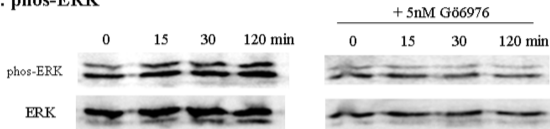
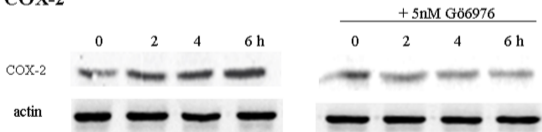


## Supplemental Figure S1 Radiation-induced bystander effect inhibited by PKC $\alpha$ inhibitor Gö6976

### a. phos-ERK

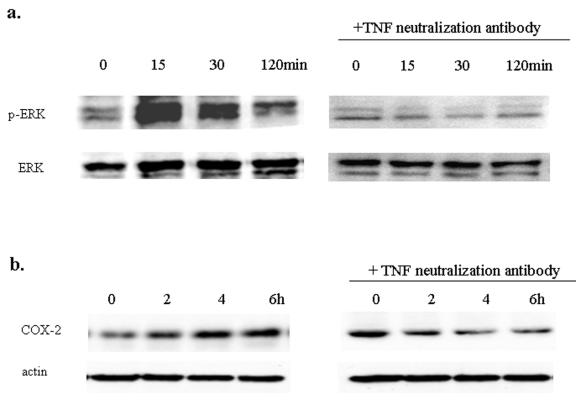


### b. COX-2



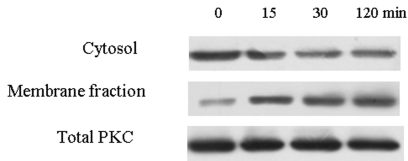
Bystander cells were treated with selective PKC $\alpha$  inhibitor Gö6976. Gö6976 is a potent and selective PKC inhibitor for conventional PKC isoforms PKC $\alpha$  and  $\beta$  1, with IC<sub>50</sub> values of 2.3nM and 6.2 nM, respectively. We therefore used a concentration of 5nM to differentiate the effect caused by PKC  $\alpha$  or  $\beta$  1. Proteins were extracted, separated with SDS-PAGE, transferred to PVDF membrane and probed with different antibodies. Three independent experiments were performed and a representative blot was shown.

## Supplemental Figure S2 TNF $\alpha$ neutralization antibody suppressed activation of ERK and up-regulation of COX-2



30ng/ml TNF  $\alpha$  neutralization antibody was added 1h before cells were subjected to irradiation. Bystander cells were collected at time points indicated and proteins were extracted, separated with SDS-PAGE, transferred to PVDF membrane and probed with ERK or COX-2 antibodies. Three independent experiments were performed and a representative blot was shown.

### **Supplemental Figure S3 PMA affect cellular distribution of PKC $\alpha$**



Cells were treated with 1 $\mu$ M PKC activator PMA and collected at different time points. Membrane proteins were extracted, separated with SDS-PAGE, transferred to PVDF membrane and probed with PKC $\alpha$  antibody. Three independent experiments were performed and a representative blot was shown.