

Table S1

Gene	Primer sequence	Reference
<i>ghr1</i>	FW 5'- GAGGATGACCAAGCTTCAGAC -3' RV 5'- TGCCATGACCAAAGACCTC -3'	
<i>ghr2</i>	FW 5'- AGCAGGAGAATTGATGGTGG -3' RV 5'- CACCCAAGACTGACGAGAAC -3'	
<i>rpl7</i>	FW 5'-CGCCAGATCTTCAACGGGTAT-3' RV 5'-AGGCTCAGCAATCCTCAGCAT-3'	Zhang and Hu <i>et al.</i> 2006

Table S1: Primer sequences used in the present study for real time PCR assays.

Figure S1

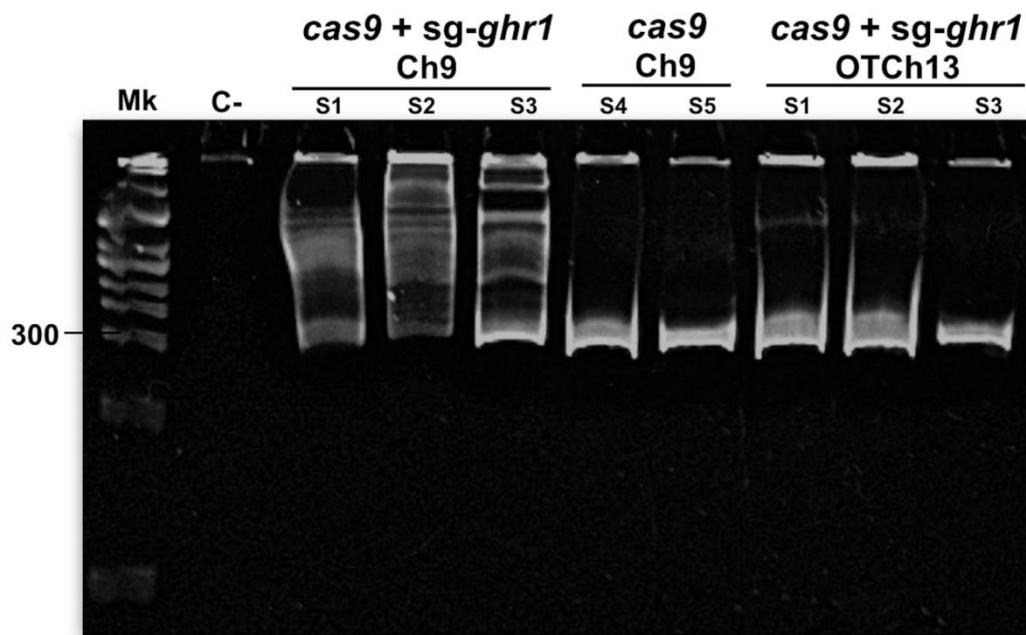


Fig. S1. Full-length gel of images of heteroduplex mobility assay (HMA). HMA to analyze to detection of off-target alterations. Representative HMA are show negative control (C-), embryos microinjected with *cas9+sg-grh1*: amplification to target gene *grh1* in chromosome 9 (ch9) samples 1,2 and 3 (S1,S2,S3), embryos microinject only with *cas9* samples 4 and 5 (S4,S5) and potential off-target loci in chromosome 13 (OTCh13) in samples 1,2 and 3.

Figure S2

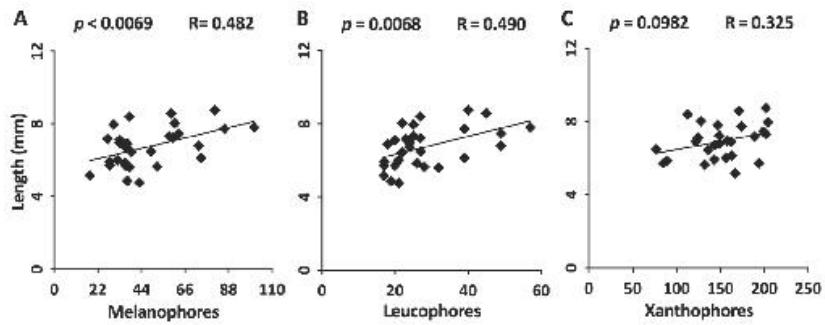


Fig. S2. Chromatophores and body length. Pearson's correlation coefficient between standard length and melanophores (a), leucophores (b), and xanthophores (c).