Figure S1.

(A) Poly(I:C) and 5-FU were administered at 10 mg/kg BW and 150 mg/kg BW, respectively, at the indicated time points. (B) LD-TBI was performed 4 hours before BMT, at a dose of 1.5 Gy or 3 Gy of TBI.
Figure S2

Figure S2. Change in donor cell chimerism in recipient mice preconditioned with poly(I:C) in the absence of TBI. Related to Figure 1A and 1B (preconditioning without TBI). The percentage of donor-derived B cells and myeloid cells was determined 1, 2, 4, 5 and 8 months after BMT in Experiment 1 (A) and 1, 3, 5 and 7 months after BMT in Experiment 2 (B). Data shown are the mean±SD of donor-derived cells (n=3 mice per group).
Figure S3. *Poly(I:C)* treatment does not predispose BM LSK cells to DNA damage. WT B6 mice were treated with *poly(I:C)* on days 0 and 2 as represented in Figure S1, then the BM LSK cells were harvested on day 6. Some mice were further treated with 1.5-Gy TBI 1 hr before LSK preparation. The sorted LSK cells from each recipient mouse were then immunostained to detect γH2AX foci in the nuclei. (A) Representative image of nuclear γH2AX foci (green) in the LSK cells from 1.5-Gy-irradiated mice (right). Nuclei were visualized using 49,6-diamidino-2-phenylindole (DAPI; blue). (B) The percentage of foci-positive cells (≥5 γH2AX positive foci) in more than 100 LSK cells is analyzed. Data shown are the mean ± SD of four independent experiments. ns, not significant.
Figure S4. Change in donor cell chimerism in recipient mice preconditioned with poly(I:C) in the presence of TBI. Related to Figure 1C and 1D (preconditioning with TBI). The percentage of donor-derived B cells and myeloid cells was determined at 1, 2, 4, 5 and 8 months after BMT in Experiment 1 (A) and 1, 3, 5 and 7 months after BMT in Experiment 2 (B). Data shown are the mean±SD of donor-derived cells (n=3 mice per group).
Figure S5. The engraftment promoted in Irf2-/- mice was abolished in Irf2-/- Ifnar1-/- mice. Irf2+/-(n=6), Irf2-/- (n=3), Ifnar1-/- (n=4) or Irf2-/-Ifnar1-/- (n=3) mice (CD45.1^CD45.2^) were treated with 150 cGy TBI, then given 5 x 10^6 whole BM cells from congenic mice (CD45.1^CD45.2^). Data shown are the percentage of donor-derived B cells (B220^, lower) and myeloid (Gr1^ plus CD11b^, upper) cells 4 months after BMT. Each circle represents an individual mouse.
Figure S6. Flow cytometric analysis of the peripheral blood leukocytes (PBLs) from Sly recipients 3 months after BMT. PBLs were stained with ImagGene Green C12-FDGlcU substrate and B cell (B220), T cell (CD3ε), or myeloid cell markers (Gr1 and CD11b). Representative FACS profiles of 4-6 mice are shown.
Figure S7. The distribution of GUSB$^+$ cells in non-hematopoietic organs. Three months after transplantation, liver, kidney and meninges sections were prepared from mice preconditioned with poly(I:C) and 5-FU, and were stained for GUSB activity (red) and counterstained with methyl green. Original magnification, x40
Figure S8. GAG levels in various organs. Eight-week-old Sly mice were untreated (n=4) or treated with either 5-FU alone (n=5) or poly(I:C) and 5-FU (n=6), then given 1 x 10^7 of whole BM cells from littermate WT mice. (A,B) The levels of chondroitin sulfate (A) and dermatan sulfate (B) in liver and heart homogenates from BMT mice (at 3 months after BMT) were measured as described in Methods. GAG level is expressed as ng/mg wet tissue. Horizontal bars show the average percentage for each group. Each symbol represents an individual mouse. *P < 0.05, ** P < 0.01, *** P < 0.001, ns, not significant.