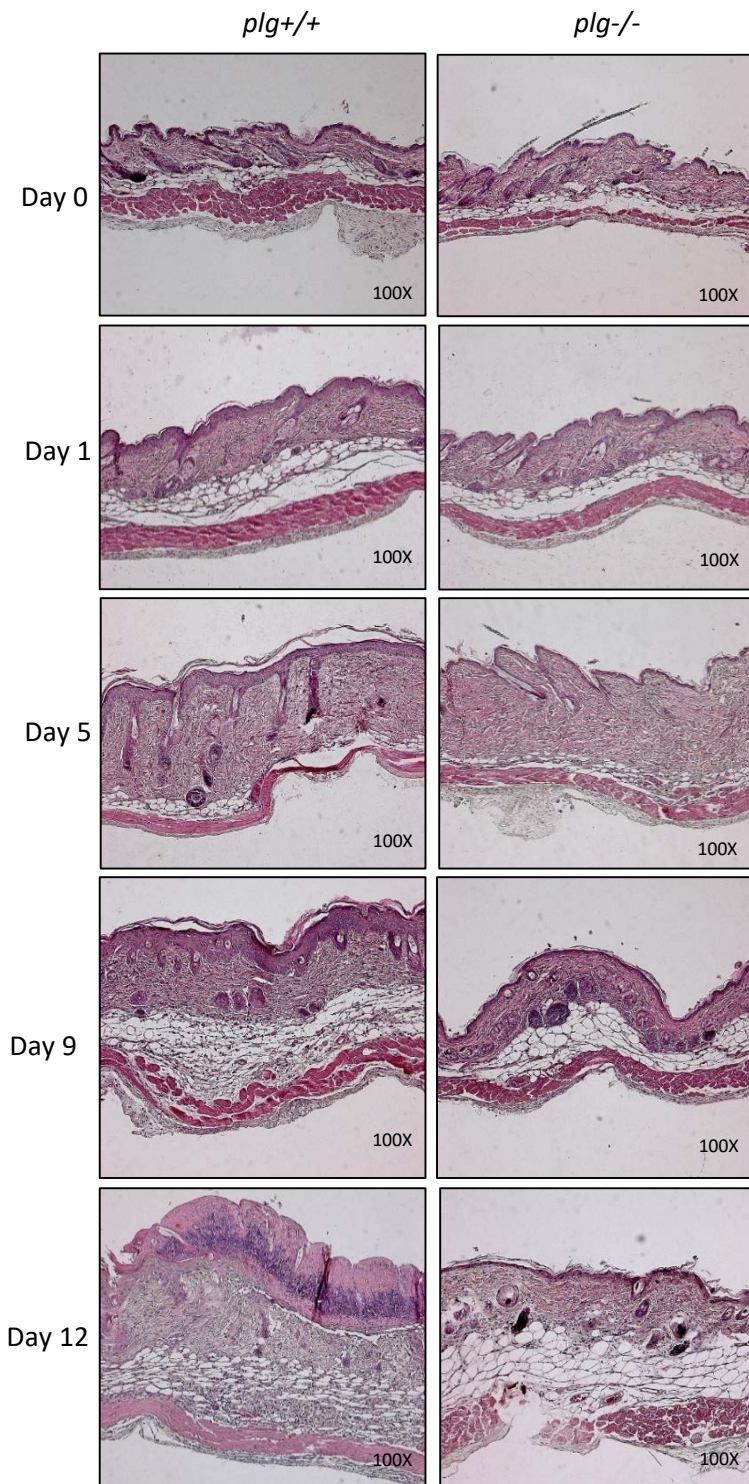


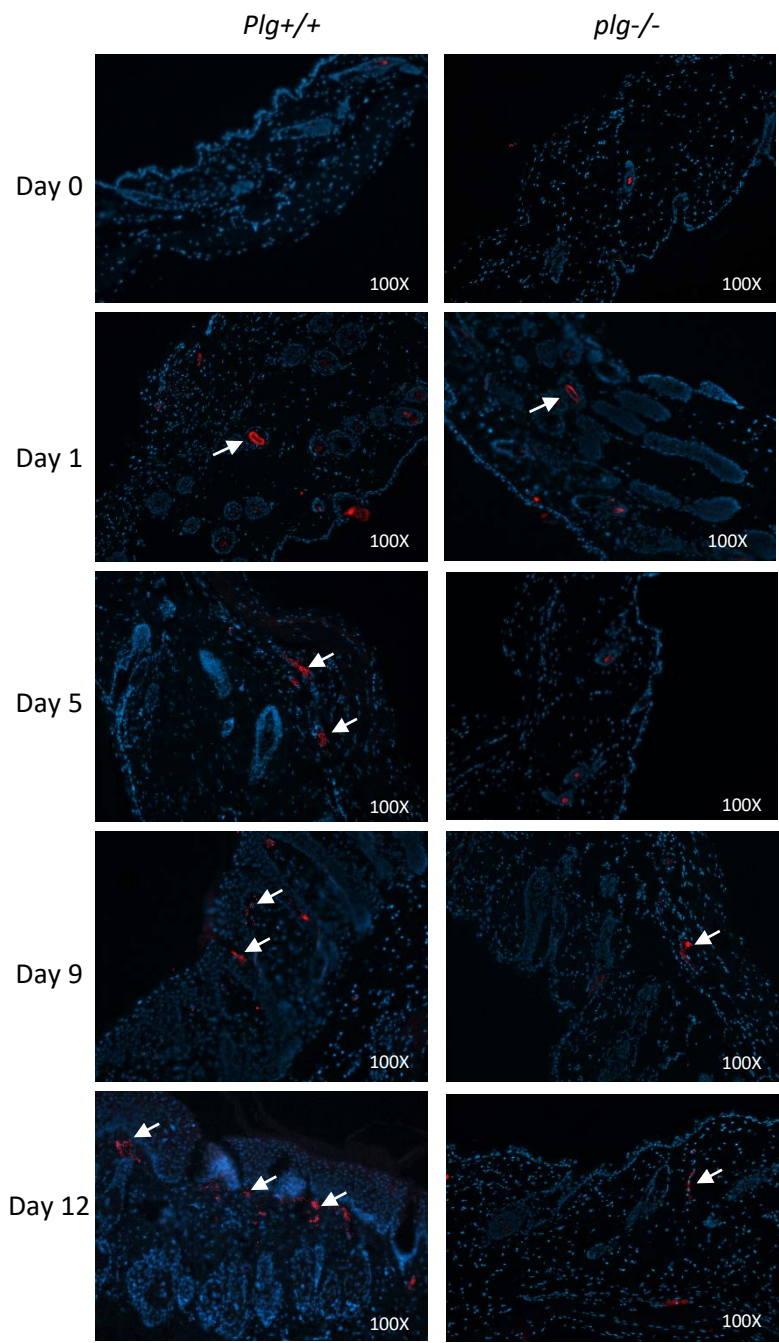
b

	Day 10			Day 14			Day 20			Day 40		
	<i>Plg</i> ^{+/+}	<i>Plg</i> ^{+/-}	<i>Plg</i> ^{-/-}	<i>Plg</i> ^{+/+}	<i>Plg</i> ^{+/-}	<i>Plg</i> ^{-/-}	<i>Plg</i> ^{+/+}	<i>Plg</i> ^{+/-}	<i>Plg</i> ^{-/-}	<i>Plg</i> ^{+/+}	<i>Plg</i> ^{+/-}	<i>Plg</i> ^{-/-}
<i>Plg</i> ^{+/+}	-	*	ns	-	*	ns	-	**	**	-	*	*
<i>Plg</i> ^{+/-}	*	-	ns	*	-	ns	**	-	ns	*	-	ns
<i>Plg</i> ^{-/-}	ns	ns	-	ns	ns	-	**	ns	-	*	ns	-

