

Stromal Cell Lines that Support Hematopoiesis in Vitro Via Direct Cellular Interaction and Release of Soluble Mediators

This is a cell line, AC6.21, from the murine cell line of 6C3Ag^{hi} phenotype. The cell line supports the proliferation and differentiation of pre-B cells from their hematopoietic precursors in vitro.

We have cloned and characterized several mouse bone marrow stromal cells which, by contact and by production of soluble factors, cause the proliferation and differentiation of pre-B cells from their hemtoietic precursors. Current evidence indicates that these precursors include the pluripotential hematopoietic stem cell. We therefore claim any cell-surface or secreted proliferation and differentiation-inducing molecules produced by these cells. We have also isolated and cloned several independent stromal lines that, by contact and production of soluble factors, cause the proliferation and differentiations of other bone marrow-derived blood cells not of the pre-B lineage. These too are claimed. We expect that homologous molecules and cells can be isolated from human tissues, based on eitiher direct transfer of materials or technology, or on the knowledge developed from our experiments.

Publications

- Cell, Vol. 48, 1009-1021, 27 March 1987.

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