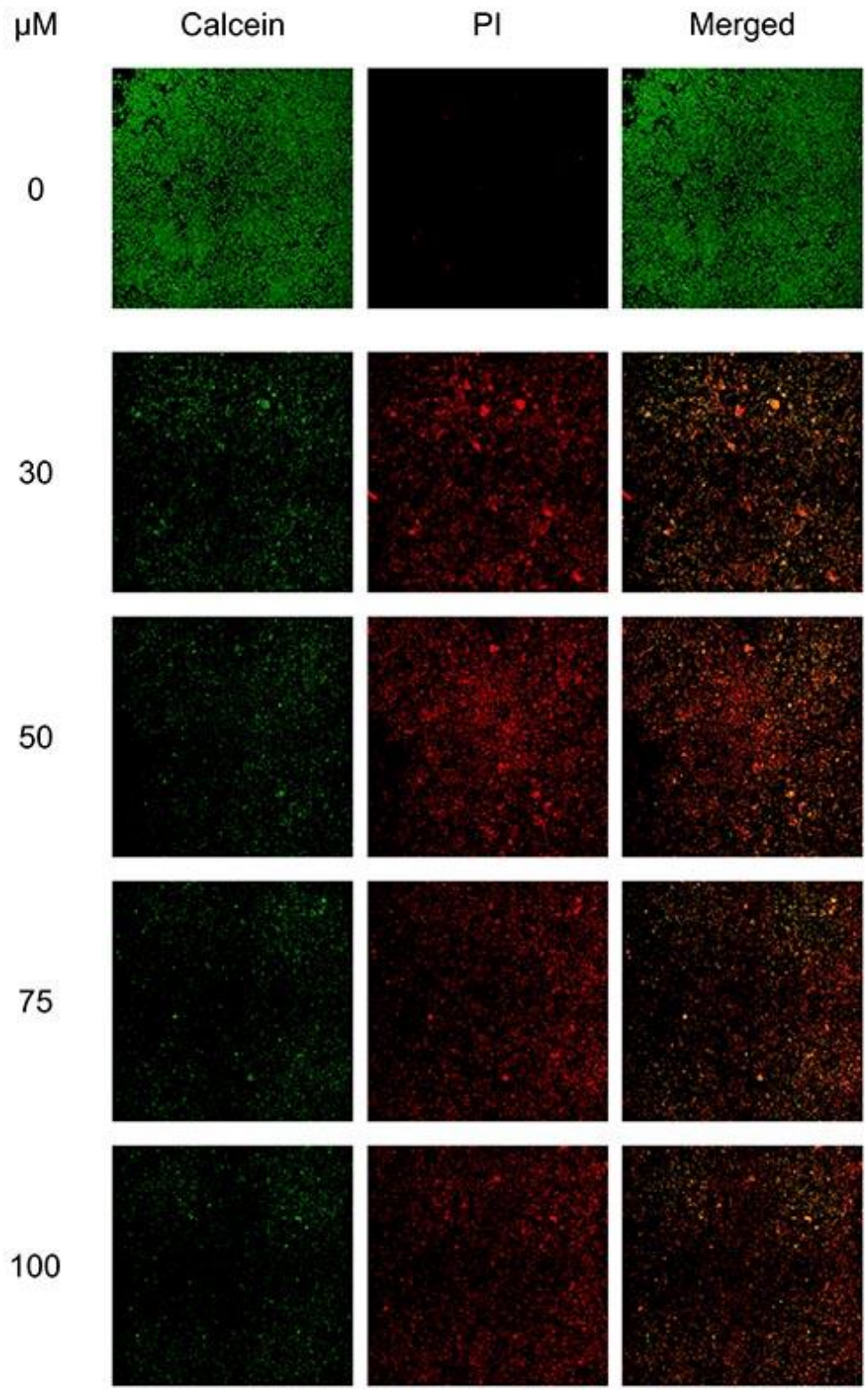


Figure S26. Representative fluorescent microscopic images of MCF7 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **5**.

