A common Chk1-dependent phenotype of DNA double-strand break suppression in two distinct radioresistant cancer types

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ELECTRONIC SUPPLEMENTAL MATERIAL

Figures S1-5

Supplementary Figure Legends

Suppl. Fig. S1.
A) Panel of breast cancer cell lines used in the current study.
B) Chk1 inhibitor LY2603618 blocks autophosphorylation of Chk1 kinase while at the same time enhancing DNA damage-mediated phosphorylation of serine 345 (Wang et al., Apoptosis 2014 Sep;19(9):1389-98).

Suppl. Fig. S2.
A) Short-term radiosensitization factors (6 Gy) for breast cancer cell lines grown as mammospheres.
B) Fraction of cells as measured by CellTiterGlo (Promega) following 5 days of treatment with Chk1 inhibitor LY2603618 at concentrations indicated.

Suppl. Fig. S3.
Fraction of cells with 5+ RAD51 foci, corrected for baseline foci in untreated cells, 24 hours following incubation of cells with 0.25 mg/ml doxorubicin.

Suppl. Fig. S4.
A) Western blot for total Aurora B protein in triple-negative MDA-MB-468 cells. Cells were exposed to 1 hour treatment with small molecule inhibitors against Chk1 (LY2603618), EGFR (erlotinib), and Aurora B (AZD1152). Cells were arrested at the G1/S border using a double thymidine (TdR) block as previously described (Wang et al., Cancer Res 2014, 74(10):2825-2834).
B) Representative FACS images for MDA-MB-468 cells treated with Aurora B inhibitor (AurBi) AZD1152 for 1 hour +/- 1 Gy irradiation followed by standard flow cytometry 30 minutes later as described (Wang et al., Cancer Res 2014, 74(10):2825-2834).

Suppl. Fig. S5.
Expression of *EGFR*, *AURKB*, and *CHEK1* in TNBC vs receptor-psoitive cell lines using the CCLE (Rhodes et al., Neoplasia 2004, 6(1):1-6).

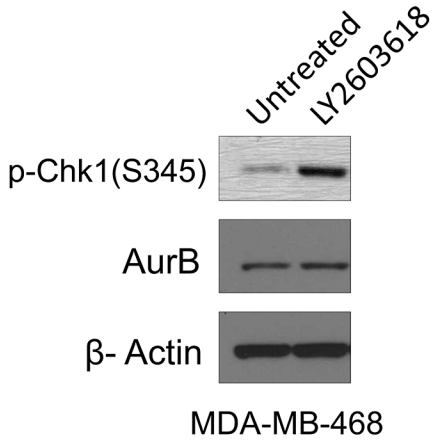
Supplementary Figure S1

A

Cell line	ER	PR	HER2	TP53	Histology	Subtype
BT-474	+	[+]	+	wt	IDC	LU
EFM-19	+	+		fs	Ac	LU
MCF-7	+	[+]		wt	IDC	LU
MDA-MB-361	+	[-]	+	wt	AC	LU
T47-D	+	[+]		194	IDC	LU
BT-20	-	[-]		132	IDC	BaA
BT-549	-	[-]		249	IDC,pap	BaB
MDA-MB-157	-	[-]		del	Mc	BaB
MDA-MB-231	-	[-]		280	AC	BaB
MDA-MB-436	[-]	[-]		fs	IDC	BaB
MDA-MB-468	[-]	[-]		273	AC	BaA

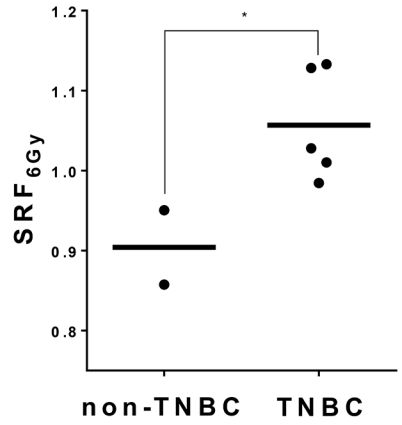
ER, estrogen receptor; PR, progesterone receptor; wt, wild-type; fs, frameshift mutation; del, deletion; IDC, invasive ductal carcinoma; AC, adenocarcinoma; Pap, papillary carcinoma; MC, mucinous carcinoma; LU, luminal; Ba, basal A or B