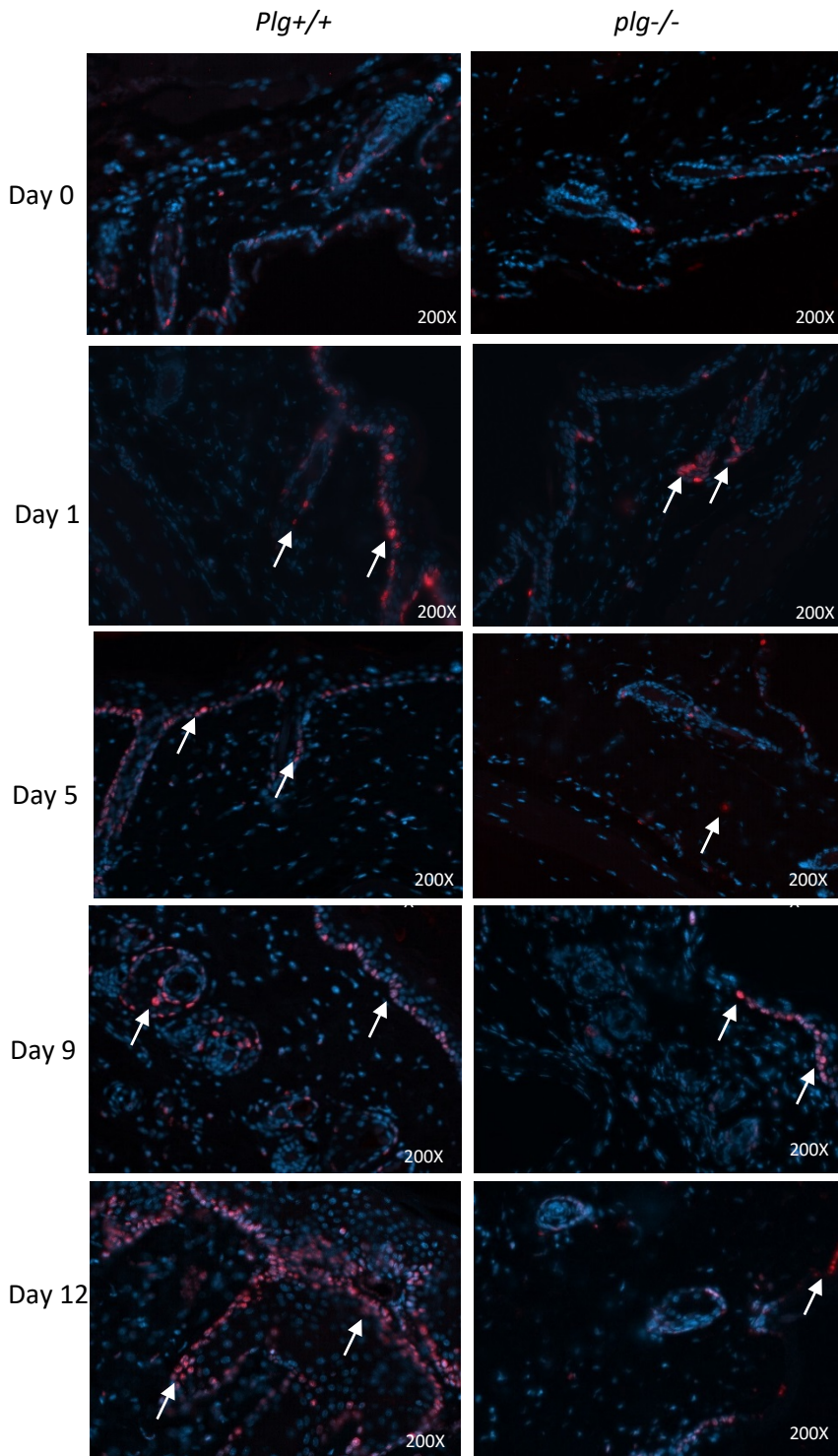
Supplementary Fig. 1. A comparison of the quality of dorsal skin in *plg*^{+/+}, *plg*^{+/-} and *plg*^{-/-} mice at different days after irradiation. (a) Skin scores for *plg*^{+/+}, *plg*^{+/-} and *plg*^{-/-} mice at different days after irradiation. (b) Statistical analysis of skin scores between *plg*^{+/+}, *plg*^{+/-} and *plg*^{-/-} mice at different days after irradiation. * p<0.05, ns= not significant.