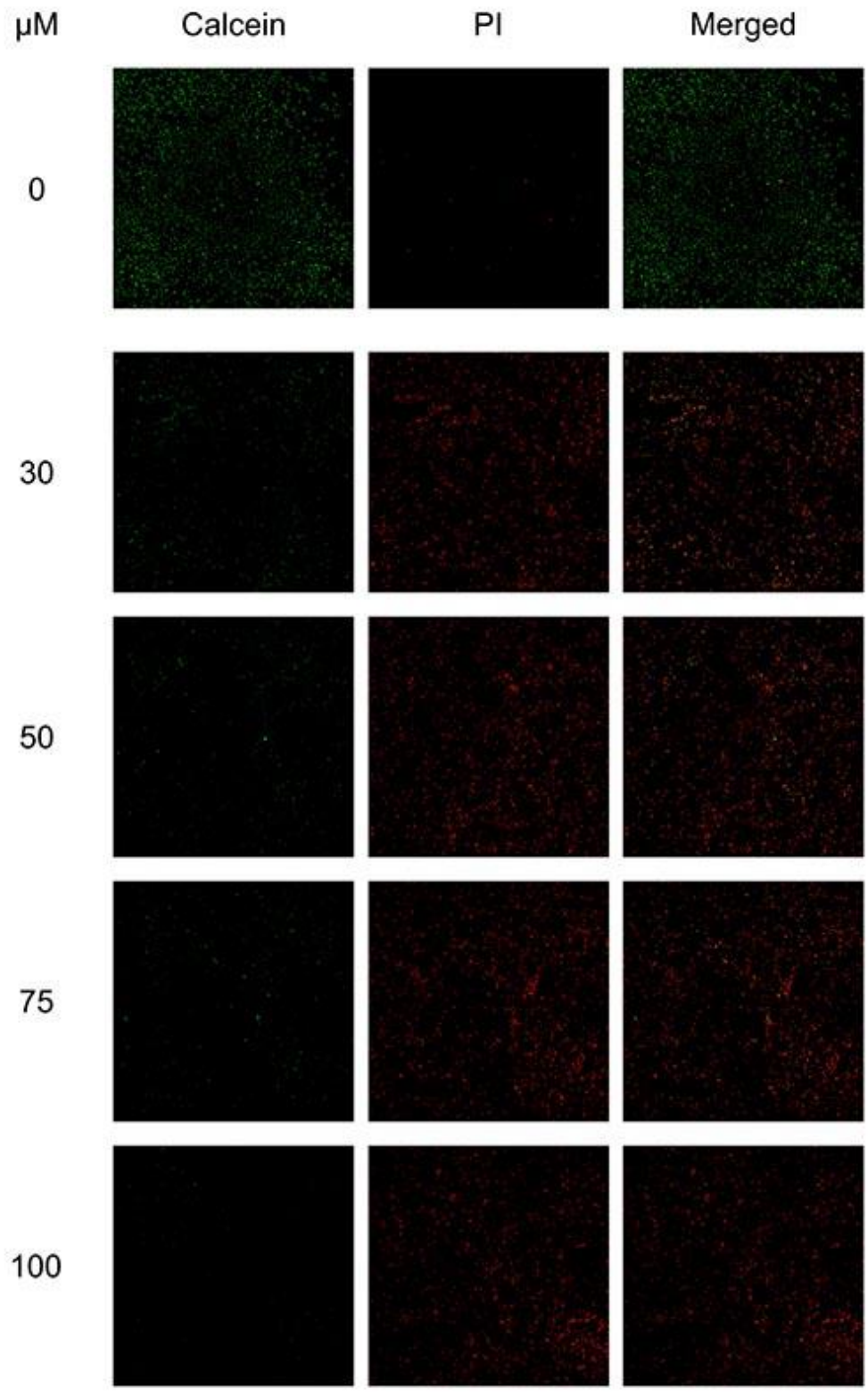


Figure S27. Representative fluorescent microscopic images of Skov-3 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **1**.

