

Western blot analysis of Nrf2 and GCLC protein levels. The top blot is probed with anti-Nrf2 antibody, showing bands at 150, 100, and 75 kDa. The bottom blot is probed with anti-GCLC antibody, showing a band at 75 kDa. The blots are divided into two main sections: 1 x 7.5 Gy and 3 x 7.5 Gy. Each section includes a Ladder lane, a tBHQ lane, and three lanes for the respective radiation dose. The 3 x 7.5 Gy section shows a more pronounced increase in Nrf2 levels compared to the 1 x 7.5 Gy section. The GCLC levels remain relatively stable across all lanes.

6 h							24 h						
RT	-	-	-	-	+	+	RT	-	-	-	-	+	+
tBHQ	-	+	-	+	-	-	tBHQ	-	+	-	+	-	-
NAC	-	-	+	+	-	+	NAC	-	-	+	+	-	+

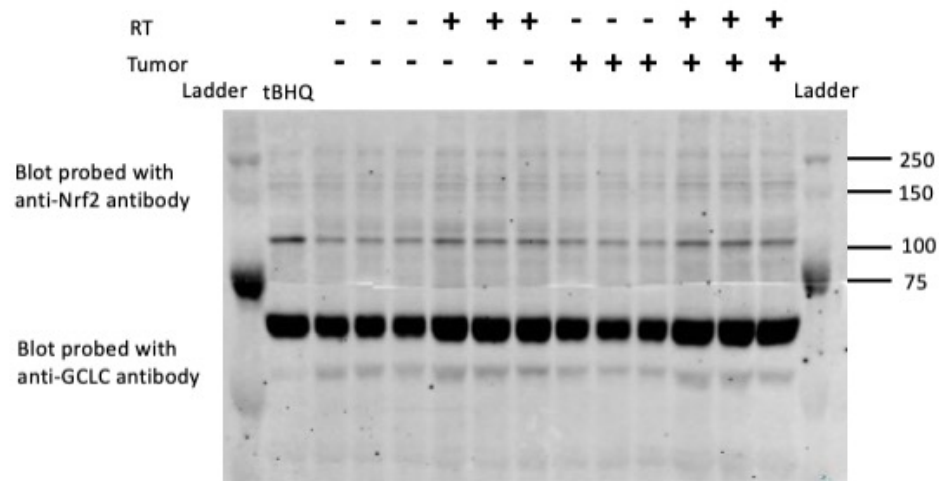
Blot probed with anti-Nrf2 antibody

Blot probed with anti-HO-1 antibody

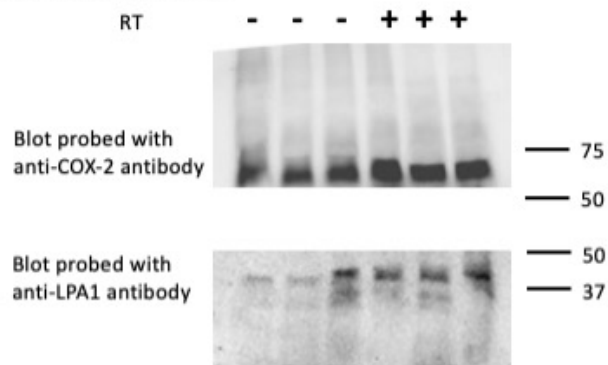
Blot probed with anti-Nrf2 antibody

Blot probed with anti-HO-1 antibody

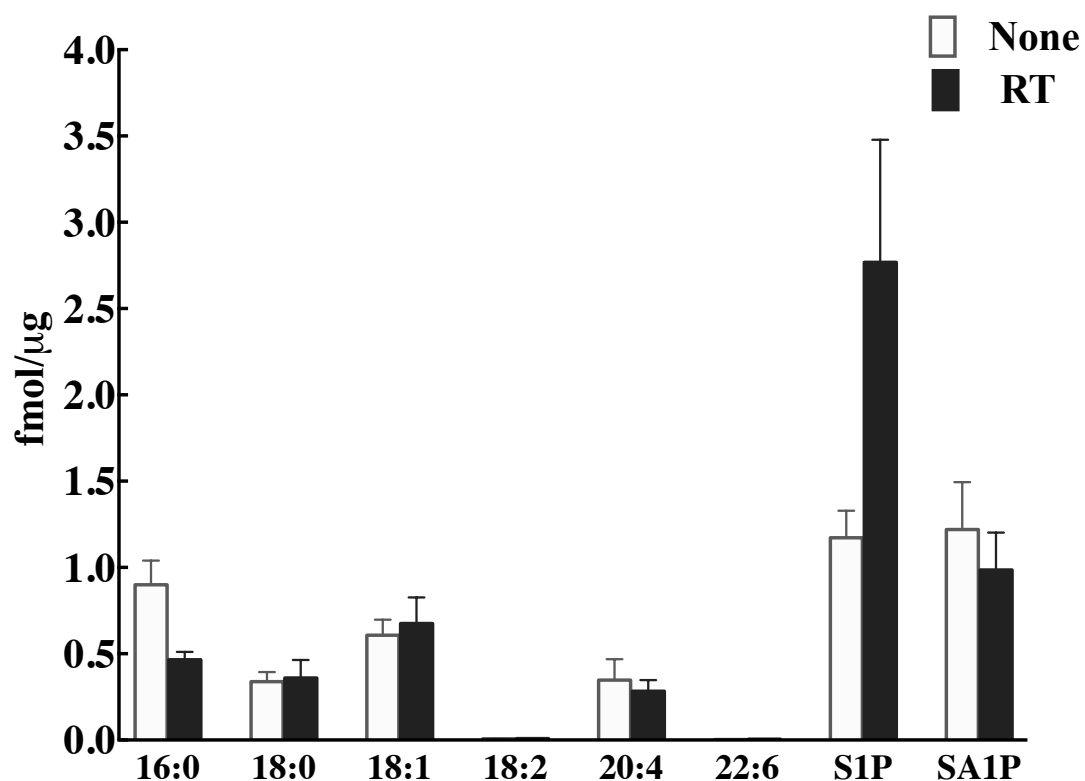
Western blot Figure 8C



Western blot Figure 9B-a



Supplementary Figure 1. The original membranes as shown were cut according to the molecular weight markers and were then probed with the appropriate antibodies as shown in examples.



Supplementary Fig. 2. Three 7.5-Gy fractions of RT did not change the concentrations of LPA species, S1P and SA1P in tumors significantly. Mice with breast tumors were either untreated or were treated daily with X-rays for 3 days, and the concentrations of LPA species, S1P and SA1P in tumor tissues were measured at 48 h after the completion of RT. Absolute amounts of C16:0-LPA, C18:0-LPA, C18:1-LPA, C20:4-LPA were determined from the calibration curves, while LPA-18:2 LPA-22:6, S1P and SA1P were estimated from their peak areas relative to the isotopically-labelled standards. Results are expressed as means \pm SEM with 6 mice/group.