Supplementary Material

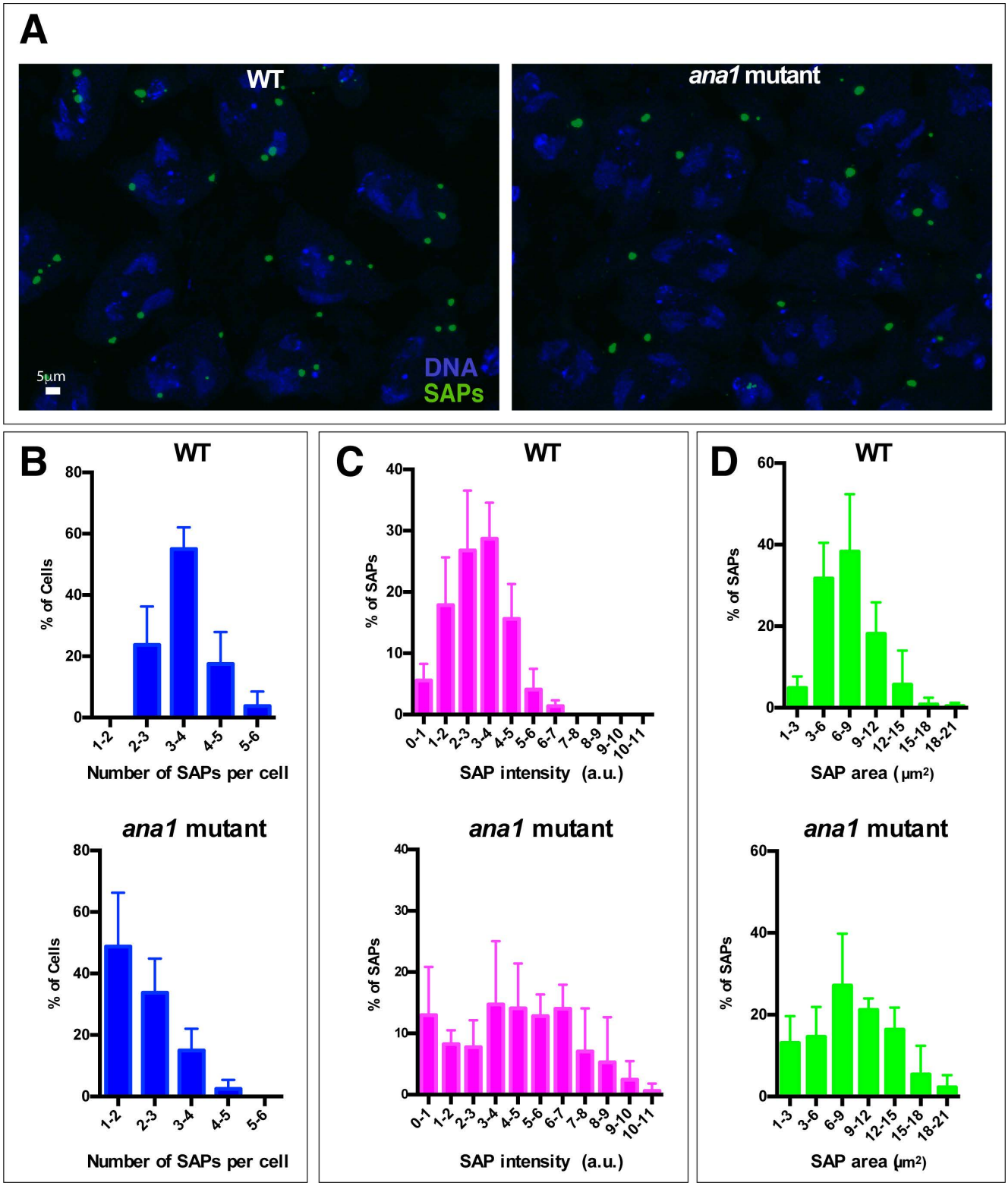