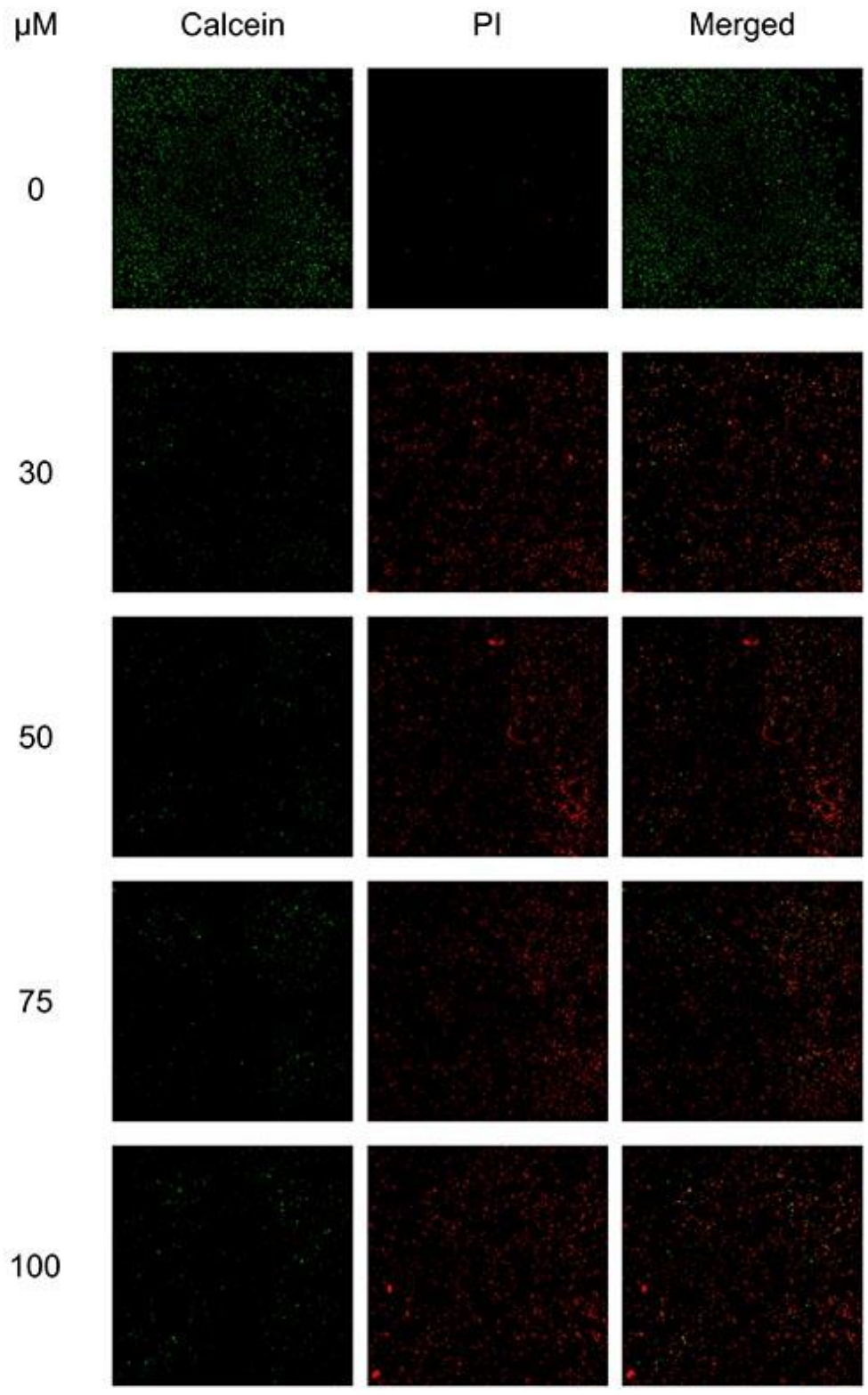


Figure S28. Representative fluorescent microscopic images of Skov-3 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **2**.

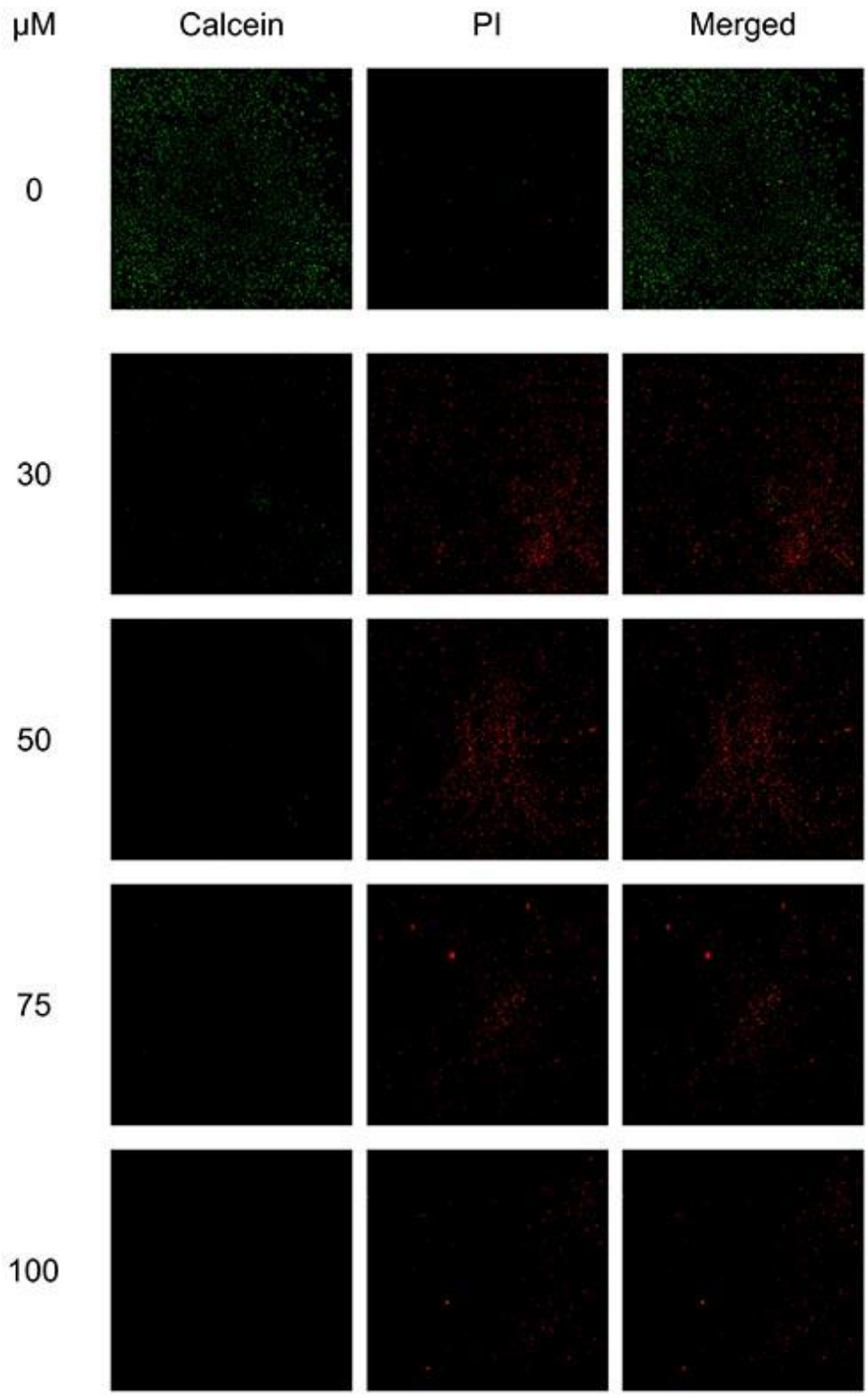


Figure S29. Representative fluorescent microscopic images of Skov-3 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **3**.

