

Figure S1 Long-term survival of esophageal cancer cells was analyzed by clone genesis assay. (A) EC109 cells were seeded into 6-well plates and pretreated with trichostatin A for 12 h and further treated with or without radiation. The cells were further cultivated for 10-14 days after replacing the medium. Then the cells were fixed and stained with 0.5% crystal violet. The number of colonies that included more than 50 cells was counted using a microscope. (B) KYSE450 were similarly treated as that of EC109 cells.

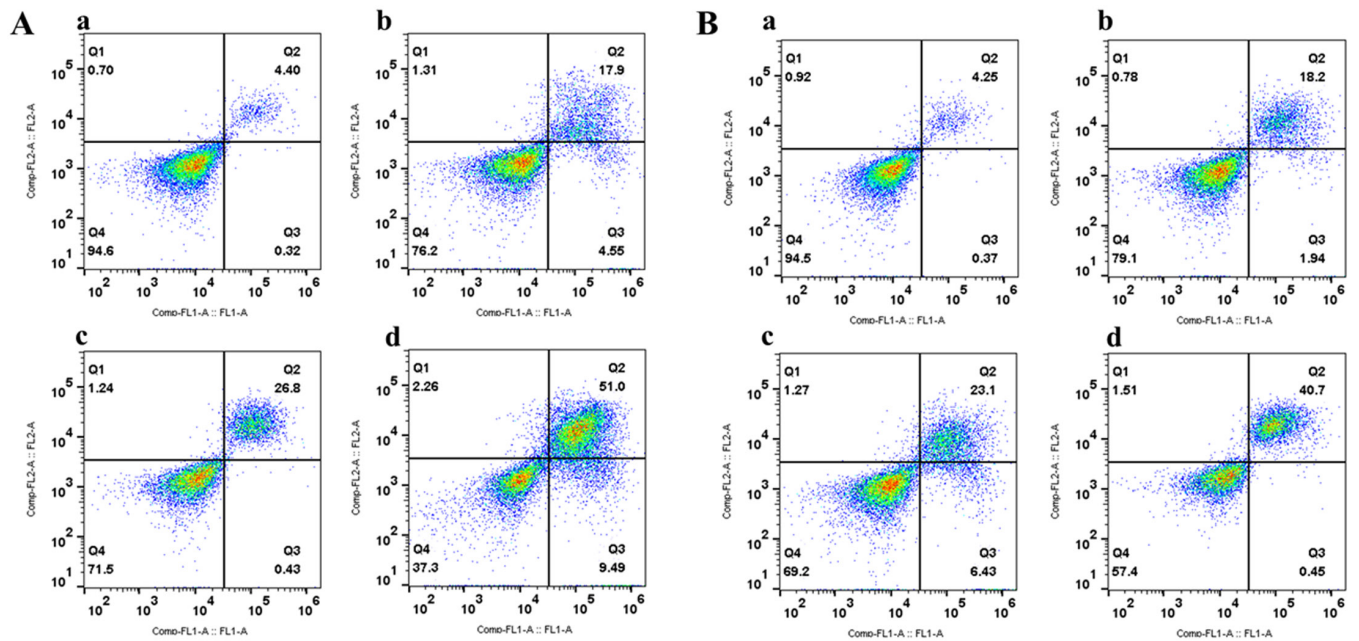


Figure S2 Representative images of apoptosis detection by flow cytometry. (A) EC109 cells were pretreated with trichostatin A (TSA) for 12 h and further treated with or without radiation. a: untreated control; b: TSA; c: 5 Gy; d: TSA + 5 Gy. (B) KYSE450 were similarly treated as that of EC109 cells. a: untreated control; b: TSA; c: 5 Gy; d: TSA + 5 Gy.

