



**Supplementary Figure S2** Induction of oxidative stress increased DNA damage when PRDXs are inhibited. After 90 min of incubation with the maximum concentration of the inhibitors of the 2-Cys PRDXs, the TRX/TRD system, the NADPH-suppliers' enzymes, the reactivation system of the PRDX6 peroxidase activity or the  $\text{Ca}^{2+}$ -iPLA<sub>2</sub> activity of PRDX6, spermatozoa were challenge with 1 mM  $\text{H}_2\text{O}_2$  for another 30 min. The percentage of labeled cells were analyzed by MACSQuant Analyzer flow cytometry and results are presented as the mean  $\pm$  SEM of six measurements performed with sperm samples from different donors. \*A significant difference ( $P \leq 0.05$ ) and ^significant difference with the sample incubated with the respective inhibitor alone (Mann Whitney test).