Figure S1. Examination of the antiproliferative property of 24a. A panel comprising tumor cell lines was examined against 24a following exposure for 72 h. (A) B38 is murine myeloma, BSC-1 is African green monkey kidney epithelial cells (from *Chlorocebus pygerythrus*, but was originally misidentified as from *Chlorocebus aethiops*; https://web.expasy.org/cellosaurus/CVCL_0607), HeLa is human cervical adenocarcinoma, MDA-MB-231 is human breast adenocarcinoma and GM04390A is normal fibroblast. Cells were seeded overnight in 96-well plates as to obtain ~10% confluence at the time of treatment. After 72 h, cell viability was measured by the nucleic acid-binding fluorescent dye, CyQUANT GR (Invitrogen; Thermo Fisher Scientific, Inc.), on a plate reader. (B) IC_{50} values estimated from A.

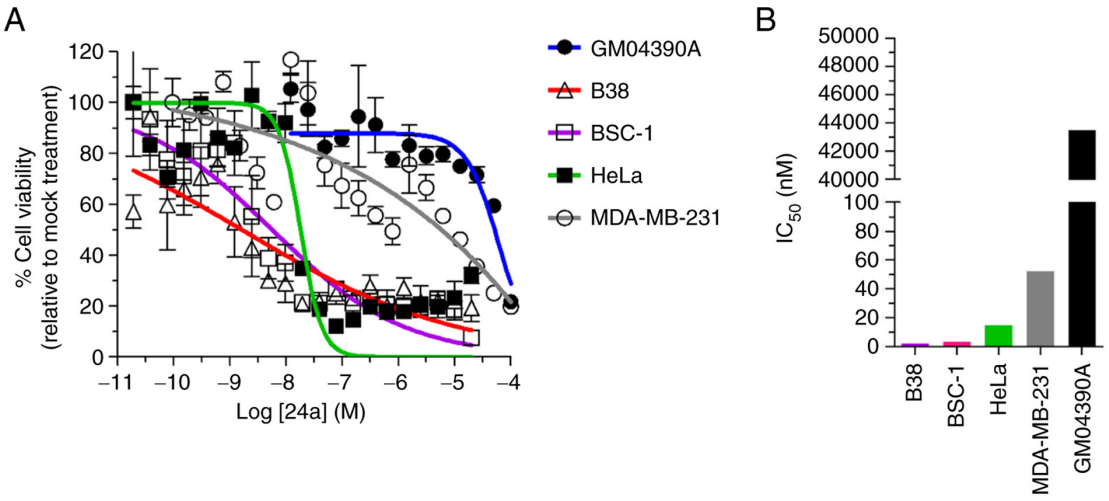


Figure S2. Cell cycle analysis of normal fibroblast and Detroit 562 cells exposed for 24 h to 24a. Representative histograms for the (A) normal fibroblast cell line GM04390 and (B) Detroit 562 cells are shown for the corresponding doses of 24a, with the extracted percentage of cells in different phases reported in Fig. 2A of the manuscript.