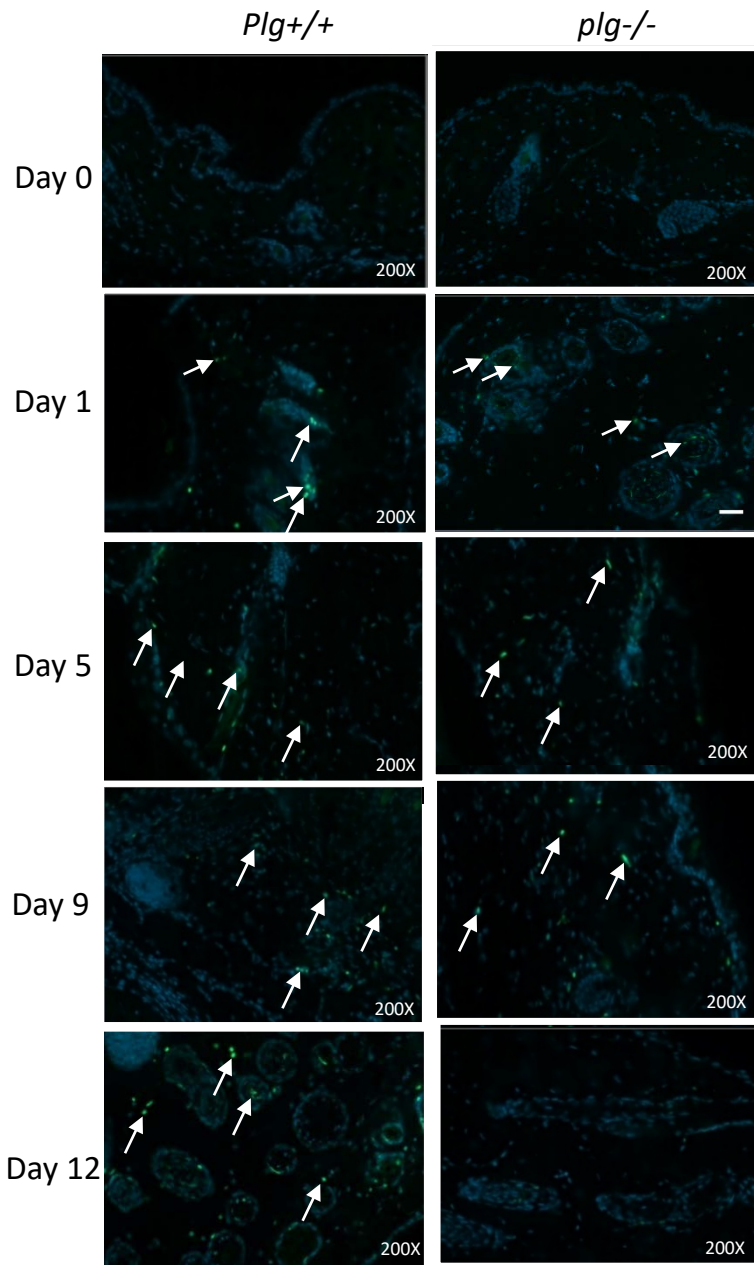
Supplementary Fig. 2. The thickness of epidermis increases significantly after irradiation in *plg+/+* mice, but not in *plg-/-* mice. Representative photographs of H&E stained skin sections from *plg+/+* and *plg-/-* mice at different days after irradiation. Magnification 100x.



Supplementary Fig. 3. The number of vessels increases significantly after irradiation in *plg+/+* mice, but not in *plg-/-* mice. Representative photographs of CD31 (red) and DAPI (blue) staining of skin sections from *plg+/+* and *plg-/-* mice at different days after irradiation. Magnification 100x.