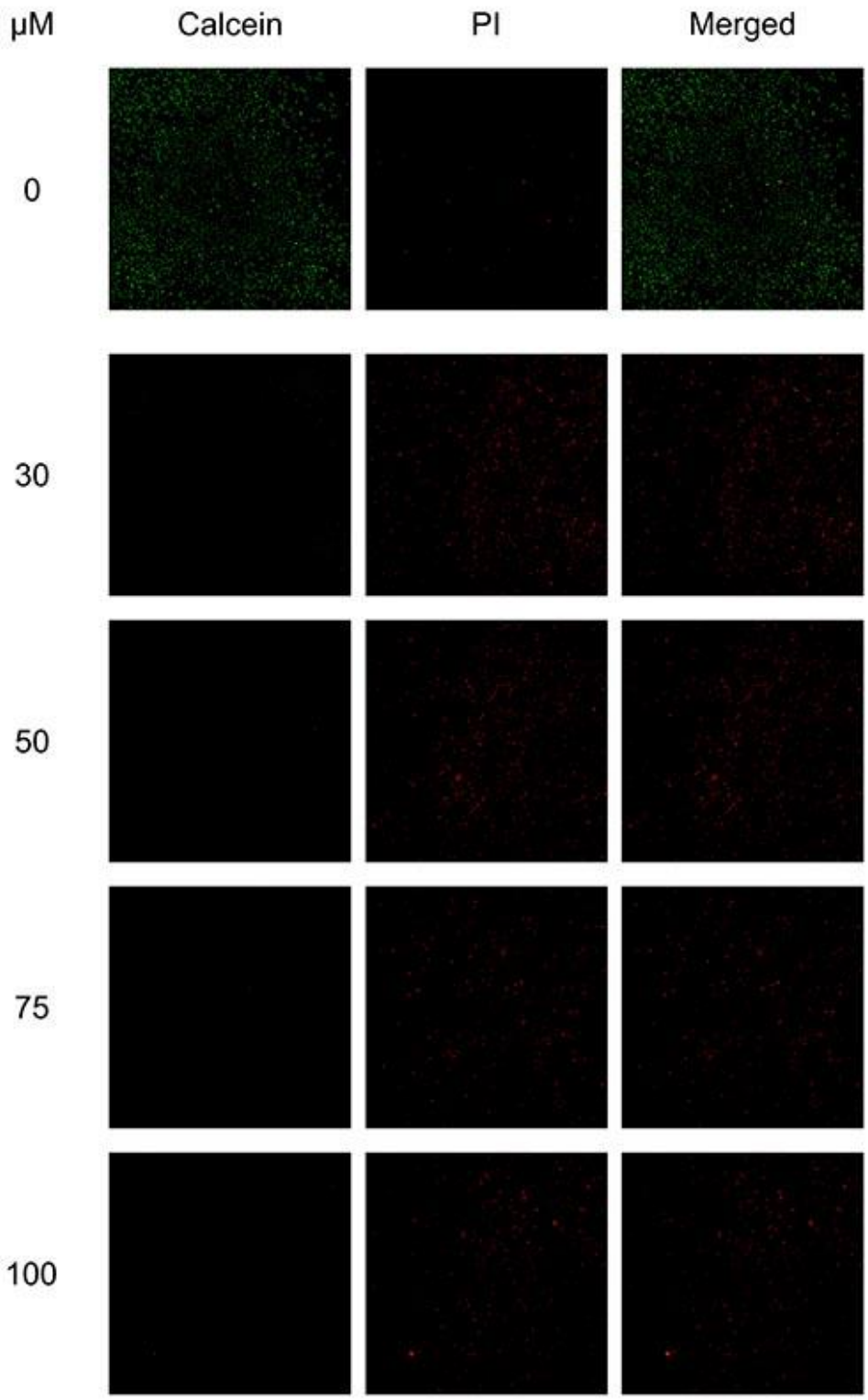


Figure S30. Representative fluorescent microscopic images of Skov-3 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **4**.

