Table EV3. Summarized imaging acquisition parameters and 3D refinement statistics

|  |  |  |
| --- | --- | --- |
| **Sperm genotype** | **WT** | **Lrrc23** |
| Microscope | Titan Krios | Titan Krios |
| Voltage (kV) | 300 | 300 |
| Camera | Gatan K3 | Gatan K3 |
| Slit width (eV) | 20 | 20 |
| Pixel size (Å) | 3.4 | 3.4 |
| Defocus range (µm) | 1 (volta-phase phase) | 1(volta-phase phase) |
| Tilt range | -51°/+51° (3°) | -51°/+51° (3°) |
| Tilt scheme | Dose-symmetric | Dose-symmetric |
| Total dose (e-/Å2) | 100 | 100 |
| Number of tomograms | 8 (20)\* | 38 (60)\* |
| **3D refinement statistics** | **96-nm axonemal repeat** |
| Number of final sub-tomograms | 1,212 | 2,137 |
| Symmetry | C1 | C1 |
| Resolution (Å) (0.143 cut-off) | 34 | 27 |
| EMDB deposition | EMD-29013 | EMD-28606 |

\*Initial number of tomograms