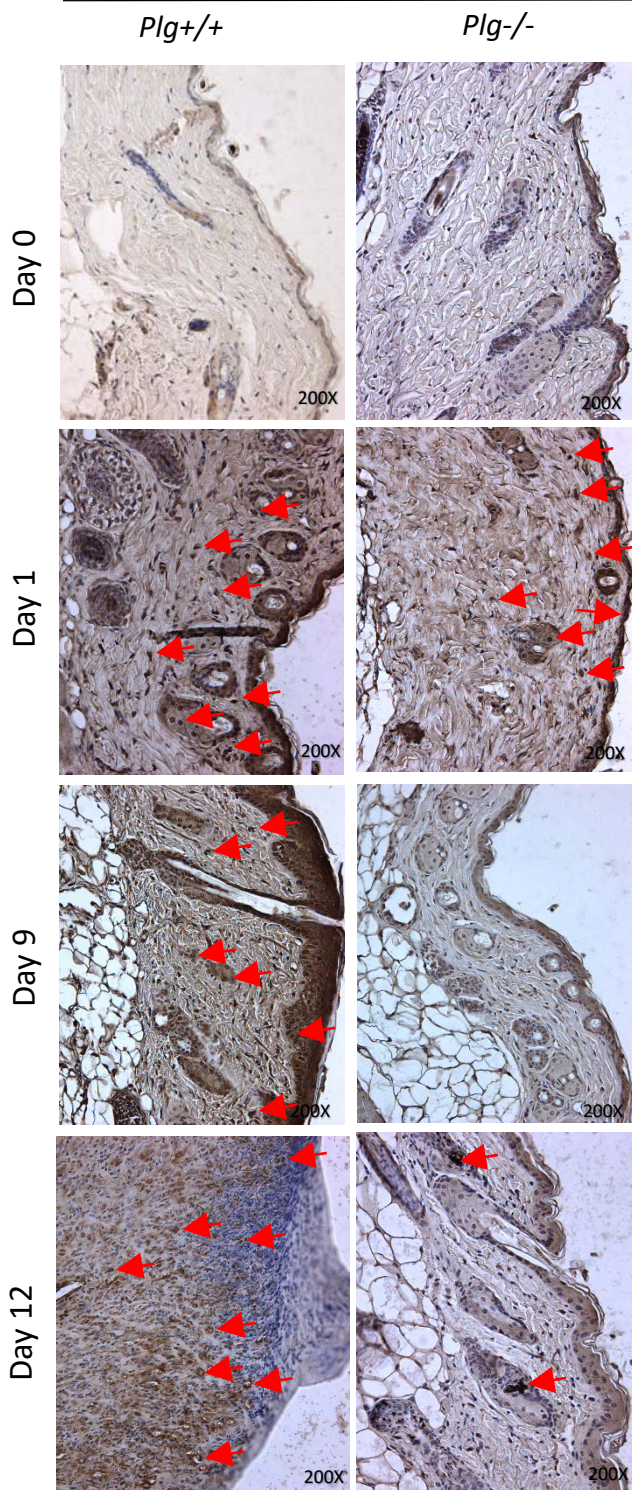


Supplementary Fig. 4. The number of proliferating cells increases significantly after irradiation in *plg+/+* mice, but not in *plg-/-* mice. Representative photographs of Ki67 (red) and DAPI (blue) staining of skin sections from *plg+/+* and *plg-/-* mice at different days after irradiation. Magnification 200x.

