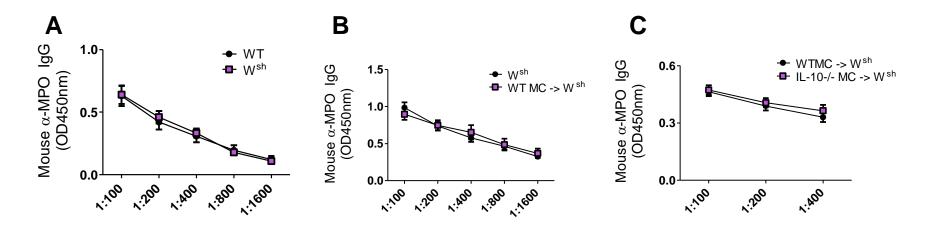# Figure S1

Figure S1. Similar anti-MPO antibody titres were measured in WT and Kit[W-sh/W-sh] mice with autoimmune anti-MPO glomerulonephritis.

(A) MPO immunized C57BL/6 WT mice (n=8) and MPO immunized Kit[W-sh/W-sh] mice (n=8) both developed comparable levels of anti-MPO IgG titres. (B) No difference in ANCA was observed between MPO immunized Kit[W-sh/W-sh] mice (n=9) and WT mast cell reconstituted Kit[W-sh/W-sh] mice (n=10). Titres of ANCA were not statistically significant between Kit[W-sh/W-sh] mice reconstituted with either WT mast cells (n=10) or IL-10-/- mast cells (n=10). All data representative of two independent experiments with error bars depicting mean ± SEM.
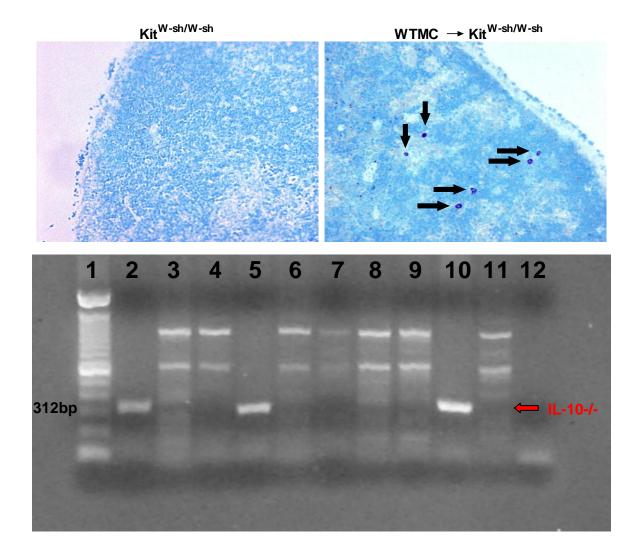
Figure S2

Fig S2. Confirmation of MC reconstituted Kit^{W-sh/W-sh} mice.

(A) Twelve weeks after intravenous transfer of mast cells into Kit$^{W-sh/W-sh}$ mice, lymph nodes were harvested and stained using toluidine blue to verify repopulation of mast cells (i) No mast cells were observed in non-reconstituted Kit$^{W-sh/W-sh}$ mice (n=3), (ii) while WT mast cells were observed to be repopulated in WT mast cell → Kit$^{W-sh/W-sh}$ mice (n=3) and similar to WT C57BL/6 mice (n=3; data not shown) (B) Following completion of experimental autoimmune MPO-ANCA associated GN in WT mast cell reconstituted Kit$^{W-sh/W-sh}$ mice and IL-10-/- mast cell reconstituted Kit$^{W-sh/W-sh}$ mice. Splenic mast cells from all IL-10-/- reconstituted mice (lanes 2 and 5) as well as 3 control WT mast cell reconstituted mice (lanes 4 and 6).
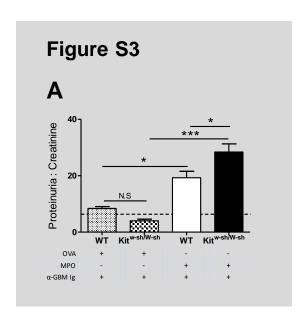
Figure S3

A

	WT	Kit^w-sh/W-sh	WT	Kit^w-sh/W-sh
OVA	+	+	-	-
MPO	-	-	+	+
α-GBM Ig	+	+	+	+

Figure S3. Subnephritogenic dose of anti-GBM antibody without MPO autoimmunity does not contribute to renal injury

(A) Ovalbumin immunized WT and $Kit^{W-sh/W-sh}$ mice (n = 3-4) given anti-GBM antibody did not develop renal injury and proteinuria was similar to naive uninjected WT mice (dotted line). Results were significantly less than mice immunized with MPO then given anti-GBM antibody. Error bars denote mean ± SEM and statistical analysis by one way ANOVA, *P<0.05 and ***P<0.001.
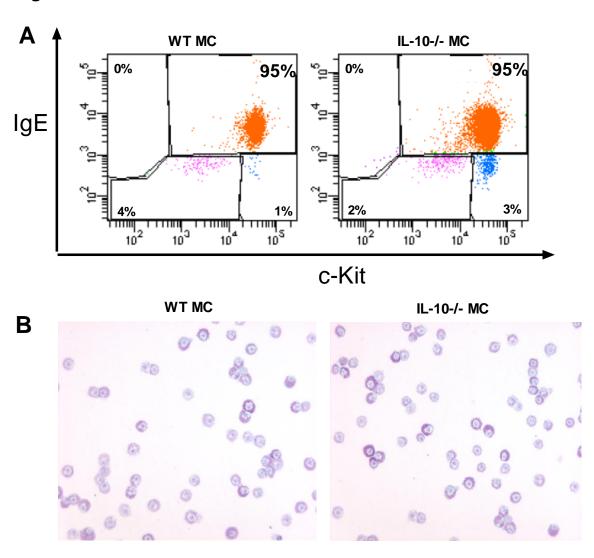
Figure S4

A

WT MC

IgE

0%   95%

4%   1%

c-Kit

IL-10-/- MC

0%   95%

2%   3%

B

WT MC

IL-10-/- MC

Figure S4. Reconstitution of the mast cell population in Kit$^{W-sh/W-sh}$ mice.

Bone marrow derived mast cells obtained from femurs of WT mice or IL-10-/- mice (n=2-3) were cultured *in vitro*. Purity of mast cells was assessed via two independent methods. (A) Firstly, by staining cells for IgE bound FceRII and c-Kit ligand. (B) Secondly, mast cells were histologically stained using toludine blue and stains mast cells purple. MCs were injected intravenously into Kit$^{W-sh/W-sh}$ mice when purity was greater than 95%.