

Supplementary Information

Cotargeting Plk1 and androgen receptor enhances the therapeutic sensitivity of paclitaxel-resistant prostate cancer

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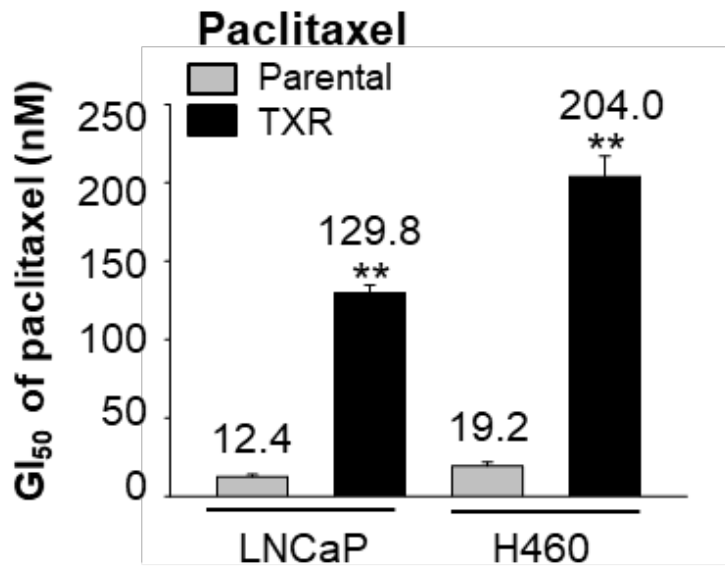
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Running Title

Cotargeting Plk1 and AR in taxol-resistant prostate cancer

Supplementary Figure 1.

Cells were treated with paclitaxel in a concentration-dependent manner in LNCaP, paclitaxel-resistant LNCaP (LNCaP^{TXR}), NCI-H460, and paclitaxel-resistant NCI-H460 (H460^{TXR}) cells for 48 h. The numbers of viable cells were then measured by a cell viability assay. The bar graph presents the mean values of half maximal growth inhibitory concentration (GI₅₀, nM for paclitaxel).



Supplementary Table 1. A combination of BI 2536 and bicalutamide in paclitaxel-resistant LNCaP^{TXR} cells. LNCaP and LNCaP^{TXR} cells were treated with BI 2536 and bicalutamide in a concentration-dependent manner for 48 h. The percentages of viable cells were measured by a cell viability assay.

			BI 2536 (nM)					
			0	1	5	10	25	50
Bicalutamide (μ M)	0	LNCaP	100.0 \pm 0.1	89.0 \pm 0.1	70.4 \pm 1.3	48.9 \pm 0.7	37.3 \pm 0.4	29.5 \pm 0.1
		LNCaP ^{TXR}	100.0 \pm 1.1	96.0 \pm 1.6	79.7 \pm 0.5	70.6 \pm 1.1	48.6 \pm 1.2	33.1 \pm 0.8
	2.5	LNCaP	82.3 \pm 0.9	67.3 \pm 0.9	56.9 \pm 0.8	43.7 \pm 0.7	34.6 \pm 1.1	25.0 \pm 1.3
		LNCaP ^{TXR}	73.2 \pm 1.6	67.4 \pm 0.9	58.8 \pm 1.6	50.0 \pm 1.4	38.1 \pm 0.9	27.0 \pm 1.1
	5.5	LNCaP	72.3 \pm 1.3	54.8 \pm 1.3	51.5 \pm 1.3	36.9 \pm 1.1	22.7 \pm 1.8	17.3 \pm 0.8
		LNCaP ^{TXR}	67.6 \pm 1.2	60.1 \pm 1.0	53.2 \pm 1.4	38.7 \pm 1.0	28.6 \pm 0.6	18.4 \pm 0.4

Supplementary Table 2. A combination of volasertib and bicalutamide in paclitaxel-resistant LNCaP^{TXR} cells. LNCaP and LNCaP^{TXR} cells were treated with volasertib and bicalutamide in a concentration-dependent manner for 48 h. The percentages of viable cells were measured by a cell viability assay.

			Volasertib (nM)					
			0	1	5	10	25	50
Bicalutamide (μM)	0	LNCaP	100.0 \pm 0.1	89.0 \pm 0.1	68.3 \pm 1.1	50.9 \pm 0.6	43.3 \pm 0.3	29.5 \pm 0.1
		LNCaP ^{TXR}	100.0 \pm 1.1	92.3 \pm 1.6	75.7 \pm 0.5	69.8 \pm 0.9	60.2 \pm 1.0	49.1 \pm 0.5
	2.5	LNCaP	81.1 \pm 0.4	77.9 \pm 0.7	57.1 \pm 0.2	46.8 \pm 0.9	39.8 \pm 0.4	24.4 \pm 0.4
		LNCaP ^{TXR}	72.1 \pm 0.3	66.0 \pm 1.4	60.4 \pm 1.7	51.7 \pm 1.1	44.4 \pm 0.7	30.6 \pm 1.1
	5.5	LNCaP	71.8 \pm 1.4	58.2 \pm 1.6	53.4 \pm 0.9	39.9 \pm 2.0	28.1 \pm 0.4	17.5 \pm 0.8
		LNCaP ^{TXR}	66.5 \pm 1.4	63.1 \pm 0.9	55.7 \pm 1.5	40.4 \pm 1.4	33.5 \pm 1.1	19.7 \pm 0.8

