EPA-1 Dynamic expression of B7 family molecules on hematopoietic stem cells

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Recent studies have revealed that while hematopoietic stem cells (HSCs) are rare, they can be subdivided with markers and functional assays. For example, one subset in bone marrow has reduced potential to replenish the immune system, and lacks the B7 family protein CD86. We now show that levels of CD86 displayed on HSCs depend on their tissue of residence, recent exposure to an inflammatory stimulus or recovery from myeloablation. Further analysis suggests at least five members of this complex receptor/ligand family are differentially expressed on stem and progenitors within bone marrow and may even help to regulate their numbers.

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