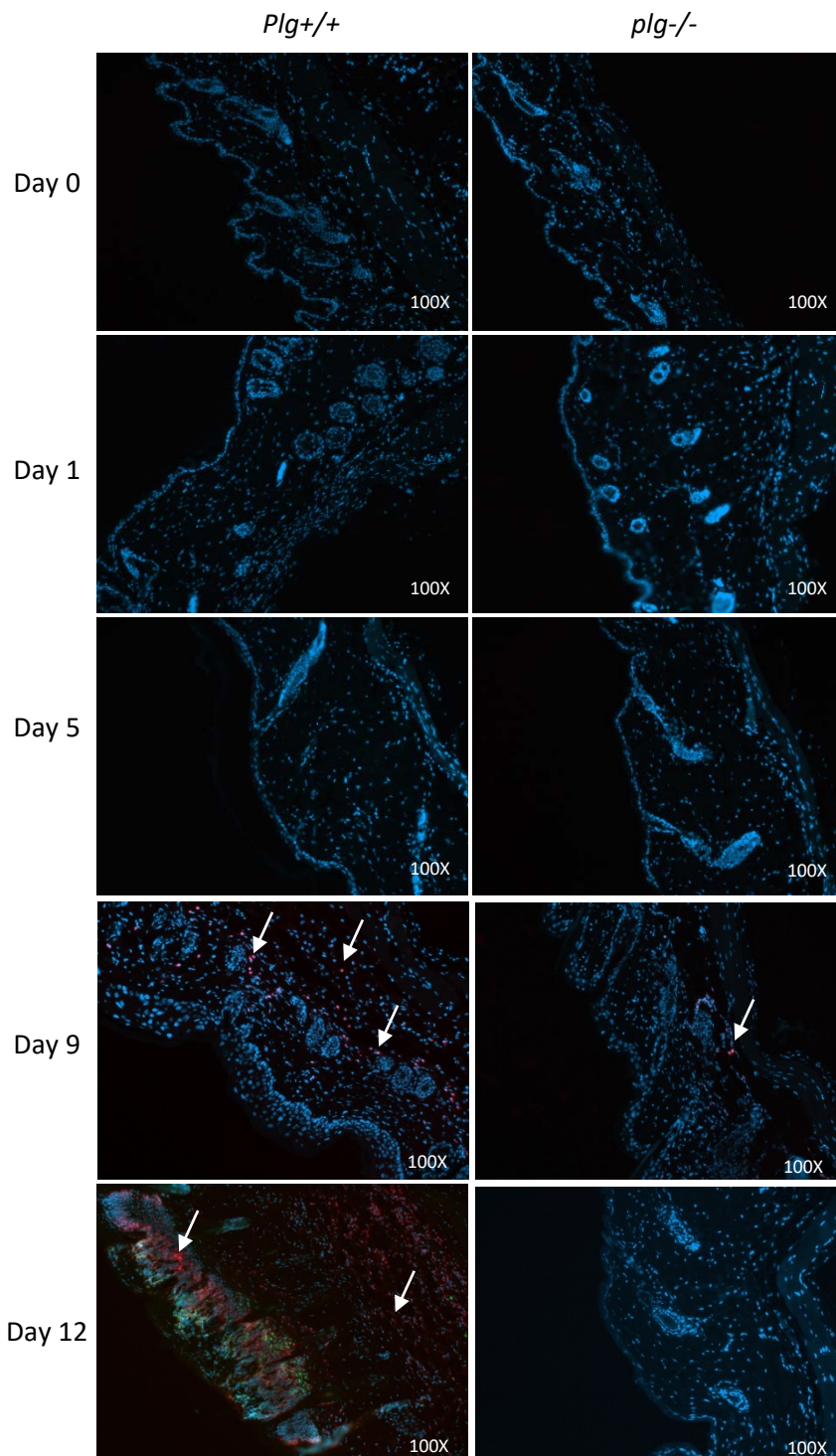


Supplementary Fig. 5. Apoptosis in the skin of *plg+/+* and *plg-/-* mice after irradiation. Representative photographs of TUNEL (green) and DAPI (blue) staining of skin sections from *plg+/+* and *plg-/-* mice at different days after irradiation. Magnification 200x.