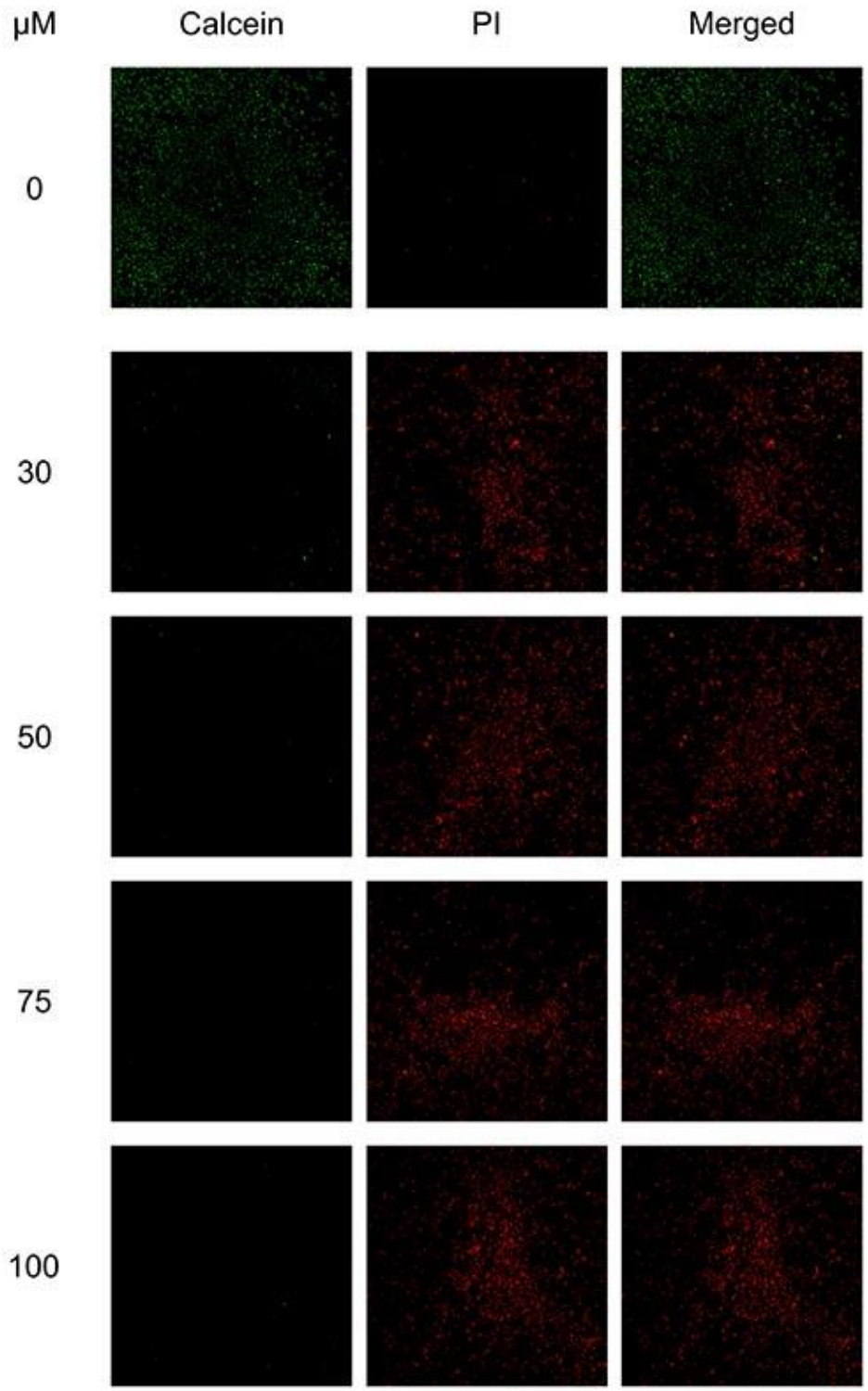


Figure S31. Representative fluorescent microscopic images of Skov-3 cells stained with Calcein AM and propidium iodide (PI) following the 24^{h} incubation with compound **5**.

