Supplementary Data

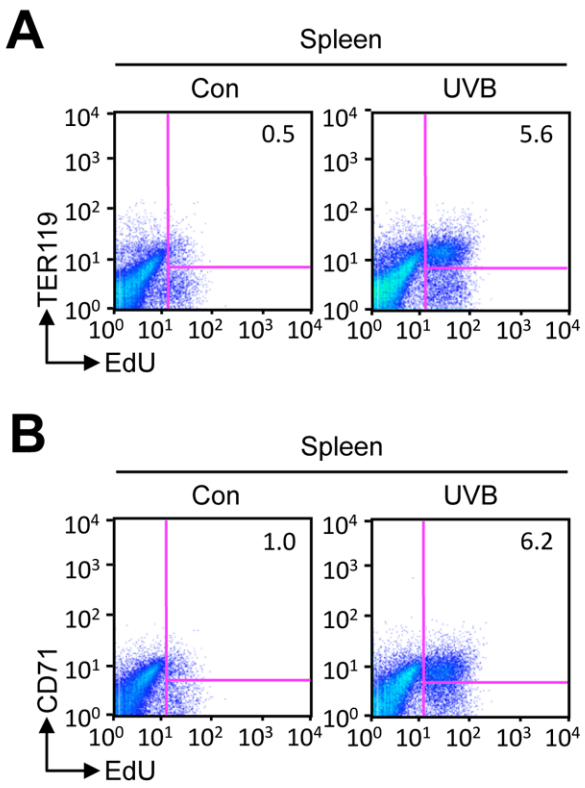

Figure S1. Skin exposure to UVB induces splenic erythroid cell proliferation in mice.

(**A** and **B**) Splenocytes prepared from C57BL/6 mice 4 days after their shaved back skin was exposed to UVB (50 mJ/cm^2) were analyzed by antibody staining and flow cytometry. EdU was injected intraperitoneally 3 hours before splenocyte isolation. Splenocytes from control (Con) mice (shaved, unirradiated, and EdU-injected) were prepared and analyzed in parallel. Data are representative of two experiments.

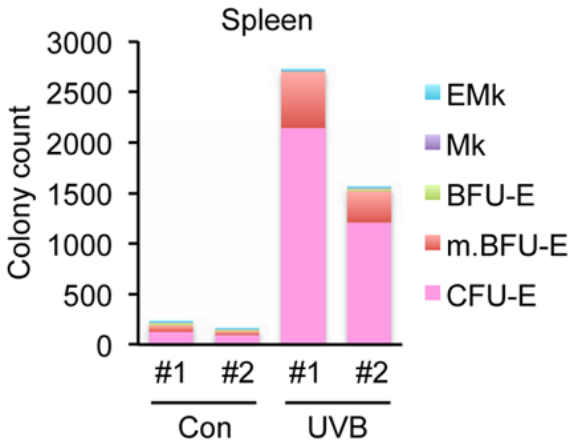

Figure S2. Skin exposure to UVB results in expansion of splenic cell populations with erythroid colony-forming potential.

Splenic nucleated cells prepared from C57BL/6 mice 4 days after their shaved back skin was exposed to UVB (50 mJ/cm^2) were plated for the formation of erythroid-megakaryocyte (EMk), megakaryocyte (Mk), burst-forming unit-erythroid (BFU-E), mature BFU-E (m.BFU-E) and colony-forming unit-erythroid (CFU-E) colonies. Colony counts indicate numbers of colonies per 5 x 10^5 plated cells for individual mice (#1 and #2) in each group. Data are representative of two experiments.

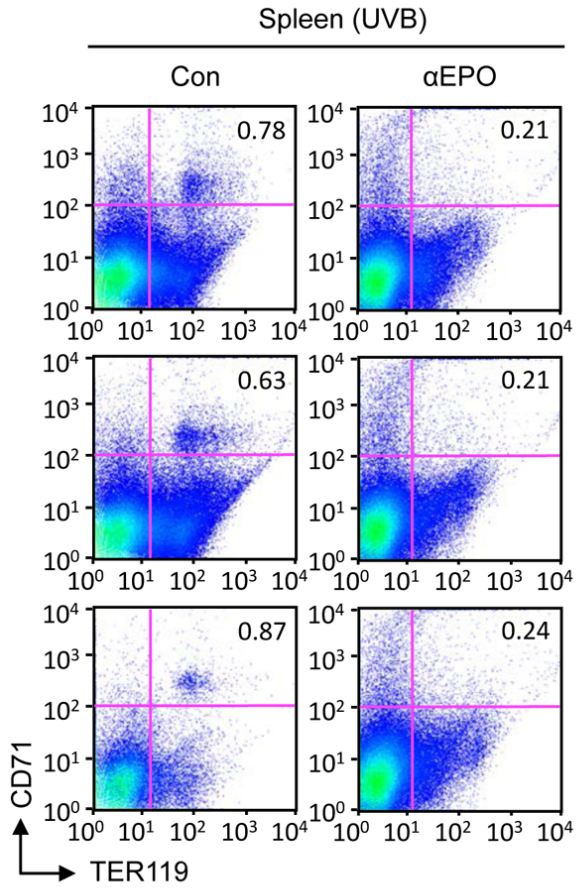

Figure S3. Administration of an anti-EPO antibody prevents UVB-responsive splenic erythroid expansion.