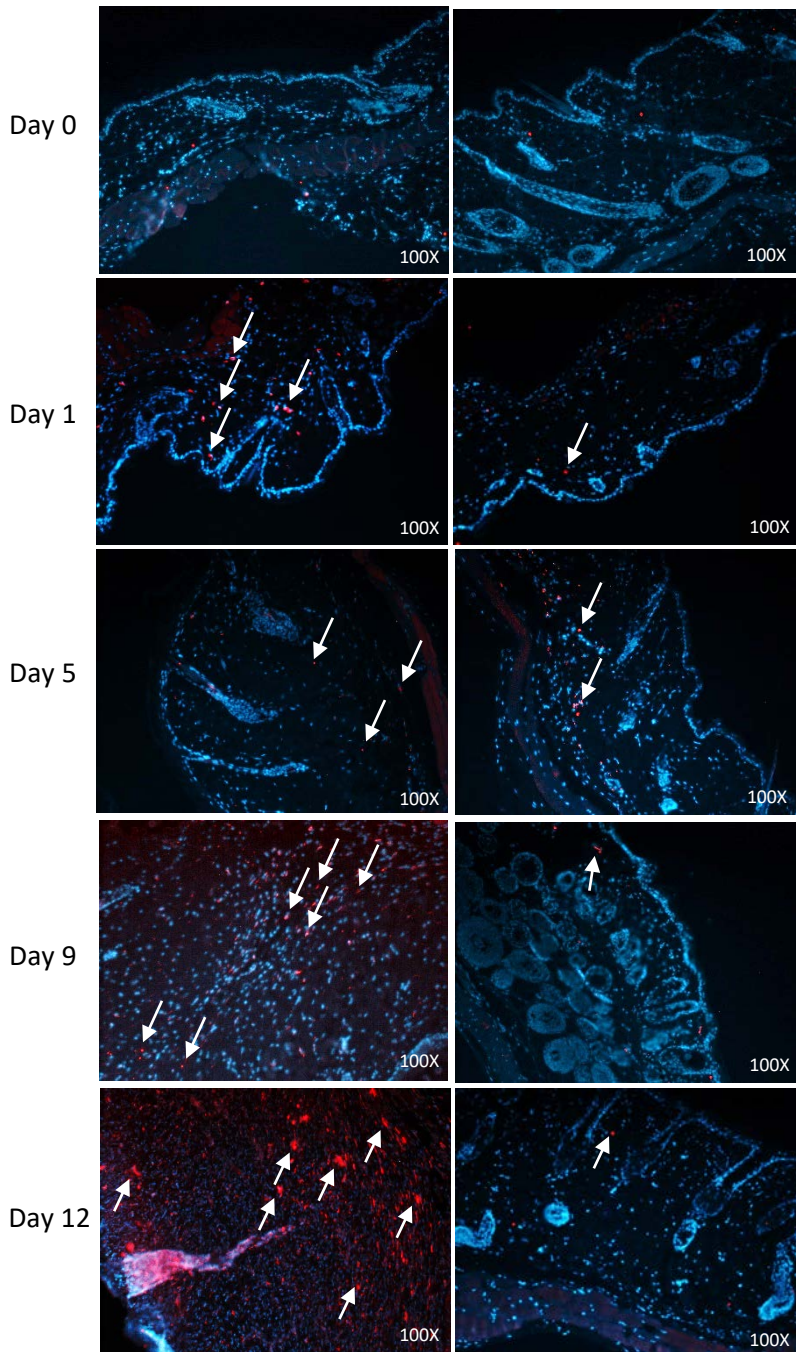
8-oxo-dG



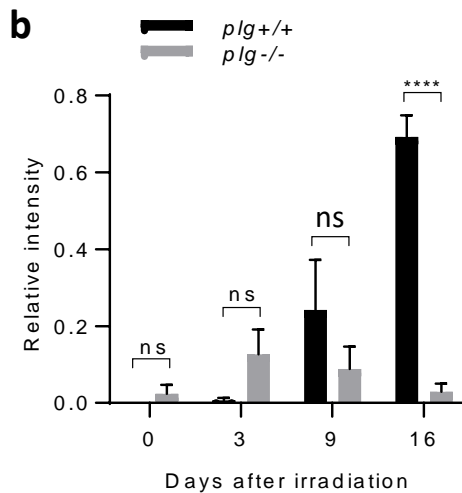
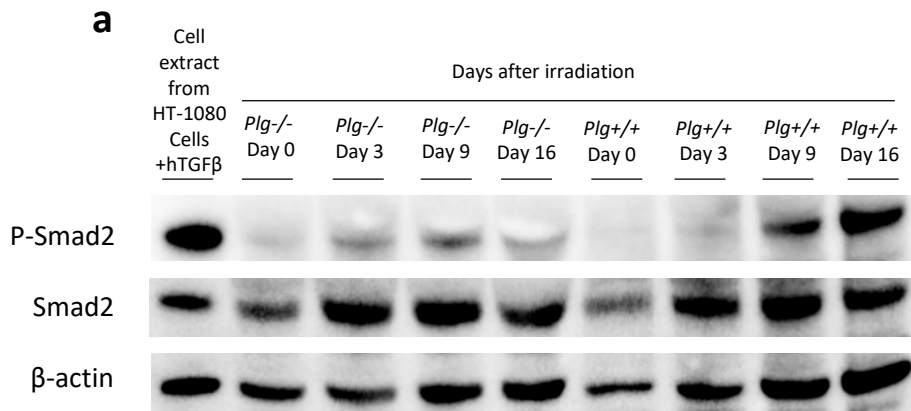
Supplementary Fig. 6. Reactive oxygen species (ROS) in the skin of *plg+/+* and *plg-/-* mice after irradiation. Representative photographs of 8-Oxo-2'-deoxyguanosine (brown) and Hematoxylin (purple) staining of skin sections from *plg+/+* and *plg-/-* mice at different days after irradiation. Magnification 200x.



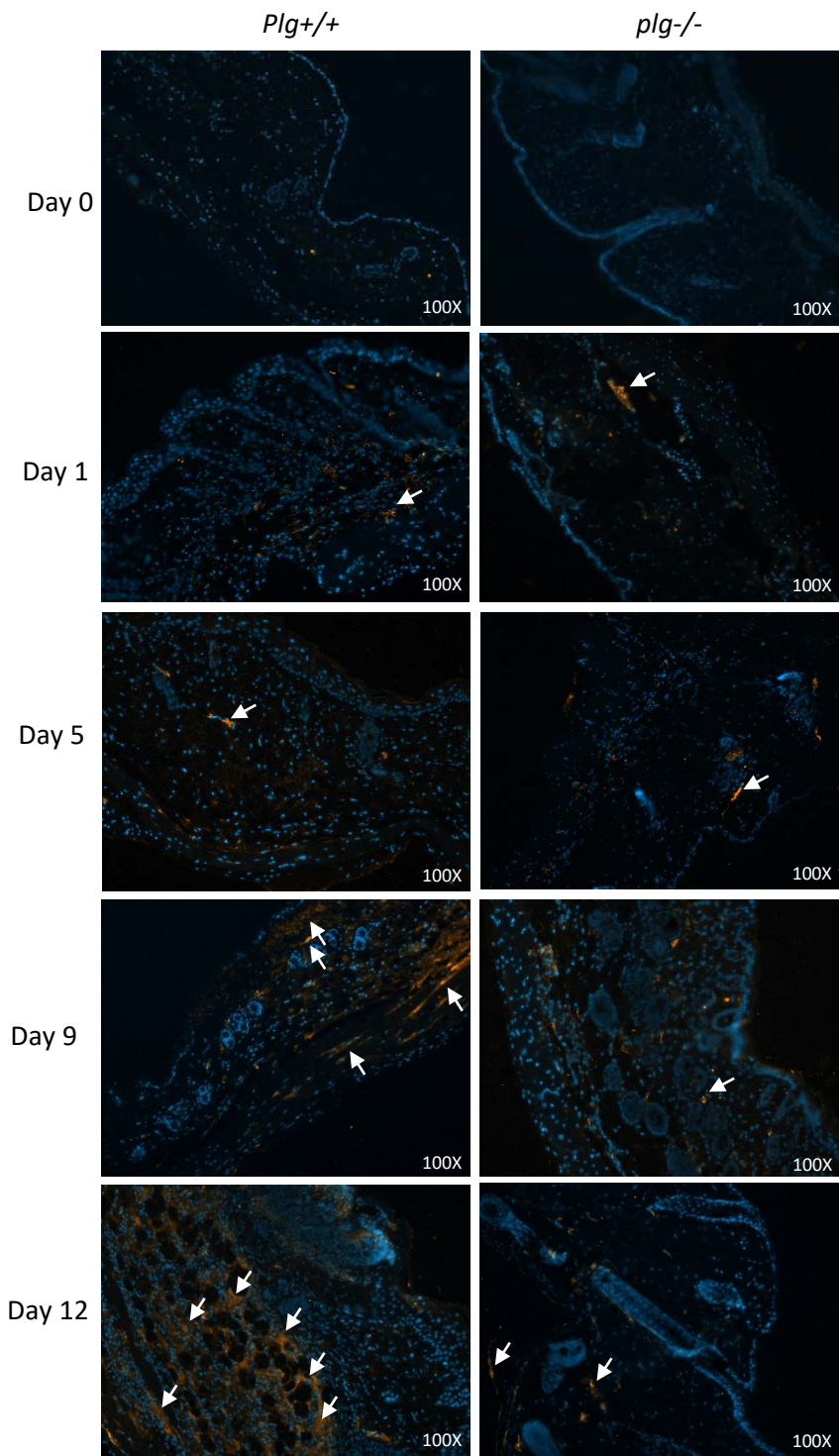
Supplementary Fig. 7. Large numbers of neutrophils and NETs infiltrate irradiated skin in *plg+/+* mice, but not in *plg-/-* mice. Representative photographs of immunostaining of neutrophils (red), DAPI (blue), and NETs (citrullinated histon 3, green) on skin sections from *plg+/+* and *plg-/-* mice at different days after irradiation. Magnification 100x.