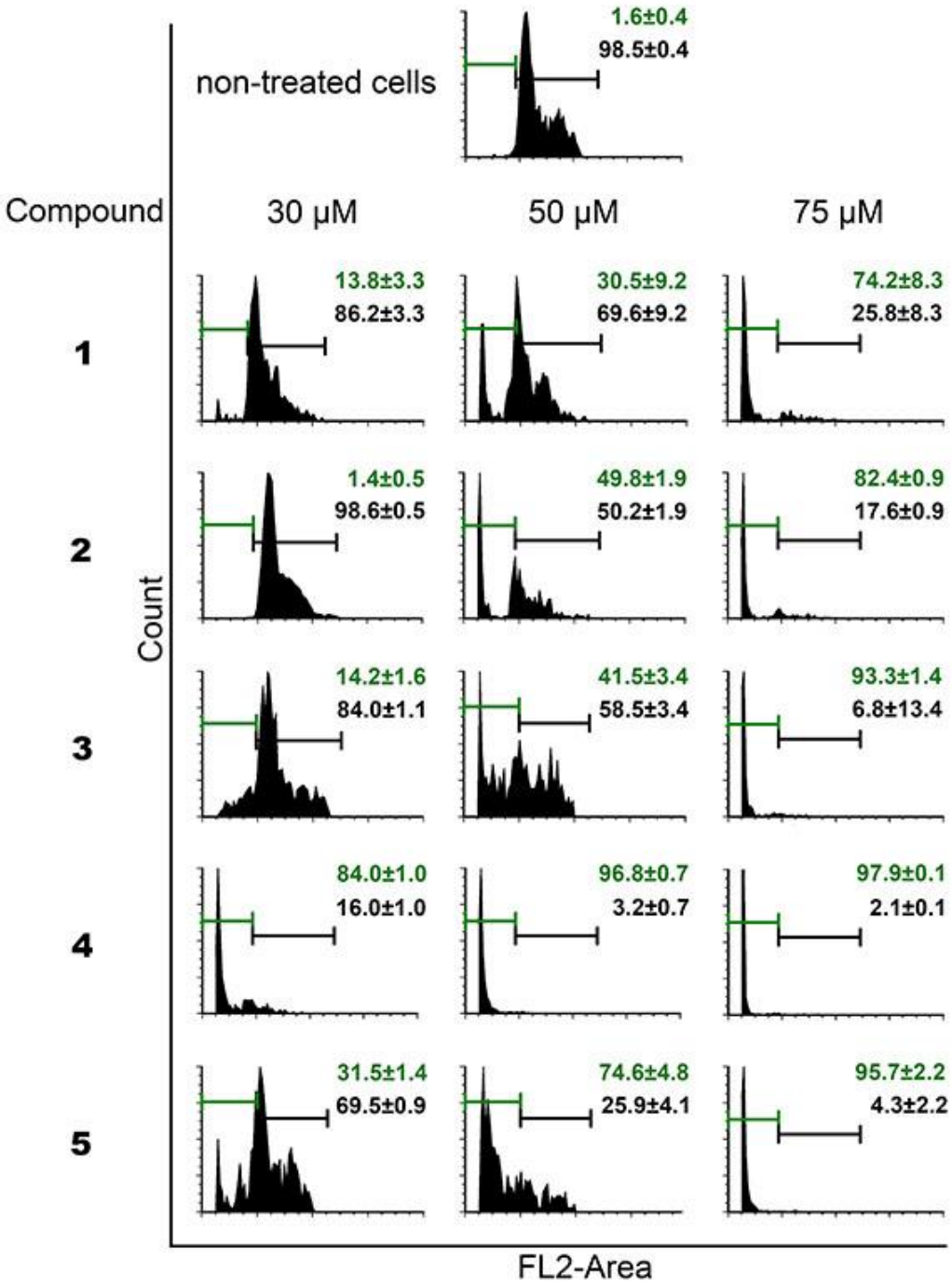


Figure 32. Sub-G0/G1 peaks that refers to cell death due to DNA fragmentation (apoptosis) in A549 cells subjected to compounds **1-5** for 24^{h}, computed as subpopulation relative to the number of total cells. Results are presented as the percentages of events at the Sub-G0/G1 population (green) and percentages of live cells distributed in phases of mitotic division (black). Each data point represents the mean ± SD of two replicates from independent experiments.

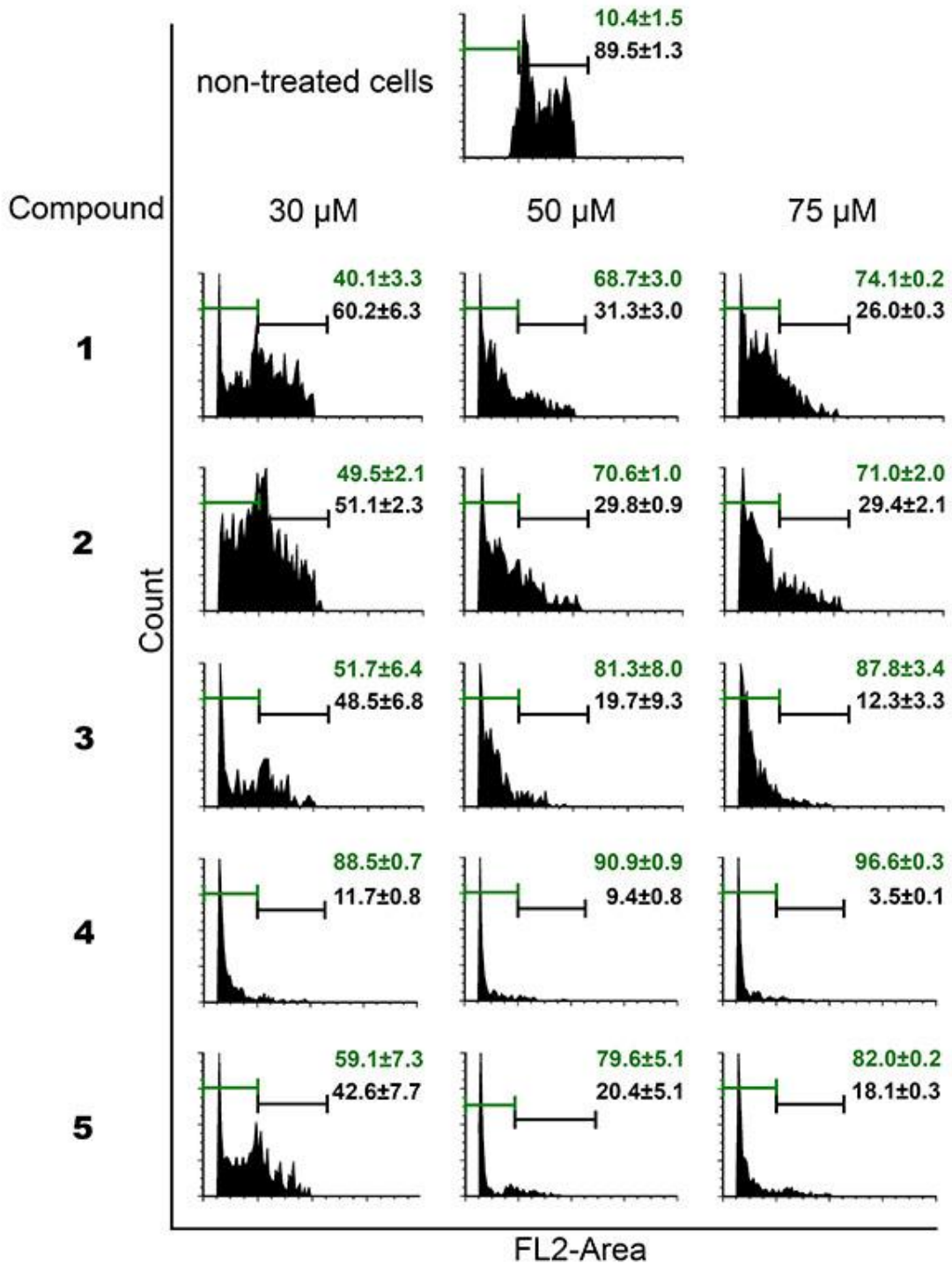


Figure 33. Sub-G0/G1 peaks that refers to cell death due to DNA fragmentation (apoptosis) in LoVo cells subjected to compounds **1**-**5** for 24^{h}, computed as subpopulation relative to the number of total cells. Results are presented as the percentages of events at the Sub-G0/G1 population (green) and percentages of live cells distributed in phases of mitotic division (black). Each data point represents the mean ± SD of two replicates from independent experiments.