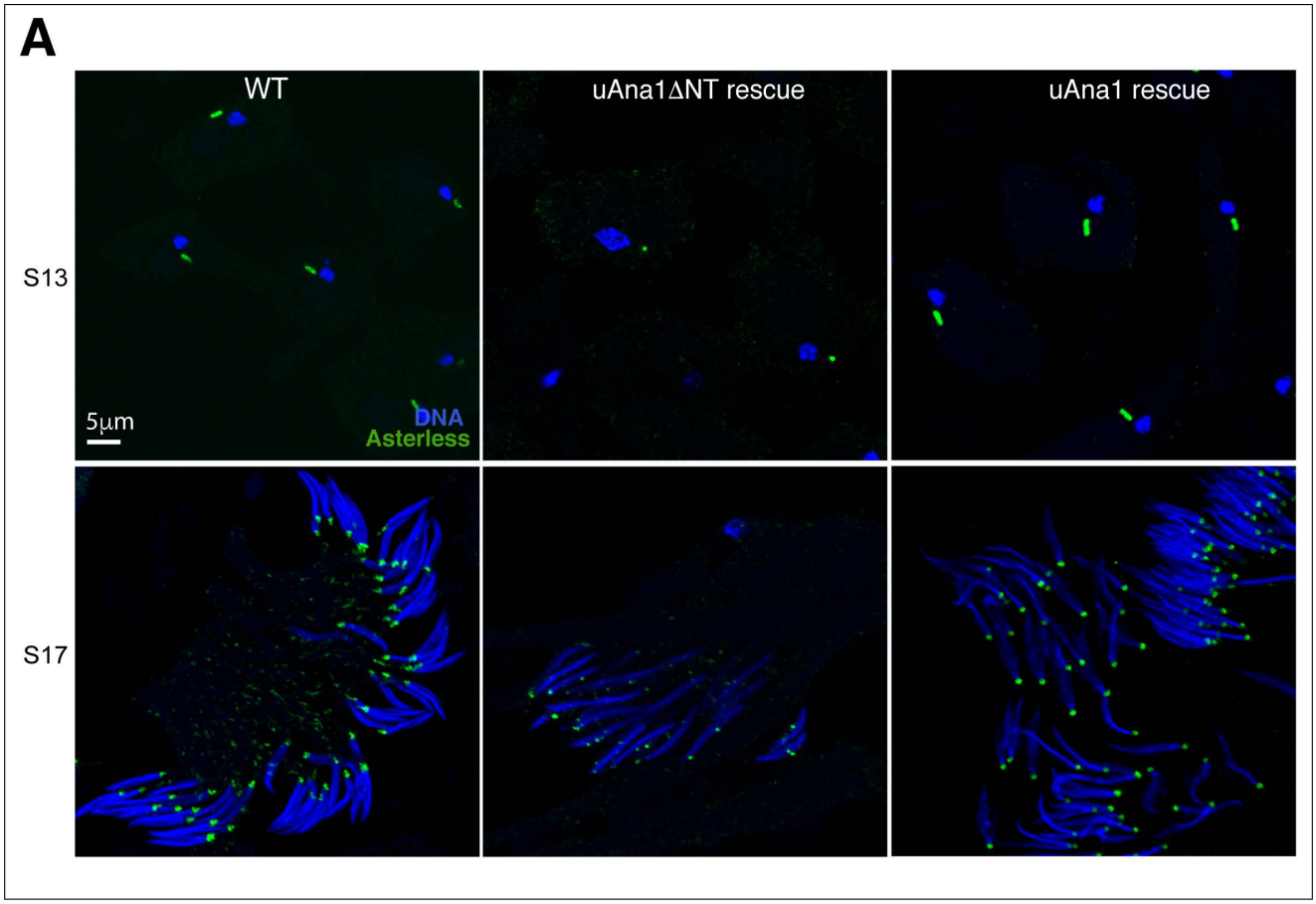