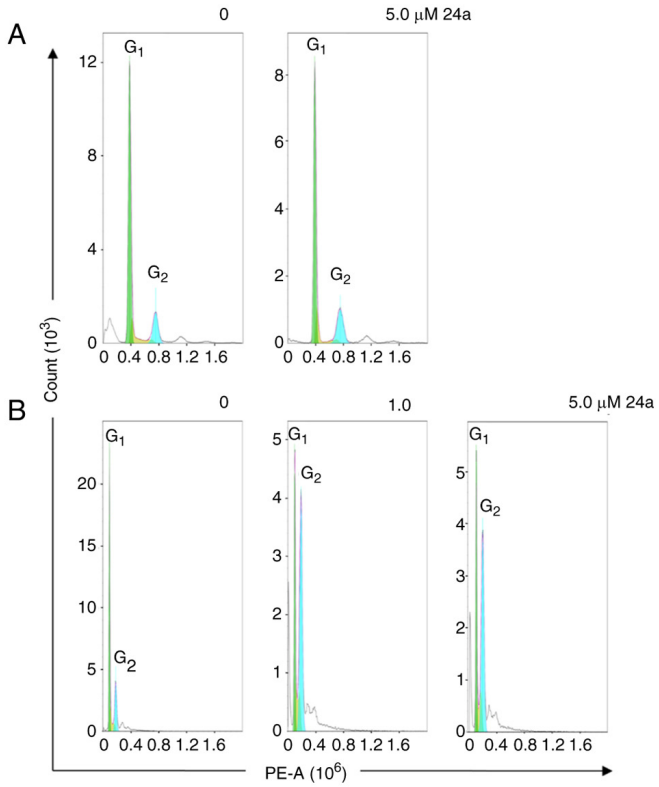


Figure S3. Examination of cell cycle progression of Fast FUCCI-expressing Detroit 562 cells following mock treatment (DMSO) shows no increase in PI staining. Shown are representative images after 24-h mock treatment. Scale bar=500 μm. Magnification, x5. PI, propidium iodide.

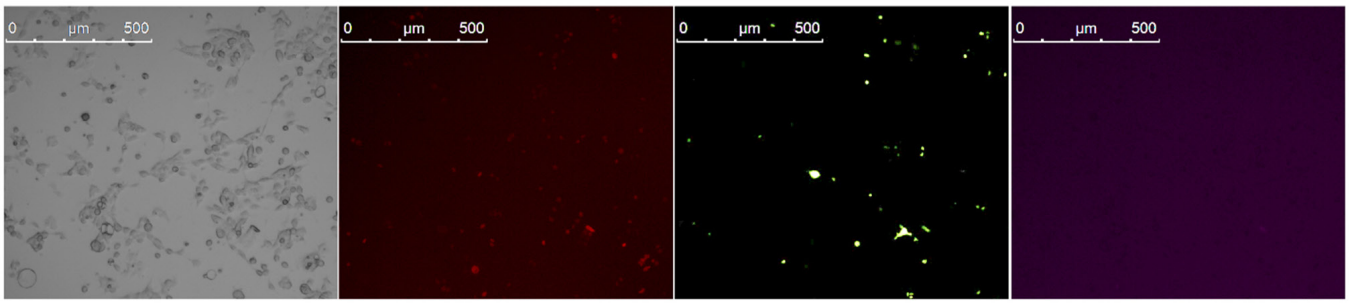
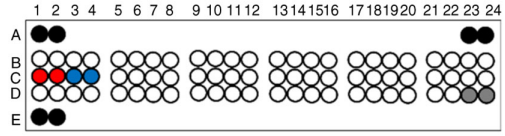


Figure S4. Human Apoptosis Array. (A) Array coordinates referring to the placement of antibody probes for the corresponding apoptosis-related proteins. Each nitrocellulose membrane contains control antibodies spotted in duplicate. (B) Chemiluminescence detection. Membranes were exposed simultaneously for 20 min and the chemiluminescence spots were converted to pixel densities. After subtraction of the signals from the PBS control, the results of the 24a treatments were compared with the DMSO treatment. DR4 and DR5 are shown boxed. DR, death receptor.

A



Coordinate	ID	Coordinate	ID
A1,A2	Reference spots	C13,C14	HO-2/HMOX2
A23,A24	Reference spots	C15,C16	HSP27
B1,B2	Bad	C17,C18	HSP60
B3,B4	Bax	C19,C20	HSP70
B5,B6	Bcl-2	C21,C22	HTRA2/Omi
B7,B8	Bcl-x	C23,C24	Livin
B9,B10	Pro-caspase-3	D1,D2	PON2
B11,B12	Cleaved caspase-3	D3,D4	p21/CIP1/CDKN1A
B13,B14	Catalase	D5,D6	p27/Kip1
B15,B16	cIAP-1	D7,D8	Phospho-p53 (S15)
B17,B18	cIAP-2	D9,D10	Phospho-p53 (S46)
B19,B20	Claspin	D11,D12	Phospho-p53 (S392)
B21,B22	Clusterin	D13,D14	Phospho-Rad17 (S635)
B23,B24	Cytochrome c	D15,D16	SMAC/Diablo
C1,C2	TRAIL R1/DR4	D17,D18	Survivin
C3,C4	TRAIL R2/DR5	D19,D20	TNF RI/TNFRSF1A
C5,C6	FADD	D21,D22	XIAP
C7,C8	Fas/TNFRSF6/CD95	D23,D24	PBS (negative control)
C9,C10	HIF-1α	E1,E2	Reference spots
C11,C12	HO-1/HMOX1/HSP32		

