Table S1. Fly Stocks Used, Related to Experimental Procedures

tj-GAL4 (DGRC # 104055);
tj-Gal4; *gypsy*-lacZ (Olivieri et al, 2010)
MTD-GAL4 (Ni et al., 2011);
armi RNAi (VDRC # 16205);
mael RNAi (VDRC # 100907 (KK));
mael RNAi (VDRC # 18198 (GD));;
$mael^{M391}/mael^{Df}$ (Findley et al, 2003)
$mael^{Df}$ (DGRC*:* 150235) (rescue experiments)
Short hairpin RNAi lines were cloned into the Valium-22 vector (Ni et al, 2011) modified with a white selection marker and integrated into the attp2 landing site reported in Markstein et al (2008). The hairpin sequence for *mael* was CCGAAGCTTGTTCGCTTTCTA
y,w,hsFlp122;;act<CD2>GAL4, UAS-GFP (Olivieri et al, 2010)
FLAG-eGFP-Mael was cloned by inserting an N-terminal FLAG-eGFP cassette via bacterial recombineering into a genomic rescue construct (3L : 22712955 -22721349) which was integrated into the attp40 landing site. For the ΔHMG rescue construct, the first 240 nucleotides of *maelstrom* were deleted from the original FLAG-eGFP-Mael construct.
flamenco restrictive and permissive flies (Sarot et al, 2004)
All flies were aged 5 days at 25°C before analysis.

Table S2. Primers for qPCR Analysis, Related to Experimental Procedures

GENE	Primer	Sequence
rp49	rp49_fwd	CCGCTTCAAGGGACAGTATCTG
	rp49_rev	ATCTCGCCGCAGTAAACGC
ZAM	ZAM_fwd	ACTTGACCTGGATACACTCACAAC
	ZAM_rev	GAGTATTACGGCGACTAGGGATAC
HeT-A	HeT-A_fwd	CGCGCGGAACCCATCTTCAGA
	HeT-A_rev	CGCCGCAGTCGTTTGGTGAGT
DM412	412_fwd	AAAGTACGGTCCAATGAAGACG
	412_rev	GTGGTGATGAGCTGTTGATGTT
actin5C	Act5C_fwd	AAGTTGCTGCTCTGGTTGTCG
	Act5C_rev	GCCACACGCAGCTCATTGTAG
mdg1	Mdg1_fwd	AAACTCCAACTCCCAATCCG
	Mdg1_rev	AGTGGTCCCTCGCAGTCGTT
gypsy	Gypsy_fwd	CAACAATCTGAACCCACCAATCT
	Gypsy_rev	TATGAACATCATGAGGGTGAACG
piwi locus	Piwi_fwd	TTACCCGTACTTCGTCCTGATG
	Piwi_rev	TTGGGCACCGAAATAACTCA
mael locus	Mael_fwd	AGACCACACTTCCTTTGCC
	Mael_rev	GTGCGTCGGTAAGTTCCTAG
reporter_1	1_fwd	CGTTAGGTCCTGTTCATTGTTTA
	1_rev	CGTCAGCATTGTTCATACAAAG
reporter_2	2_fwd	CTCGGCAACAGTATATTTGTGGT
	2_rev	AGGCGATTAAGTTGGGTAACG

Table S3. Probes Used for Northern Blots, Related to Experimental Procedures

Probe	Sequence
mir-310	AAAGGCCGGGAAGTGTGCAATA
tj-piRNAs	GGTAATGGGAATGCACTTCTCTTGAA
Idefix-piRNA	AAACTACTGGCAATCGTTTGGGAA

Table S4. siRNAs Used for RNAi in OSCs, Related to Experimental Procedures

GENE	siRNA	Sequence
eGFP	eGFP_guide	ACUUCAGGGUCAGCUUGCCTT
	eGFP_passenger	GGCAAGCUGACCCUGAAGUTT
armi	Armi_guide	UAAACUUAGCUUGACAGCGTT
	Armi_passenger	CGCUGUCAAGCUAAGUUUATT
mael	Mael1_guide	UUCUUCGAACAAGCGAAAGUU
	Mael1_passenger	GAAGCUUGUUCGCUUUCUAUU
	Mael2_guide	UUCCAAAUACUACAAGCAUU
	Mael2_passenger	GGUUUAUGAUGUUCGUAAAUU
piwi	Piwi_guide	CACCUUCACGCCUGGGAGCTT
	Piwi_passenger	GCUCCCAGGCGUGAAGGUGTT

Table S5. Sequencing Data Used in This Study, Related to Experimental Procedures

cells	methods	Genotype
OSC	RNA-seq	ctrl-KD
		piwi-KD
		armi-KD
		mael-KD
	GRO-seq	wild-type
		piwi-KD
	Rpb3 ChIP-seq	ctrl-KD
		ctrl-KD
		piwi-KD
		piwi-KD
		mael-KD
		mael-KD
	H3K9me3 ChIP-seq	ctrl-KD
		ctrl-KD
		piwi-KD
		piwi-KD
		mael-KD
		mael-KD
	input ChIP-seq	ctrl-KD
		ctrl-KD
		piwi-KD
		piwi-KD
		mael-KD
		mael-KD
	DNA-seq	wild-type
	small RNA-seq	wild-type
fly	Rpb3 ChIP-seq	tj-GAL4>*tej* RNAi
		tj-GAL4>*tej* RNAi
		tj-GAL4>*armi* RNAi
		tj-GAL4>*armi* RNAi
	small RNA-seq	*flam*(permissive)
	small RNA-seq	*flam*(reactive)

Table S6. Coordinates of Heterochromatin Used in This Study, Related to Figure 5

chromosome	start	end
chr2L	20100000	23011544
chr2LHet	1	368872
chr2R	1	2400000
chr2RHet	1	3288761
chr3L	22500000	24543557
chr3LHet	1	2555491
chr3RHet	1	2517507
chrU	1	10049037
chrX	21300000	22422827
chrXHet	1	204112
chrYHet	1	347038