Figure S1

SAP assembly is subtly altered in the absence of Ana1. (A) Micrographs show SAPs (*green*) in primary spermatocytes from WT (left panel) or *ana1* mutant (right panel) *Drosophila* late pupal testes. The tissue was stained with Hoechst to stain the DNA (*blue*)**. (B-D)** Graphs quantify the number of SAPs per cell (B), the sum SAP fluorescence intensity (C), and the average area of SAPs per cell in WT (top graphs) or *ana1* mutant (bottom graphs) spermatocytes. These data show that SAPs are less abundant and larger than normal in *ana1* mutant spermatocytes. Error bars represent SD. N=20 spermatocytes per testis and 4 testes per genotype.



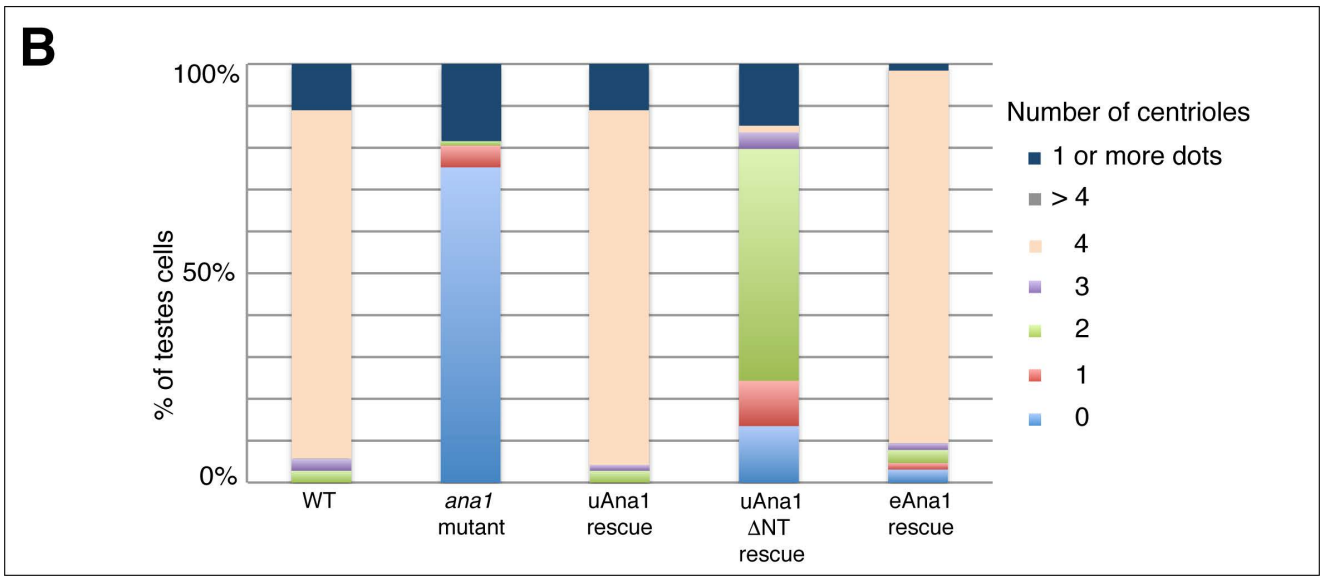


Figure S2

Ana1 levels influence centriole length. (A) Micrographs show *Drosophila* early S13 spermatids (top panels) at the onion stage (before axoneme formation) or S17 spermatids (bottom panels) during the process of axoneme elongation. Cells were stained for DNA (*blue*) and Asterless (centriole/basal body marker) (*green*) from WT (left panels) or *ana1* mutant rescued with either uGFP-Ana1ΔNT (middle panels) or uGFP-Ana1 (right panels). Note the non-elongated dot-like centrioles/basal bodies in the mutant cells rescued with uGFP-Ana1ΔNT. **(B)** Graphs illustrate the quantification of the percentage of primary spermatocytes of *Drosophila* late pupal testes exhibiting different numbers of centrosomes (n=62 total cells from 5 different testes) in WT, *ana1* mutant, *ana1* mutant rescued by the different transgenes (as indicated). Note that in primary spermatocytes there are normally 4 elongated centrioles per cell, but in the ana1 mutants rescued by GFP-Ana1ΔNT the centrioles were so short that the centriole pair could no longer be resolved, and so we counted these as 2 centrioles per cell (see Figure 7). Note also that we scored for the presence of occasional dot-like structures (“dots”) that were stained by both Asl and Cnn antibodies.

Table S1, related to materials and methods

	Commercial Antibodies	Catalogue number
1	Mouse anti– α-tubulin (DM1 α; Sigma-Aldrich)	T9026
2	Anti-Rabbit IgG Alexa Fluor® 405 (Invitrogen)	A31556
3	Anti-Guinea pig IgG Alexa Fluor® 488 (Invitrogen)	A11073
4	Anti-Rabbit IgG Alexa Fluor® 488 (Invitrogen)	A21206
5	Anti-rabbit IgG Alexa Fluor® 568 (Invitrogen)	A11011
6	Anti-Mouse IgG Alexa Fluor® 568 (Invitrogen)	A11004
7	Anti-Guinea Pig IgG Alexa Flour 594 (Invitrogen)	A11076
8	Anti-Sheep IgG Alexa Fluor® 647 (Invitrogen)	A21448
9	Anti-Mouse IgG Alexa Fluor® 647 (Invitrogen)	A21236
10	GFP-booster-atto488 (ChromoTek)	gba488
11	Anti Rabbit HRP conjugated (GE Healthcare)	NA934V
12	Anti Mouse HRP conjugated (GE Healthcare)	NA931V