A METHOD FOR PRESERVATION OF HUMAN HEMATOPOIETIC STEM OR PROGENITOR CELLS

Abstract

Maintenance of quiescent hematopoietic stem and progenitor cells (HSPC) in culture without the addition of exogenous growth factors is an important aspect in clinical hematology. A recent report described the ability of Flt3 receptor-interacting lectin (FRIL) in the maintenance of cord blood (CB) derived progenitors in vitro. Since FRIL is a mannose binding lectin we examined the effectiveness of four such lectins of well-characterized specificities on the preservation of HSPC of CB origin. The HSPC preservation activity of lectins was assessed by in vitro colony forming unit (CFU) and long-term culture initiating cell (LTC-IC) assays. It was found that all four lectins had a HSPC preservation activity at least up to 30 days in culture without addition of exogenous growth factors. The results indicate that use of such lectins may provide a cost effective method of HSPC maintenance for clinical use.

Figure: None