Supplementary Table 3. A combination of genistein and bicalutamide in paclitaxel-resistant LNCaP^{TXR} cells. LNCaP and LNCaP^{TXR} cells were treated with genistein and bicalutamide in a concentration-dependent manner for 48 h. The percentages of viable cells were measured by a cell viability assay.

			Genistein (μM)					
			0	1	5	10	25	50
Bicalutamide (μM)	0	LNCaP	100.0 \pm 1.4	87.9 \pm 1.3	79.9 \pm 1.2	70.4 \pm 1.1	60.8 \pm 1.0	38.4 \pm 1.4
		LNCaP ^{TXR}	100.0 \pm 0.8	77.7 \pm 2.3	64.0 \pm 1.3	50.5 \pm 0.5	46.1 \pm 1.8	37.3 \pm 1.1
	2.5	LNCaP	82.0 \pm 1.1	66.2 \pm 1.2	61.0 \pm 1.5	54.2 \pm 1.3	47.8 \pm 1.3	37.3 \pm 2.2
		LNCaP ^{TXR}	74.0 \pm 1.2	69.8 \pm 1.6	59.3 \pm 1.6	48.2 \pm 0.9	35.3 \pm 1.5	25.7 \pm 0.6
	5.5	LNCaP	71.0 \pm 1.6	65.4 \pm 1.5	55.6 \pm 1.2	48.4 \pm 1.2	40.5 \pm 0.8	36.1 \pm 0.6
		LNCaP ^{TXR}	68.5 \pm 1.2	55.2 \pm 2.3	48.6 \pm 0.9	37.9 \pm 0.6	30.3 \pm 1.2	19.8 \pm 0.3

Supplementary Table 4. Oligonucleotide sequence of PCR primers used in this study

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
MDR1	5'-ATATCAGCAGCCCACATCAT -3'	5'- GAAGCACTGGGATGTCCGGT -3'
MRP1	5'-CAGTGACCTCTGGTCCTTAAAC-3'	5'-ATCCACCTTGGA ACTCTCTTTC-3'
PLK1	5'- AAGAGATCCCGGAGGTCCTA -3'	5'- TCATTCAGGAAAAGGTTGCC -3'
AR	5'-CGCTGAAGGGAAACAGAAGTA-3'	5'-CCTCTCCTTCCTCCTGTAGTT-3'
PSA	5'-CTTGTAGCCTCTCGTGGCAG-3'	5'-GACCTTCATAGCATCCGTGAG-3'

Supplementary Figure 2

Figure 1D

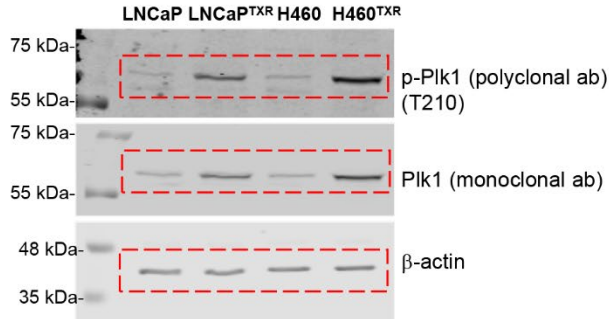


Figure 4F

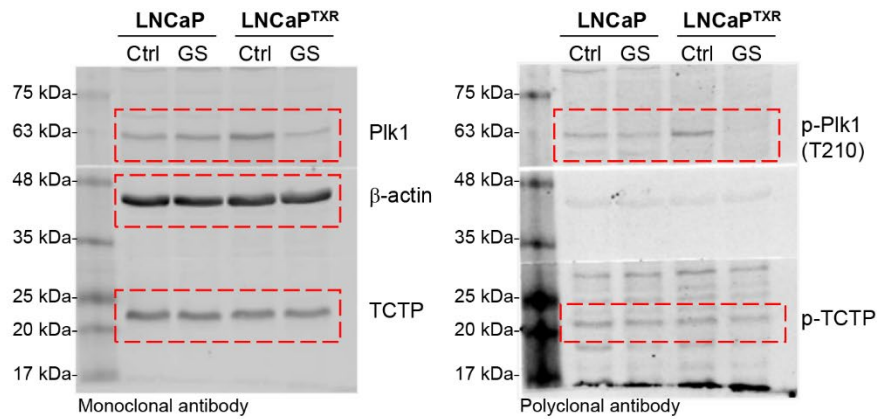


Figure 5D