B

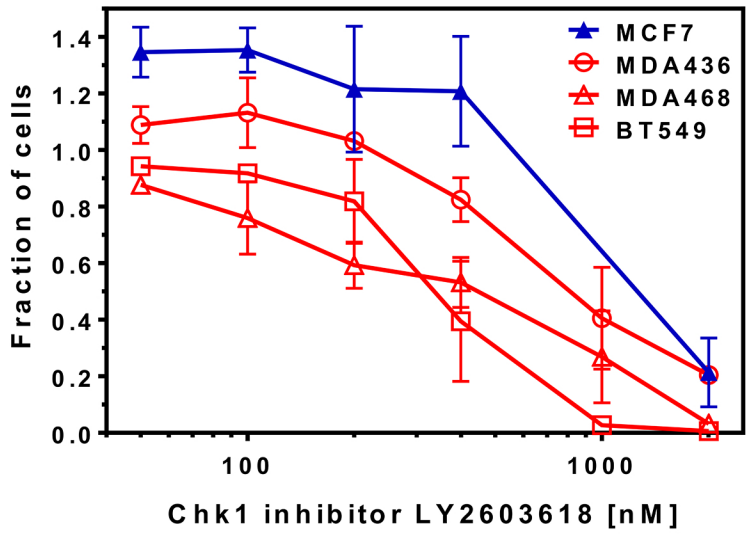


Supplementary Figure S2

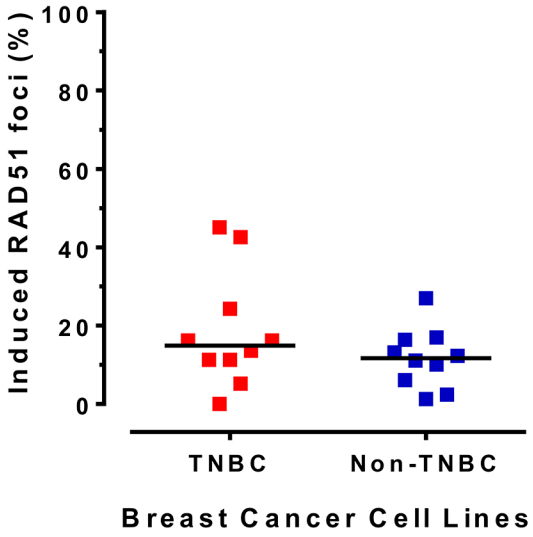
A



B

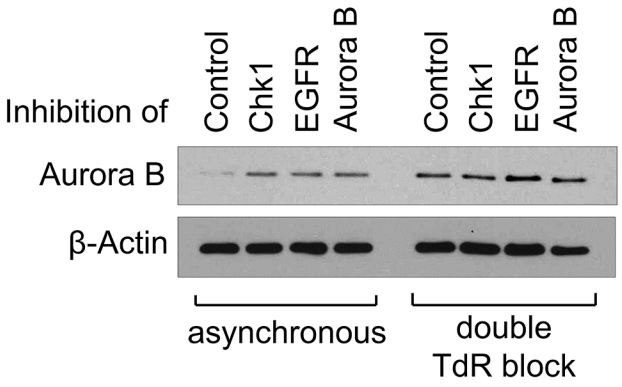


Supplementary Figure S3



Supplementary Figure S4

A



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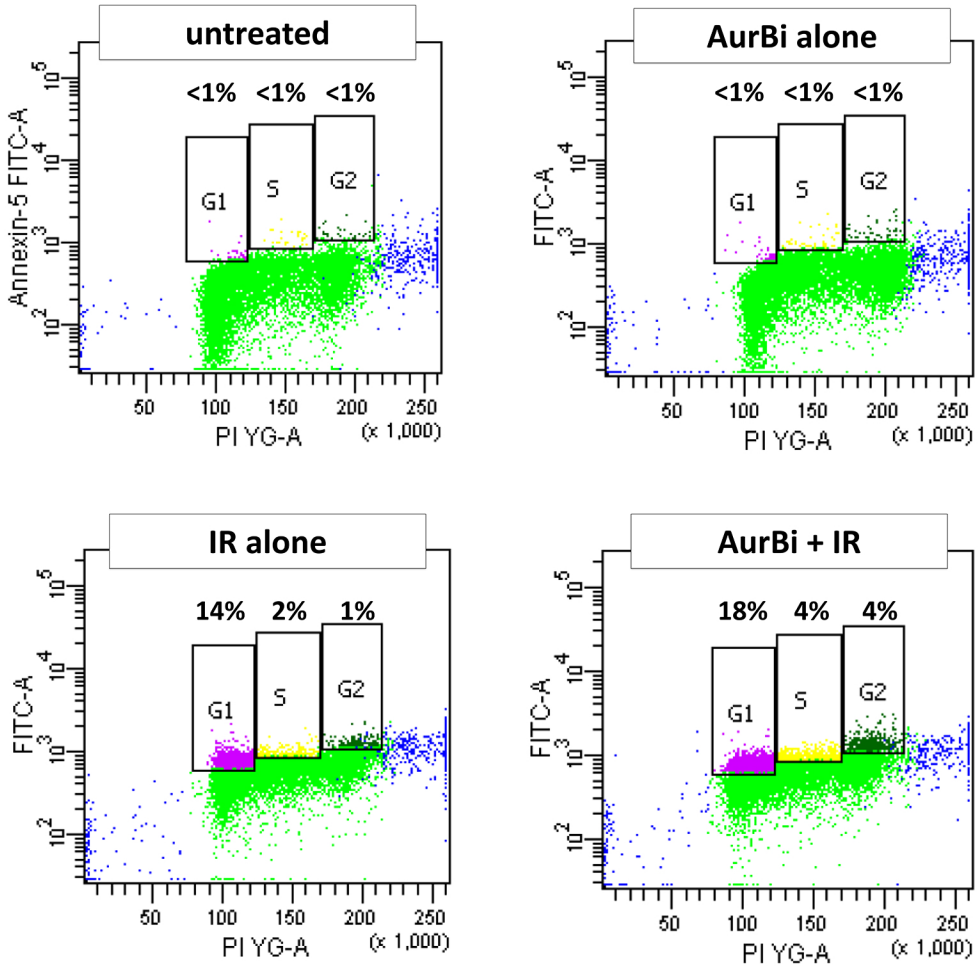

Supplementary Figure S5