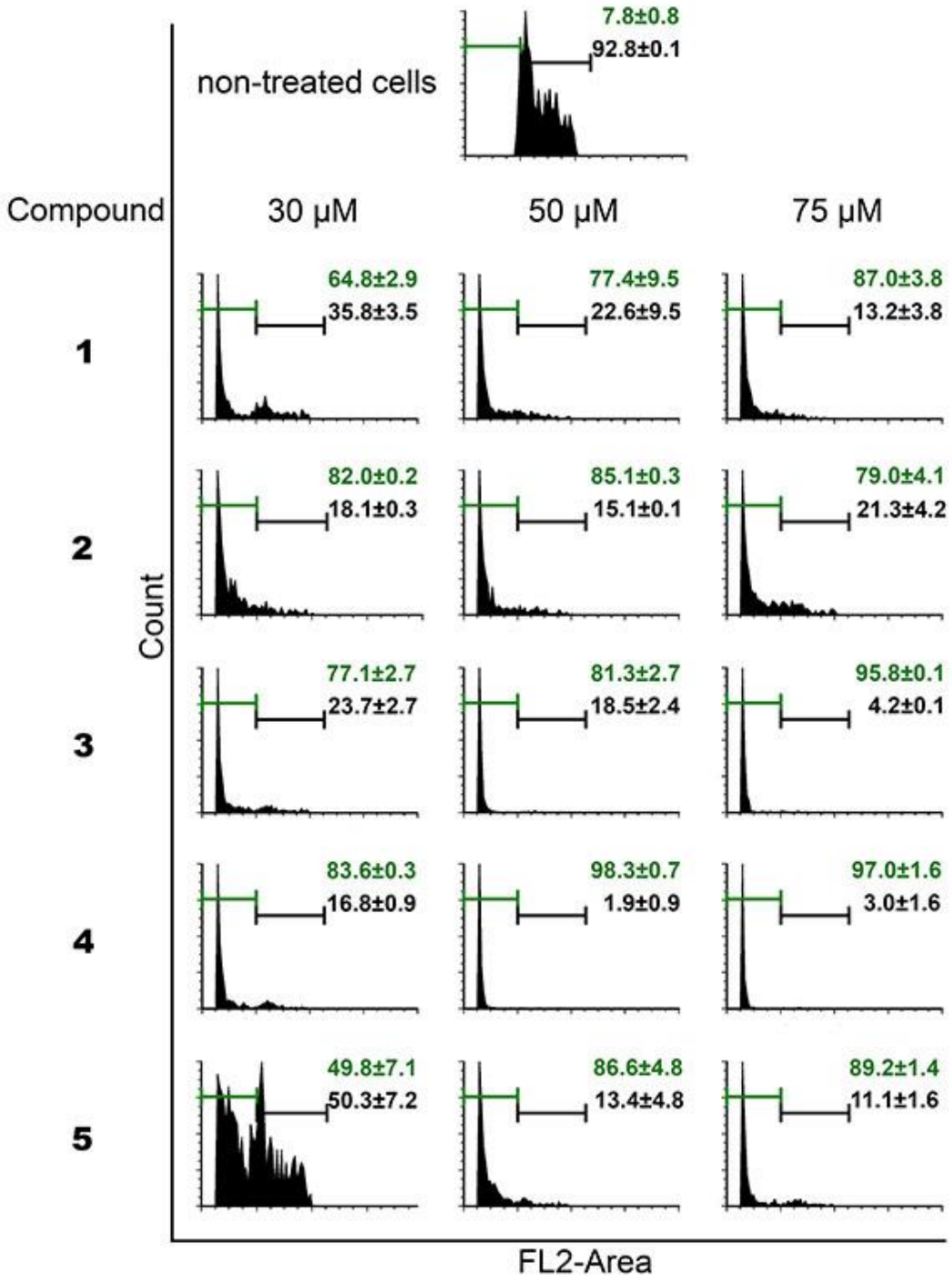


Figure 34. Sub-G0/G1 peaks that refers to cell death due to DNA fragmentation (apoptosis) in Skov-3 cells subjected to compounds **1**-**5** for 24^{h}, computed as subpopulation relative to the number of total cells. Results are presented as the percentages of events at the Sub-G0/G1 population (green) and percentages of live cells distributed in phases of mitotic division (black). Each data point represents the mean ± SD of two replicates from independent experiments.

