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Supplemental Experimental Procedure

CRISPR/Cas9-mediated *Kit* gene editing

Kit-knock out (KO) mice were generated by pronuclear injection of circular plasmid expressing Cas9 and single guided RNA, into fertilized eggs (ICR × C57/B6). The plasmid was prepared by ligating the annealed oligos (5'-CACCGGGAGCTGGTGCCTTCGGGA-3' and 5'-AAACTCCCGAAGGCACCAGCTCCC-3') into the Bbsl site of pX330-U5-Chimeric_BB-CBh-hSpCas9 (addgene plasmid 42230; Cong et al. 2013). The construct was purified by large-scale preparation followed by PEG precipitation (Sambrook et al. 1989). The plasmid DNA was quantified using agarose gel electrophoresis in addition to absorption spectrometer, and injected into pronucleus of fertilized eggs with pX330 construct at 5ng/μl and with oligonucleotide (5'-TTCCTTCCTAAAGGAAAGACATTGGGAGCTGGTGCCTTCAGGAAGGTCGTTGAGGCCAC TGCATATGGCTTGATTAAGTC-3') at 10 ng/μl in 10 mM Tris-HCl (pH7.5), 0.1mM EDTA and 100mM NaCl. A *Kit*-KO mouse with the white belly was derived from 18 injected mice.

Supplemental References

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