Supplementary material (Recuero et al.)

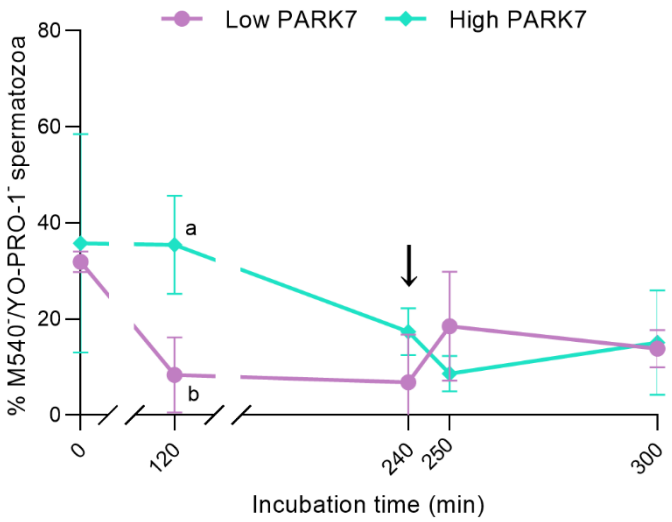

Figure S1. Percentage of viable spermatozoa with low lipid membrane disorder ($M540^-/YO\text{-}PRO\text{-}1^-$) during in vitro capacitation and progesterone-induced acrosome exocytosis (300 min). Black arrow indicates the time at which progesterone was added at a final concentration of 10 µg/mL (240 min). Data are shown as mean ± SD. Different letters indicate significant differences ($p < 0.05$) between samples containing high or low levels of PARK7 at 0 min of incubation.

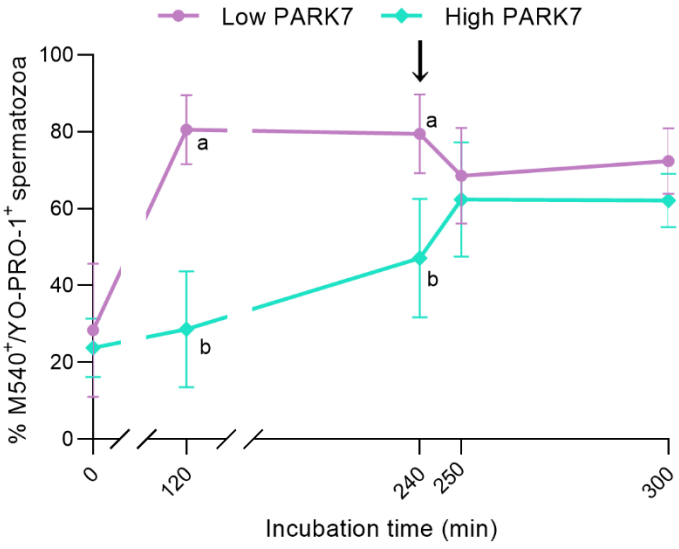

Figure S2. Percentage of non-viable spermatozoa with high lipid membrane disorder ($M540^+/YO\text{-}PRO\text{-}1^+$) during in vitro capacitation and progesterone-induced acrosome exocytosis (300 min). Black arrow indicates the time at which progesterone was added at a final concentration of 10 µg/mL (240 min). Data are shown as mean ± SD. Different letters indicate significant differences ($p < 0.05$) between samples containing high or low levels of PARK7 at 0 min of incubation.