Splenocytes prepared from C57BL/6 mice 7 days after their shaved back skin was exposed to UVB (50 mJ/cm^2) were analyzed by antibody staining and flow cytometry. An anti-EPO antibody and isotype-matched control (Con) immunoglobulin were administered to mice on d1, d3, and d5 after UVB irradiation. Data were obtained from one experiment.

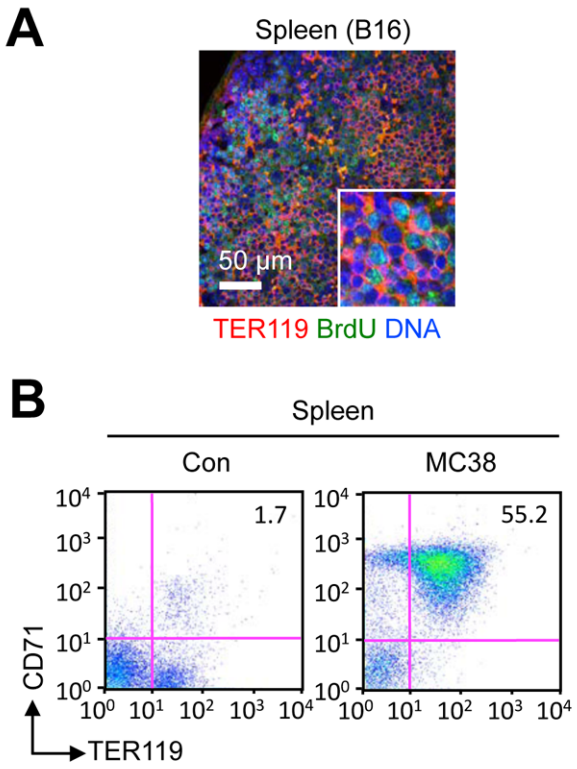

Figure S4. Tumor growth induces splenic erythroid cell proliferation in mice.

(**A**) The spleen of a mouse bearing subcutaneous B16 tumors of approximately 2,000 mm^3 in size was isolated 3 hours after intraperitoneal BrdU injection. A spleen section was analyzed by immunofluorescence along with DNA counterstaining. Data are representative of two experiments.

(**B**) Splenocytes prepared from a mouse bearing subcutaneous MC38 tumors of 2,000-2,500 mm^3 in size and a control (Con) mouse without tumor growth were analyzed by antibody staining and flow cytometry. Data are representative of three experiments.

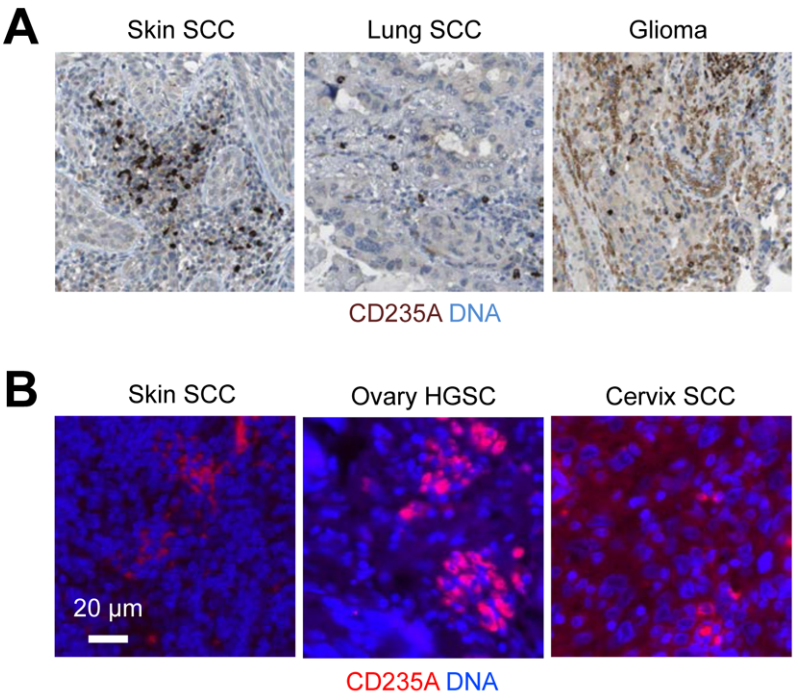

Figure S5. CD235A immunostaining identifies tumor-associated erythroid cells in human cancer tissues.

(**A**) Immunohistochemistry images from the Human Protein Atlas project reveal CD235A-expressing cells in human tumors.

(**E**) Human tumor sections were analyzed by immunofluorescence and DNA counterstaining.