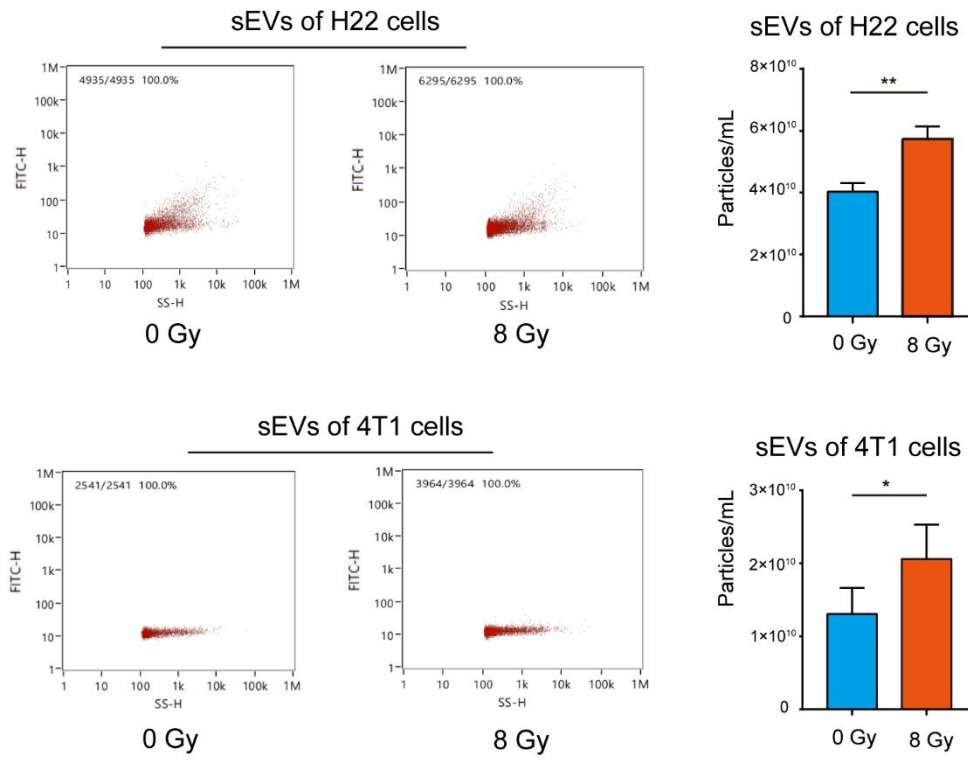
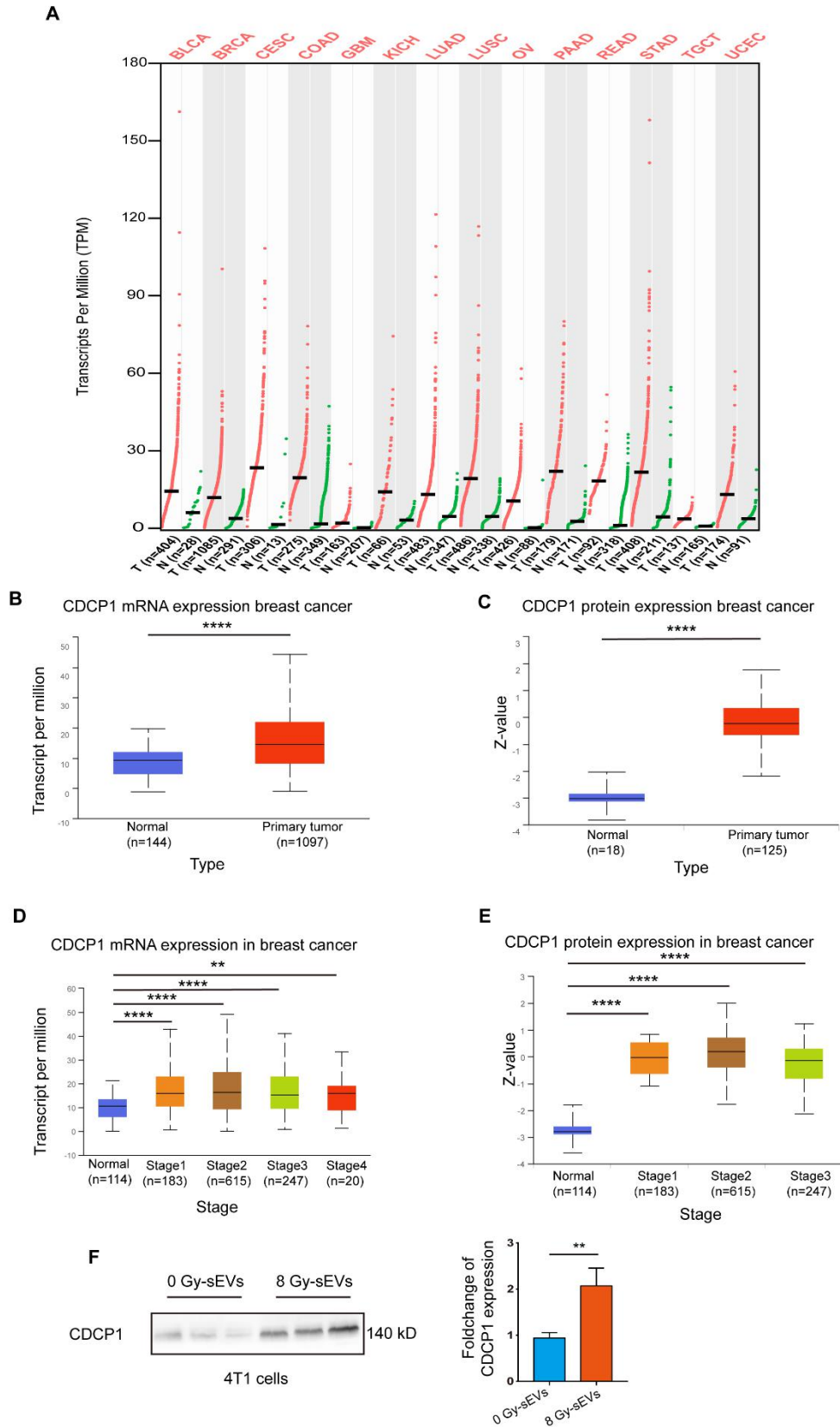