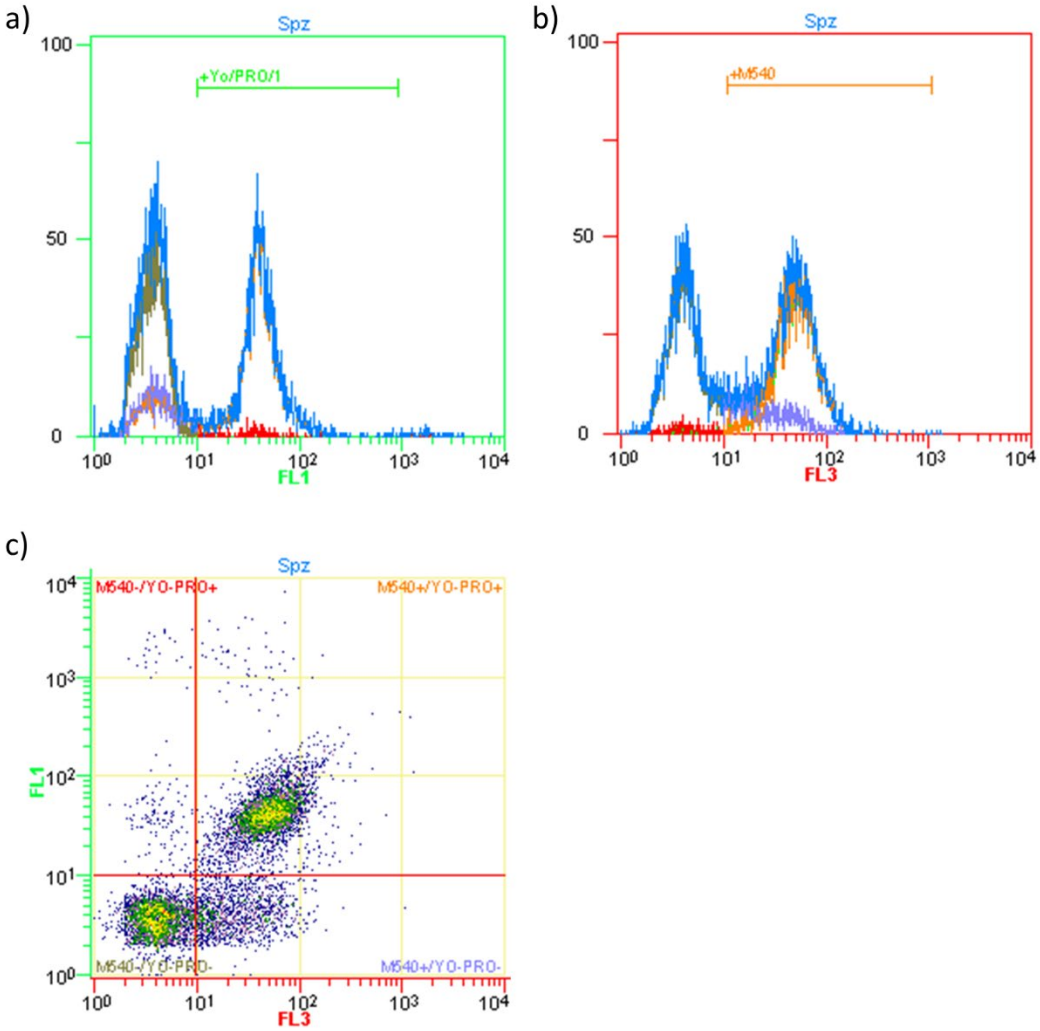

Figure S3. Representative flow cytometry YO-PRO (**a**) and M540 (**b**) histograms of sperm samples at the beginning of the in vitro capacitation experiment (0 min of incubation). **(c)** Dot plots of M540 and YO-PRO staining showing four distinct populations: $M540^-/YO\text{-}PRO^+$, $M540^+/YO\text{-}PRO^-$, $M540^-/YO\text{-}PRO^-$, and $M540^+/YO\text{-}PRO^+$.