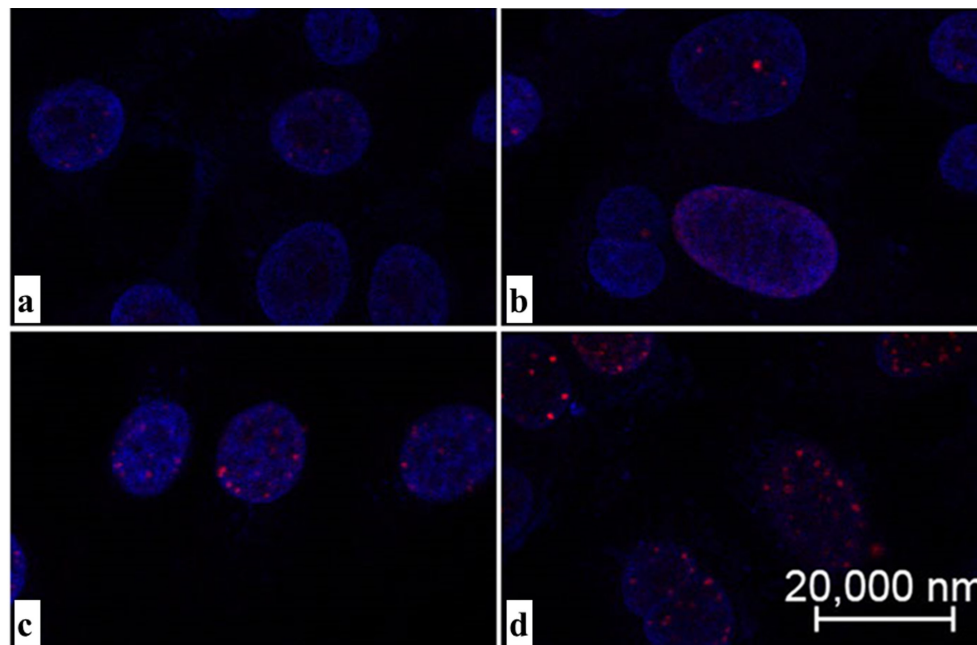


Figure S3 KYSE450 cells were pretreated with trichostatin A (TSA) for 12 h and further treated with or without radiation. Then the cells were fixed and permeabilized with buffer containing 2% paraformaldehyde and 0.2% Triton X-100. Then the cells were blocked using 5% goat serum, followed by hydride with anti-phospho-histone H2A histone family member X antibody. After staining, the cells were observed under a fluorescent microscope. (A) Untreated control; (B) TSA; (C) 5 Gy; (D) TSA + 5 Gy.

