Supplementary Figure 1 An acrosome is formed in all three genotypes of XO male mice and elongating post-MI germ cells are seen in XSxr<sup>O</sup>O and X<sup>ESxr</sup>O but not in X<sup>ESO</sup>sry mice. PAS/hematoxylin stained histological sections of testes from 5-6 week old XY, XSxr<sup>O</sup>O, X<sup>ESxr</sup>O and X<sup>ESO</sup>sry mice. Stages of seminiferous tubules are indicated. Acrosome development in round post-MI germ cells of XO mice is synchronous with the acrosome development in XY round spermatids (black arrows). While in XY and XSxr<sup>O</sup>O males spermatids start elongating (white arrows) at stage IX-X, no elongation could be observed in X<sup>ESxr</sup>O or X<sup>ESO</sup>sry males; instead the post-MI germ cells remain round (black arrowheads). A delayed elongation is observed in X<sup>ESxr</sup>O males since a few elongated nuclei were found at stage XII (white arrowheads). Note that even by stage XII, no elongated spermatids were formed in X<sup>ESO</sup>sry testes; instead we found round (black arrowheads) together with degenerating (stars) post-MI germ cells. Also, in XSxr<sup>O</sup>O testis at stage XII there is a marked increase in MI spermatocytes that are heavily stained with PAS (MI†), indicative of necrosis/apoptosis. PL, preleptotene spermatocyte; L, leptotene spermatocyte; Z, zygotene spermatocyte; MI, metaphase of the first meiotic division. Scale bar, 40 µm.