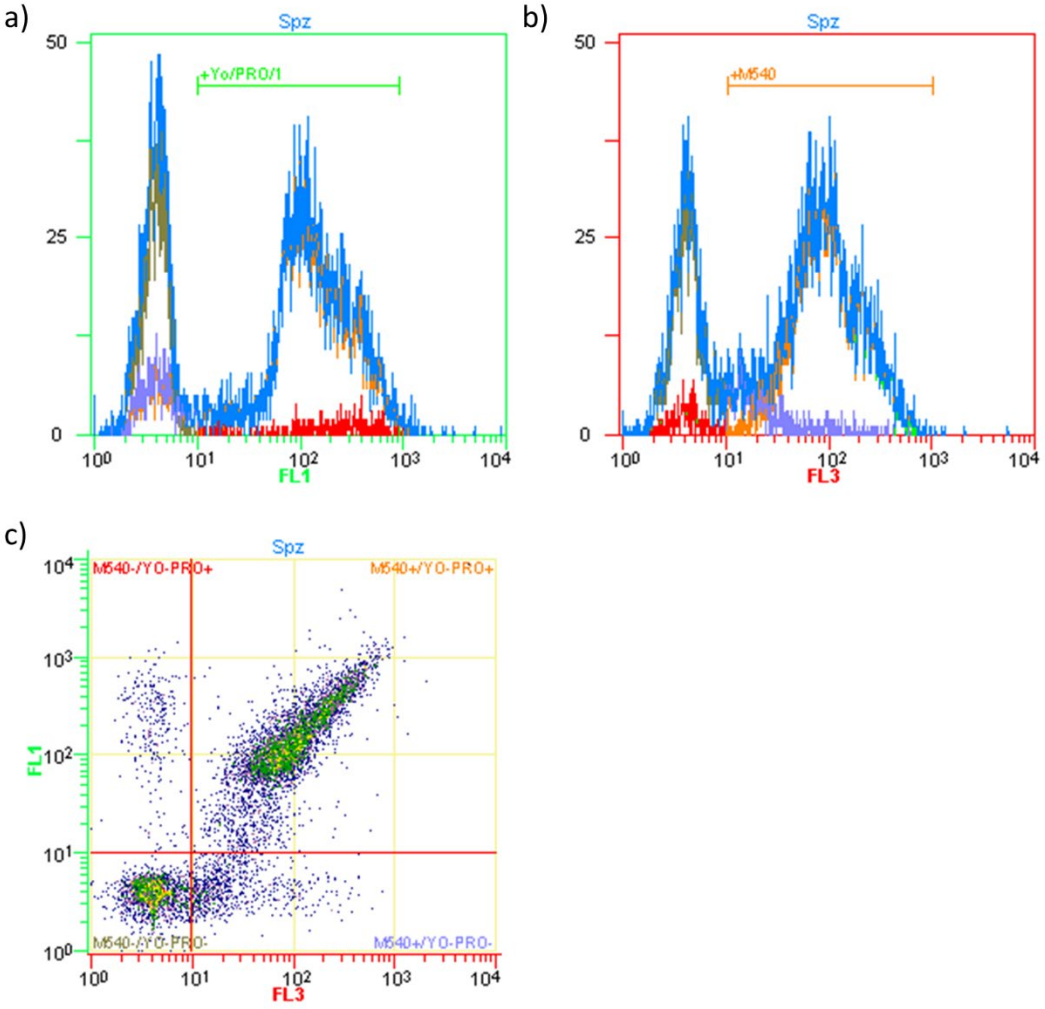

Figure S4. Representative flow cytometry YO-PRO (**a**) and M540 (**b**) histograms of sperm samples after 240 min of incubation in capacitation medium. **(c)** Dot plots of M540 and YO-PRO staining showing four distinct populations: $M540^-/YO\text{-}PRO^+$, $M540^+/YO\text{-}PRO^-$, $M540^-/YO\text{-}PRO^-$, and $M540^+/YO\text{-}PRO^+$.

