**Supplementary information**

**Table S1.** Primers for real-time PCR.

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| **PCR product** | **Oligos for mutations (forward/reverse)** |
| *Prdx1* (*peroxiredoxin 1*) | 5'-tcc caa gcg cac cat tgc tca-3'  5'-cac aga gcg gcc aac ggg aa-3' |
| *Prdx2* (*peroxiredoxin 2*) | 5'-cgc gca aat cgg aaa gtc ggc-3'  5'-agc gat gat ctc cgt ggg gca-3' |
| *Prdx3* (*peroxiredoxin 3*) | 5'-gca gct gcg gga agg ttg ct-3'  5'-ggg tga cag cag ggg tgt gg-3' |
| *Prdx4* (*peroxiredoxin 4*) | 5'-tcc cgt cgc tgg acc cga aa-3'  5'-cga ctg aaa ccc ggg acg cc-3' |
| *Prdx5* (*peroxiredoxin 5*) | 5'-cga cgt gct tgg cag gca ga-3'  5'-tcc cac ctt gat cgg ggc ca-3' |
| *Prdx6* (*peroxiredoxin 6*) | 5'-gtg acg gcc cgt gtg gtg tt-3'  5'-ggg gtg gca acc ggc ttt gt-3' |
| *Gpx 1* (*glutathione peroxidase 1*) | 5'-gtg gcg ggt tcg agc cca at-3'  5'-gcg gca cac cgg aga cca aa-3' |
| *Cat* (*catalase*) | 5'-cgg cca cct gaa gga cgc tc-3'  5'-ccg gcc tgc gtg tag gtg tg-3' |
| *Abca1* (*ATP-binding cassette, sub-family A (ABC1), member 1*) | 5'-ctc ctg tgg tgt ttc tgg atg a-3'  5'-ctt agg gca caa ttc cac aag a-3' |
| *Abcg1* (*ATP-binding cassette, sub-family G (WHITE), member 1*) | 5'-agg tct cag cct tct aaa gtt cct c-3'  5'-tct ctc gaa gtg aat gaa att tat cg-3' |
| *Actb (actin, beta)* | 5'-acg gcc agg tca tca cta ttg-3'  5'-cac agg att cca tac cca aga ag-3' |

**Figure S1.** *Prdx1* expression between immune cell subsets. *Prdx1* expression between immune cell subsets was measured using microarrays generated by the ImmGen consortium (http://www.immgen.org/databrowser /index.html).

**Figure S2.** *Prdx1* deficiency increases endogenous H2O2 production in macrophages. Fluorescence confocal microscopy images of hydrogen peroxide in peritoneal macrophages stained with Peroxy Orange 1 (PO1). Peritoneal macrophages were isolated from 8-week-old *Prdx1+/+* and *prdx1-/-* mice (*n* = 5 per group), incubated with 5 μM PO1 for 40 min at 37°C, treated with 50 μg/ml oxLDL for 20 min, and imaged. Quantitative data in the graph represent relative fluorescence intensity. Scale bar: 10 μm. \**P* < 0.05, versus *Prdx1+/+* mice, by the Mann-Whitney test. Each experiment was performed 3 times, and all graphs are representative of 3 separate experiments. Data represent the mean ± SEM.

**Figure S3.** Ad-PRDX1 rescues PRDX1 expression in *prdx1-/-* macrophages. Immunoblot analysis of PRDX1 expression in *Prdx1*-deficient macrophages treated with a PRDX1-expressing adenovirus (Ad-PRDX1) or control (Ad-con). Adenovirus (2 × 109 pfu) was maintained for 24 h.

**Figure S4.** *Prdx1* deficiency exacerbates atherosclerosis in *apoe-/-* mice. Representative images of Oil Red O staining of aortas (**A**) and aortic sinuses (**B**) from *apoe-/-* and *prdx1-/-apoe-/-* mice fed an atherogenic diet for 10 weeks (*n* = 11–15 per group) as well as aortas (**C**) and aortic sinuses (**D**) from *apoe-/-* and *prdx1-/-apoe-/-* mice fed a normal chow diet for 28 weeks (*n* = 7–13 per group). Scale bar: 200 μm. (**E**) Representative immunostaining images of the macrophage marker CD68 in *apoe/-* and *prdx1-/-apoe-/-* mice fed an atherogenic diet for 10 weeks (*n* = 10 per group). Quantitative data represent plaque percent (%) or size. Scale bar: 100 μm. \**P* < 0.05, \*\**P* < 0.01, \*\*\**P* < 0.001 versus *apoe-/-* mice, by the Mann-Whitney test. Data represent the mean ±SEM.

**Figure S5.** *Prdx1*-deficient hematopoietic cells exacerbates plaque formation in *apoe-/-* mice. Bone marrow (BM) from *apoe-/-* or *prdx1-/-apoe-/-* mice was transplanted into *apoe-/-* or *prdx1-/-apoe-/-* recipients. Four weeks after transplantation, mice were fed an atherogenic diet for 10 weeks. Representative images of hematoxylin and eosin (H&E)-stainedaortic sinuses from *apoe-/-* and *prdx1-/- apoe-/-* recipient mice transplanted with *apoe-/-* or *prdx1-/-poe-/-* BM (*n* = 5–10 per group). Scale bars: 100 μm. Quantitative data represent plaques size. \**P* < 0.05 versus *apoe-/-* recipient mice transplanted with *apoe-/-* BM; #*P* < 0.05 versus *prdx1-/-apoe-/-* recipient mice transplanted with *apoe-/-* BM, by the Mann-Whitney test. Data represent the mean ± SEM.