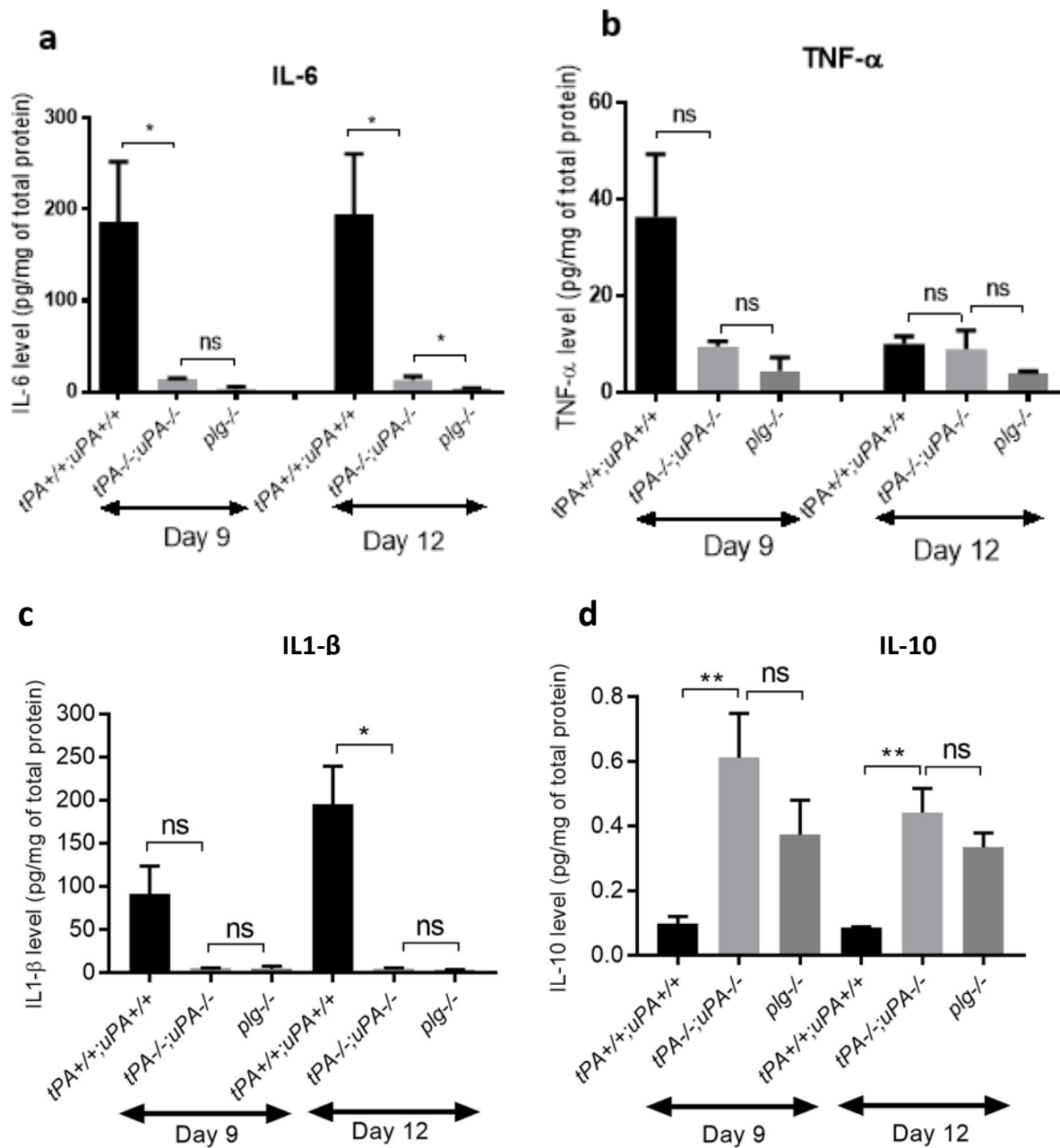
Supplementary Fig. 8. Macrophage accumulation in the skin of *plg*^{+/+} and *plg*^{-/-} mice after irradiation. Representative photographs of (CD68) (red) and DAPI (blue) staining of skin sections from *plg*^{+/+} and *plg*^{-/-} mice at different days after irradiation. Magnification 100x.



