

SUPPLEMENTARY FIG. S4. Cys57 is responsible for  $\rm H_2O_2$  reaction. The indicated GPx7 variants (20  $\mu$ M) were incubated without (lanes 1–8) or with 40  $\mu$ M  $\rm H_2O_2$  (lanes 9–12). Samples were then treated by adding NR 2×SDS-loading buffer containing 10 mM mPEG-mal (lanes 5–12) or reducing (R) SDS-loading buffer (lanes 1–4), and resolved by SDS-15% PAGE. The numbers of thiols modified by mPEG-mal were indicated on the right margin.