

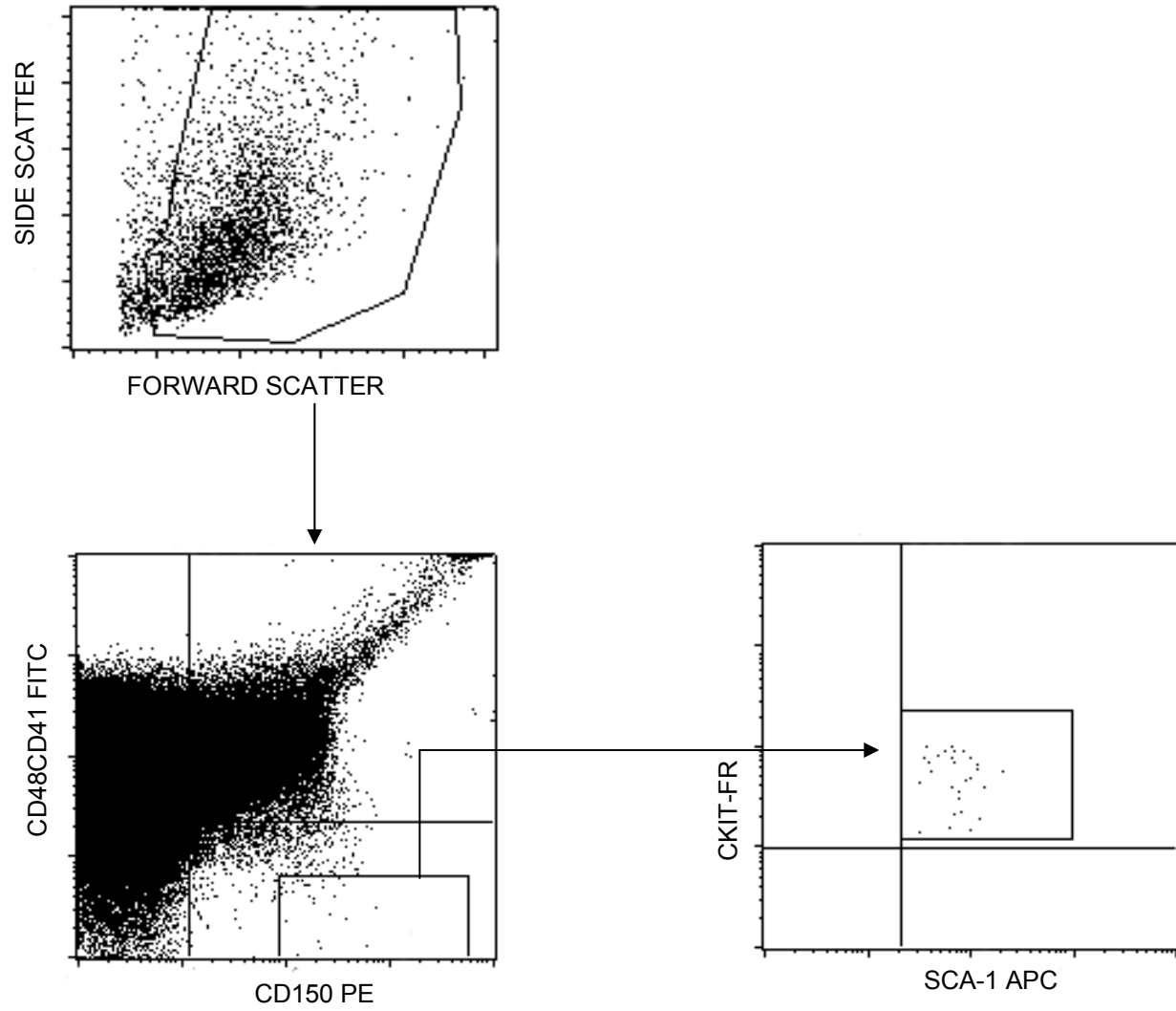
derived from sham treated animals responded to a hematopoietic stress by generating a BMP-2 response. The data are presented as fold change normalized to GAPDH, where the expression level of derived from the non-stressed animals was set as the standard. \* \* $p < 0.05$  versus the non-stressed animals (Krusal-Wallis test, and Dunn's multiple comparisons test).

**Supplemental Figure 1: FACs profile of SLAM family isolated HSCs.**

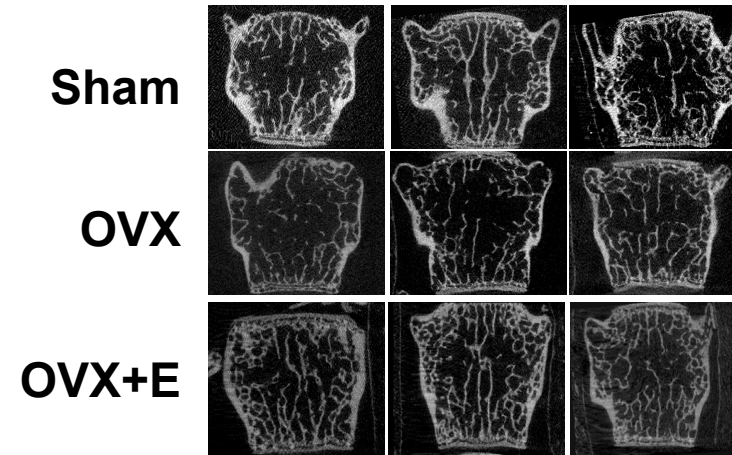
HSCs were isolated by flow cytometry as Sca-1<sup>+</sup>cKit<sup>+</sup>CD150<sup>+</sup>CD41<sup>-</sup>CD48<sup>-</sup> cells. The CD150<sup>+</sup>CD41<sup>-</sup>CD48<sup>-</sup> cells were gated from the whole bone marrow with CD150 and CD48 and CD41 markers. Their isolation was further confirmed by their double positivity for both Sca-1 and c-Kit.

**Supplemental Figure 2: Radiographic evaluation of ovariectomized animals.**

Radiographic images of lumbar vertebrae of mice were either sham operated (n=10), ovariectomized (OVX, n=10), or treated with OVX with hormone replacement ( $\beta$ -estradiol or E, n=10).



**Supplemental Figure 1**



**Supplemental Figure 2**