## Supplementary materials



**Figure S1. Effects of irradiation on the amount of secreted small extracellular vesicles (sEVs)**



**Figure S2. Identification of CDCP1 as an ideal tumor antigen**

To identify CDCP1 as an ideal TAA, the Cancer Genome Atlas (TCGA), Gene

Expression Profiling Interactive Analysis (GEPIA), UALCAN, Clinical Proteomic Tumor Analysis Consortium (CPTAC) databases were used for bioinformatic analysis. **(A)** CDCP1 is overexpressed in 14 types of tumors (data from GEPIA and TCGA). **(B)** CDCP1 mRNA expression was over-expressed in breast cancer compared to normal samples (data from UALCAN and TCGA). **(C)** CDCP1 protein expression was over-expressed in breast cancer compared to normal samples (data from UALCAN and CPTAC). **(D-E)** CDCP1 expression was associated with progression stages of breast cancer (data from UALCAN, TCGA and CPTAC). **(F)** CDCP1 expression in 0 Gy-sEVs and 8 Gy-sEVs from 4T1 cells.  $**P < 0.01$ ,  $***P < 0.001$ ,  $****P < 0.0001$ .

**Table S1. Altered proteins in radiation-induced sEVs**

	Proteins
IR-upregulated proteins	HIST1H1D, PTTG1IP, CSE1L, VPS35, PRDX2, PRSS22, TPM3-RS7, RALB, SLC7A5, CDCP1, MARCKSL1, PCBP2, MSLN, DNAJA2, NRAS, LSR, COPA, TOP2A, PKP2, QSOX1, PLP2, PSMC3, JUP, RPS11, NOP58, NEDD4L, EPB4.1L2, IFITM3, CPE, PLSCR3, DIP2B, EIF3I, LDHA, SNAP23, GJA1, HSP90B1, DYNAP, AREG, CTSL, GPRC5A, SRM, SNRNP200, PAICS, SLC12A2, PRMT5, CDH1 PRDX6, ARF3, EFTUD2, LAMP1, RPLP0, LAMC2, CPNE8, EIF3B, XPO1, VCL, PSMA4 PGK1-RS7, DNPEP, FARP1, GALK1, RARS, BAIAP2, SEPT2, CTNNB1, PTPRK, GM10259, EZR, NCKAP1, LAMB3, SLC38A2, MYL6, SLC7A1, FAM125A, IPO7, PPID, CD44, PSMB5, LARS, TMEM176B, CTNNA1, WDR1, SLC6A6, SLC2A1, EEF2, PGD, PSMA5, HSP90AA1, F11R, TAGLN2, TSPAN3, SERPINB6A, ITGB1, S100A6, PLET1, FLOT2, FLOT1, SDCBP2, HSPA9, TMPRSS11E, TSPAN4, HNRNPH1, UBA1, SLC44A2, PRPF8, GNAI2, HSP90AB1, EHD1, CD151, ATP2B1, THBS1, ITGA2, FASN
IR-downregulated proteins	C8B, C6, S100A11, ITGA5, H2AFY, WARS, RPL32, RPS12, GNB1, DLAT, HNRNPC, FGG, FABP5, HP, H2AFV, ANP32B, CLU, H2AFJ, SDC4, HINT1, MYBBP1A, GART, HIST4H4, GPC1, HIST2H3B, COL4A2, HTRA1