



**Fig. S1. A-B.** Neutrophils were depleted by i.p. injection of 62.5  $\mu$ g NIMP-R14 anti-Ly6G antibody in PBS on one day before wounding and 1<sup>st</sup> day of wounding. Control mice received 62.5  $\mu$ g rat IgG2b. on the 2<sup>nd</sup> day of wounding, the wounds were harvested. H&E and Immunofluorescence were used to check the depletion efficiency of neutrophils. Both H&E and IF showed that anti-Ly6G antibody could deplete efficiently. **C.** IF were used to check the influence of neutrophils depletion on macrophages polarization during wound healing. On 5<sup>th</sup> and 11<sup>th</sup> day after wounding, wounds were collected and subjected to IF analysis. CD68 was used as a marker of total macrophage, iNOS was used as a marker of pro-inflammation marker and arginase 1 was used as a marker of pro-healing marker, the double fluorescent positive cells were taken as the M1 OR M2 macrophage. green: CD68; red: iNOS or arginase1; blue: DAPI. **D.** Neutrophils depletion on wound healing. Wounds size were record at day 1, 5 and 11 days after wounding.