Table S1 Genes matched differential peaks

Chr	Peak start	Peak end	Gene id	Symbol
chr1	1165589	1167497	51150	SDF4
chr1	41947554	41951800	1907	EDN2
chr1	94080957	94084142	8412	BCAR3
chr1	144929633	144933574	100132406	NBPF10
chr1	144929633	144933574	100288142	LOC100288142
chr1	144929633	144933574	9659	PDE4DIP
chr1	144987821	144990120	100132406	NBPF10
chr1	144987821	144990120	100288142	LOC100288142
chr1	144987821	144990120	9659	PDE4DIP
chr1	144988980	144990012	100132406	NBPF10
chr1	144988980	144990012	100288142	LOC100288142
chr1	144988980	144990012	9659	PDE4DIP
chr1	145038656	145041469	100132406	NBPF10
chr1	145038656	145041469	100288142	LOC100288142
chr1	145038656	145041469	9659	PDE4DIP
chr1	145082851	145084601	100132406	NBPF10
chr1	145082851	145084601	100288142	LOC100288142
chr1	145091104	145094115	100132406	NBPF10
chr1	145091104	145094115	100288142	LOC100288142
chr1	230219730	230221794	2590	GALNT2
chr1	234858070	234863591	100506810	LINC01132
chr10	7450489	7453919	57713	SFMBT2
chr11	2014887	2020156	100033819	MIR675
chr11	2014887	2020156	283120	H19
chr11	19261505	19263884	79733	E2F8
chr11	47544390	47546772	10658	CELF1
chr12	48394115	48397132	1280	COL2A1
chr12	52582367	52587178	144501	KRT80
chr12	57881545	57883378	84174	SLA2
chr12	125472323	125474063	57647	DHX37
chr13	25860226	25862334	9107	MTMR6
chr13	27824761	27828173	100131205	RPL21P28
chr13	27824761	27828173	6144	RPL21
chr14	24608713	24610879	51016	EMC9
chr14	31924900	31927028	112487	DTD2
chr14	53196836	53198407	6815	STYX
chr16	2652755	2654573	5170	PDPK1
chr16	2652755	2654573	652276	LOC652276
chr17	7140431	7142918	79142	PHF23
chr17	21904414	21904926	284124	FLJ36000
chr17	21904555	21904757	284124	FLJ36000
chr18	76829313	76830440	374868	ATP9B
chr19	891923	893792	10025	MED16
chr19	1468049	1471160	79085	SLC25A23
chr19	2455359	2457294	84823	LMNB2
chr19	10735182	10737521	57153	SLC44A2
chr19	11877137	11879221	126068	ZNF441
chr19	12720774	12722870	163049	ZNF791
chr19	12720774	12722870	57474	ZNF490
chr19	52530661	52532431	80110	ZNF614
chr19	54972643	54975025	114823	LENG8
chr19	54972643	54975025	94059	LENG9
chr2	113997140	113999727	654433	PAX8-AS1
chr2	113997140	113999727	7849	PAX8
chr2	132996806	132996867	554226	ANKRD30BL
chr2	182755675	182758796	6744	SSFA2
chr2	211420973	211424190	1589	CYP21A2
chr2	215672181	215674695	580	BARD1
chr22	41346406	41348941	9978	RBX1
chr22	42229062	42231443	6721	SREBF2
chr22	43581315	43583231	23170	TTL12
chr3	47553411	47555909	54859	ELP6
chr3	196625092	196626252	205564	SEN5
chr3	196625570	196625777	205564	SEN5
chr4	184364781	184366943	55602	CDKN2AIP
chr4	184579222	184581416	201965	RWDD4
chr4	184579222	184581416	60684	TRAPPC11
chr5	368423	375770	57491	AHRR
chr5	412095	415388	57491	AHRR
chr5	671064	674733	11076	TPPP
chr5	911172	915154	9319	TRIP13
chr5	1322679	1330953	81037	CLPTM1L
chr5	10595001	10596758	651746	ANKRD33B
chr5	14155544	14158248	7204	TRIO
chr5	14580730	14583807	54491	FAM105A
chr5	16455864	16458078	90441	ZNF622
chr5	16507445	16511506	54463	FAM134B
chr5	16885708	16887720	4651	MYO10
chr5	16893339	16896054	4651	MYO10
chr5	17189153	17191638	285696	LOC285696
chr5	17248669	17250640	10409	BASP1
chr5	17248711	17249513	10409	BASP1
chr5	31853789	31856048	23037	PDZD2
chr5	32767273	32769581	8131	NPRL3
chr5	38870728	38872791	9180	OSMR
chr5	42809807	42813188	6414	SEPP1
chr5	43307168	43314916	3157	HMGCS1
chr5	134260226	134260395	84105	PCBD2
chr6	107349062	107350546	51250	C6orf203
chr6_qbl_hap6	1203029	1204046	3105	HLA-A
chr7	5085027	5086546	100533952	RBAK-RBAKDN
chr7	5085027	5086546	57786	RBAK
chr7	72476108	72476518	442582	STAG3L2
chr7	74306183	74307707	442582	STAG3L2
chr7	74306183	74307707	5383	PMS2P5
chr7	102212543	102213400	548644	POLR2J3
chr8	27631880	27633473	157570	ESCO2
chr9	124481736	124484809	153090	DAB2IP
chr9	130726600	130732490	399665	FAM102A
chr9	133321182	133321862	445	ASS1
chrUn_gl000212	40754	40963	26080	FAM230C
chrUn_gl000220	96204	100078	100507412	LOC100507412
chrUn_gl000220	101699	101798	100507412	LOC100507412
chrUn_gl000220	102125	102224	100507412	LOC100507412
chrUn_gl000220	104219	104323	100507412	LOC100507412