B

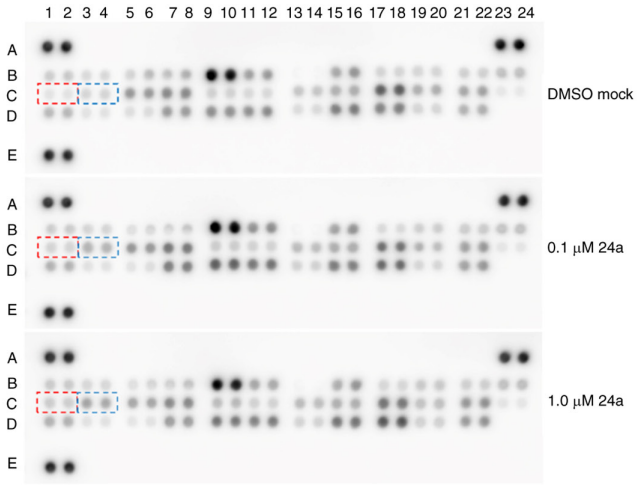


Figure S5. Western blot analysis depicting the lack of involvement of p53 and p53-associated proteins in response to 24a. Cell lysates were prepared from Detroit 562 cells treated with 24a for 24 h at the indicated doses. (A) Examination of the activity of p53 as determined by post-translational modifications. The corresponding Ser and Lys residues represent sites of phosphorylation and acetylation, respectively. (B) Examination of the protein levels of the p53 paralogs, p63 and p73. (C) Examination of the protein levels of the p53 target, p21. Representative blots depicting typical β-actin and GAPDH controls used for quantification are demonstrated. Note that only blots obtained from shorter exposures were used for quantification as to preclude signal saturation. Relative protein levels are summarized in Fig. 4E.

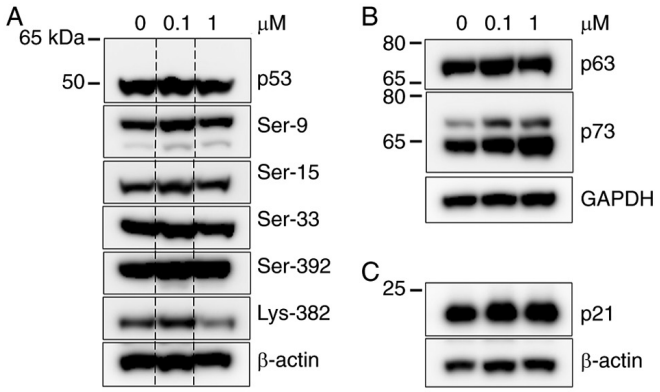


Figure S6. Western blot analysis shows no detectable expressions of phosphorylated p63 and p73 proteins after over-exposure of membranes. Each membrane (I-III) represents a designated amount of loaded total protein from cell lysates prepared following 24-h treatment with 24a at the indicated doses. All three membranes were exposed at the same time. According to the protein sequences of the ΔN isoforms of both p63 and p73, the phosphorylation sites of interest should be intact and upstream of the DNA-binding domain. (A) Detection of p63 proteins after 50-min exposure. Membrane I was separately probed for p63 and β-actin; membrane II was probed for phospho-p63 at Ser-160/162; and membrane III was probed for β-actin. The molecular weight of wild-type p63 is ~75 kDa. (B) Detection of p73 proteins after 40-min exposure. Membrane I was separately probed for p73 and β-actin; membrane II was separately probed for phospho-p73 at Tyr-99 and β-actin; and membrane III was probed for β-actin. The molecular weight of wild-type p73 is ~80 kDa.