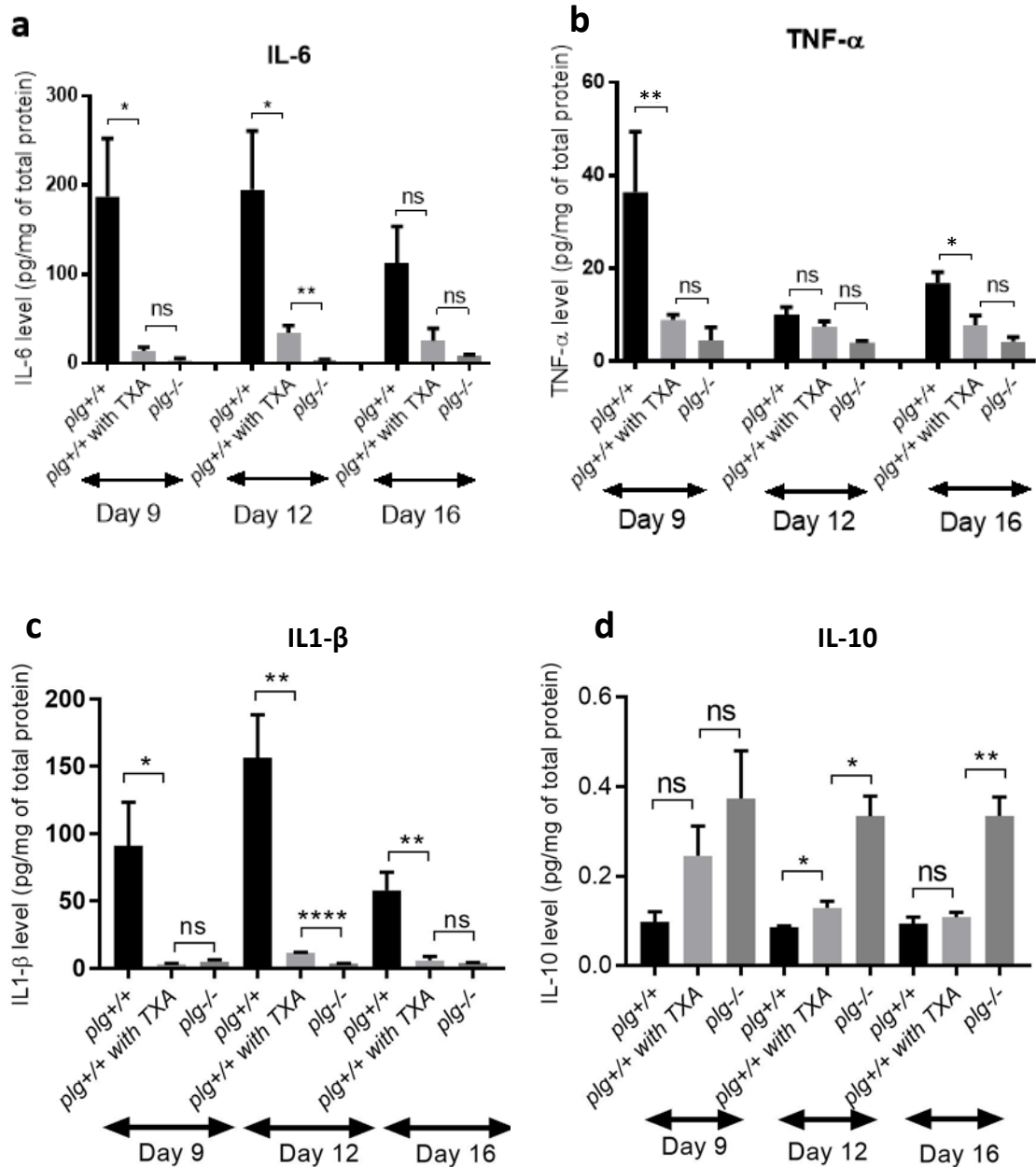
Supplementary Fig. 9. Activation (phosphorylation) of Smad2 in the skin of *plg*^{+/+} and *plg*^{-/-} mice after irradiation. (a) Representative photograph of western blot of skin samples from *plg*^{+/+} and *plg*^{-/-} mice at different days after irradiation. β-actin was used as an internal control. HT-1080 cells induced by hTGFβ were used as control for P-Smad2 antibody. (b) Quantification of P-Smad2 from the band intensity (n = 4 per time point).



Supplementary Fig. 10. Fibrin accumulation in the skin of *plg+/+* and *plg-/-* mice after irradiation. Representative photographs of fibrin (orange) and DAPI (blue) staining of skin sections from *plg+/+* and *plg-/-* mice at different days after irradiation. Magnification 100x.



Supplementary Fig. 11. Plasminogen activation is necessary to induce inflammation after irradiation. Skin samples from WT, *tPA*^{-/-};*uPA*^{-/-} and *plg*^{-/-} mice were taken at different times after irradiation. Extracts were prepared and analyzed by ELISA (n ≥ 4 per time point). (a) IL-6 levels, (b) TNF-α levels, (c) IL-1-β levels and (d) IL-10 levels in the skin after irradiation.



a

Days after irradiation	Statistical significance between <i>plg+/+</i> and <i>plg+/+</i> with TXA
Day 10	*
Day 14	*
Day 20	ns

b

Days after irradiation	Statistical significance between <i>plg+/-</i> and <i>plg+/-</i> with TXA
Day 10	**
Day 14	*
Day 20	ns

Supplementary Table 1. Statistical analysis of skin scores in irradiated mice treated with TXA (Figure 6b and 6d). (a) Statistical analysis of skin scores between *plg+/+* and *plg+/+* treated with TXA. (b) Statistical analysis of skin scores between *plg+/-* and *plg+/-* treated with TXA. * $p < 0.05$. ns= not significant.