

Supplemental Figure 1. Retention of normal karyotype in gene-modified H9 cell populations.

Six months to one year after establishment of gene-modified cells, the karyotypes of DHFR-GFP cells were analyzed. Representative normal female karyotypes are shown for: (a) EFDIG, (b) CSIIEG, and (c) REDPeG hESCs.

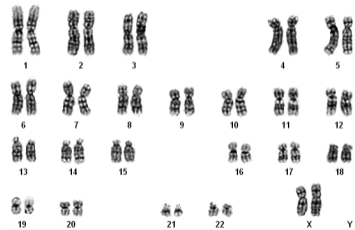
Supplemental Figure 2. Methotrexate dose response NSG mice. Bone marrow was harvested from NSG mice, transduced with either Tyr22-DHFR (a) or GFP (b) lentivirus as previously described¹², and then transplanted into irradiated (320 cGy) NSG mice. The recipient animals were then treated with MTX i.p. daily at escalating doses (0.25 to 2 mg/kg/day) with shaded bars indicating the dose administered (on right axis) for each treatment group over a 4-week time course. Animal health during MTX treatment was monitored by weekly hematocrit (%RBC on left axis; line graphs) and daily observation of weight and behavior. MTX was not administered on some days (0 MTX indicated as breaks in shaded bars) if indicated due to declining health (weight loss or decreased activity). MTX dose was escalated weekly only for animals maintaining weight and stable hematocrit during treatment. Hematocrit and dose escalation are shown for (a) DHFR-BMT mice (n= 6) and (b) GFP-BMT mice (n= 6).

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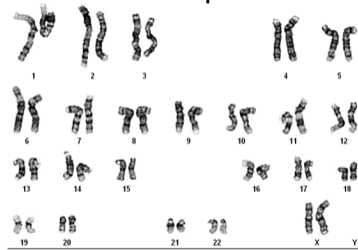
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a. EFDIG H9 p76



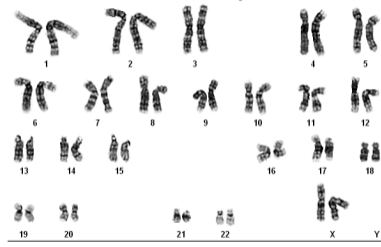
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b. CSIIEG H9 p76



Karyotype: 46,XX

c. REDPeG H9 p78



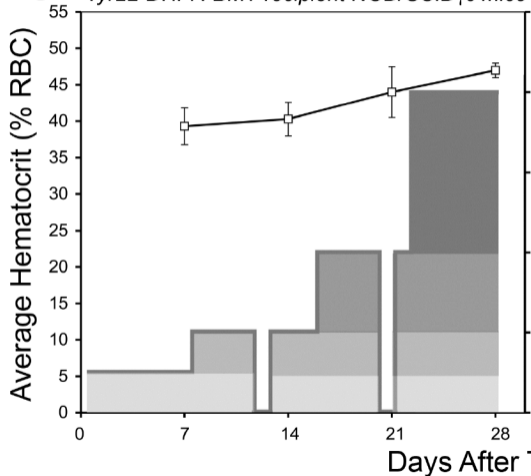
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a. *Tyr22-DHFR-BMT recipient NOD/SCID γ c mice*



b. *GFP-BMT recipient NOD/SCID γ c mice*