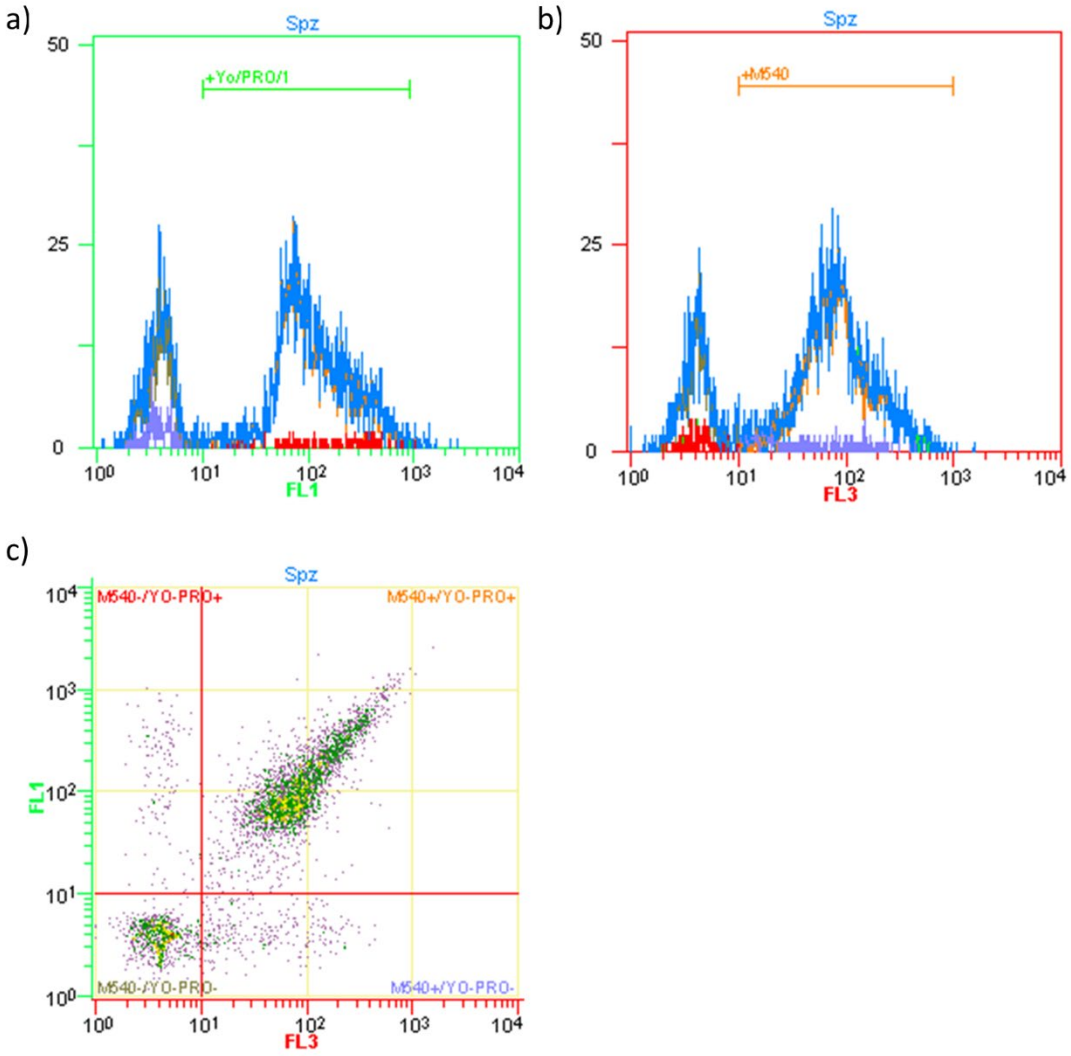

Figure S5: Representative flow cytometry YO-PRO (**a**) and M540 (**b**) histograms of sperm samples after 300 min of incubation in capacitation medium. **(c)** Dot plots of M540 and YO-PRO staining showing four distinct populations: M540^{-}/YO-PRO^{+}, M540^{+}/YO-PRO^{-}, M540^{-}/YO-PRO^{-}, and M540^{+}/YO-PRO^{+}.

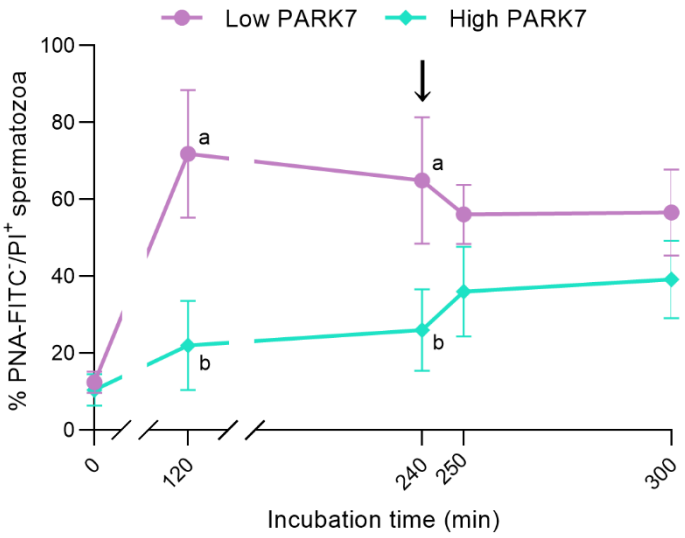

Figure S6: Percentage of non-viable spermatozoa with an acrosome that could not be fully intact (PNA-FITC$^+$/PI$^+$) during in vitro capacitation and progesterone-induced acrosome exocytosis (300 min). Black arrow indicates the time at which progesterone was added at a final concentration of 10 μg/mL (240 min). Data are shown as mean ± SD. Different letters indicate significant differences ($p < 0.05$) between sperm samples with high or low PARK7 levels at 0 min of incubation.

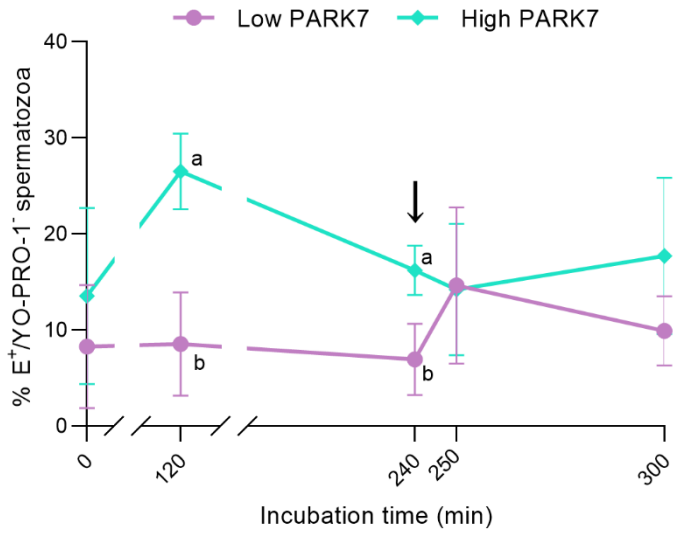

Figure S7: Percentage of viable sperm with high intracellular O_2^- levels (E$^+$/YO-PRO-1$^-$) during in vitro capacitation and progesterone-induced acrosome exocytosis (300 min). Black arrow indicates the time at which progesterone was added at a final concentration of 10 μg/mL (240 min). Data are shown as mean ± SD. Different letters indicate significant differences ($p < 0.05$) between sperm samples with high or low PARK7 levels at 0 min of incubation.