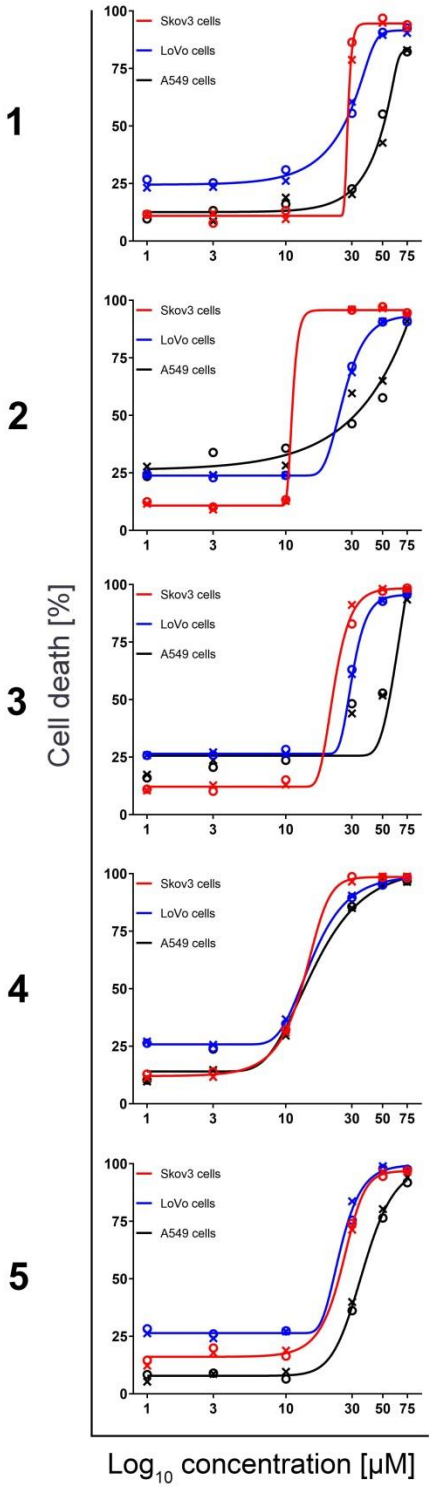


Figure S35. Concentration-response curves computed using the asymmetric five-parameter sigmoidal equation in GraphPad Prism 8 software, using results of Annexin V/propidium iodide staining from two independent experiments (circles and crosses).

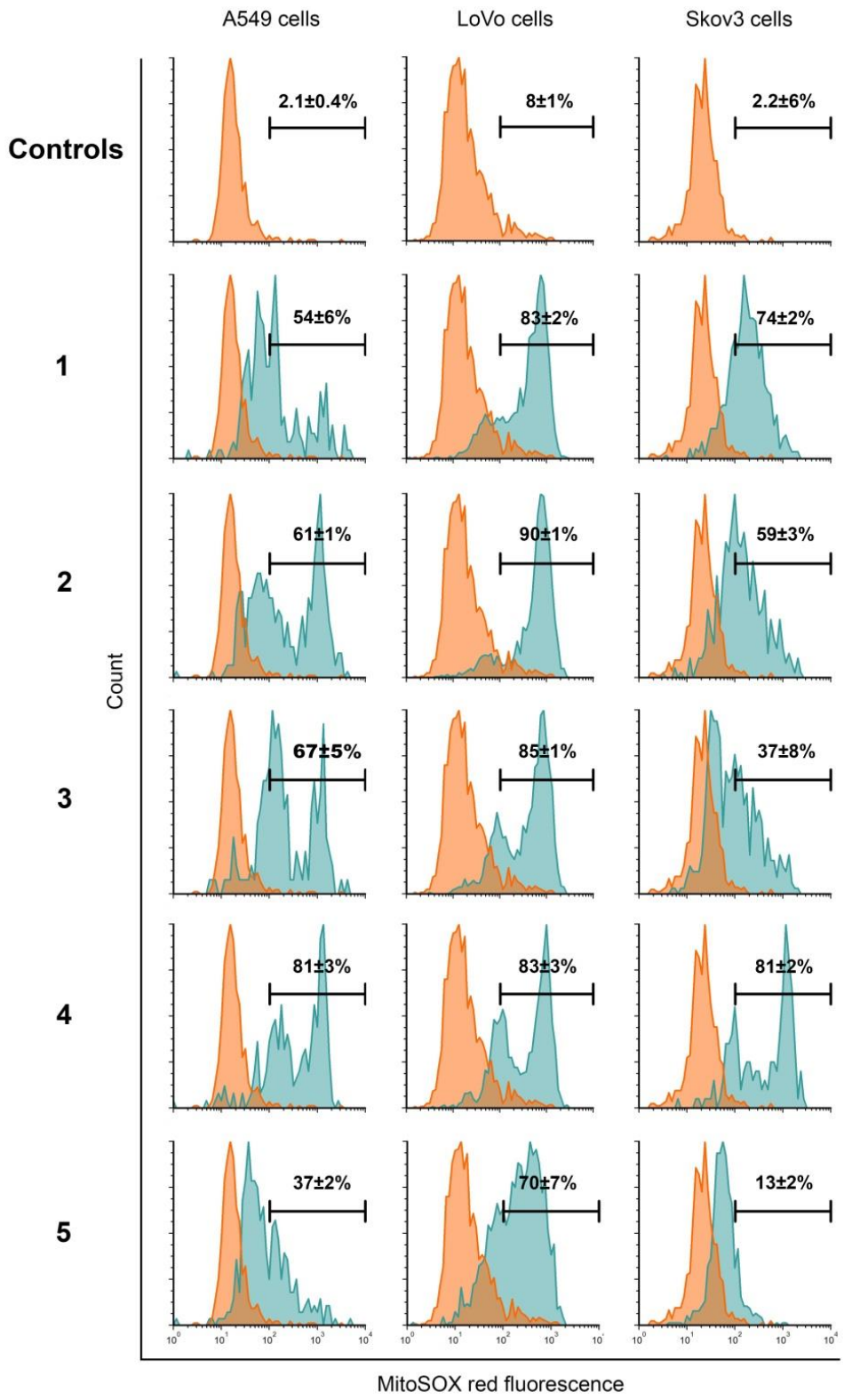


Figure S36. Representative histograms of cells stained with MitoSOX Red dye, performed at 6^{h} after treatment with compounds **1**-**5**. Results are expressed as the mean ± SD percentage of three independent experiments.