

Hematopoietic Colony Forming Cell Assay Kit ab242288

[3 Images](#)

Overview

Product name	Hematopoietic Colony Forming Cell Assay Kit
Detection method	Fluorescent
Product overview	In classical CFC assays, culture usually takes place in a 35 mm dish for 14-21 days for the colonies to reach certain size (> 40 cells/colony) for manual counting. The CFCs are classified and manually enumerated based on the morphological recognition of one or more types of hematopoietic lineage cells within the colony.

The Hematopoietic Colony Forming Cell Assay Kit (ab242288) does not involve subjective manual counting of colonies or require a 2-3 week incubation period. Instead cells are incubated only 7-10 days in a semisolid methylcellulose media before being solubilized, lysed and detected by the GR Dye in a fluorescence plate reader (see Assay Procedure below). Alternatively, viable CFCs can be easily recovered for further culturing and testing. This format provides a quantitative, high-throughput method to accurately measure HSC or hematopoietic progenitor clonogenic capability.

Notes	Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.
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Properties

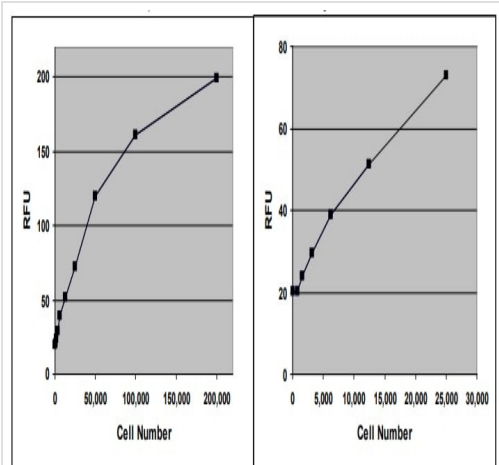
Storage instructions	Store at -20°C. Please refer to protocols.
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Components	1 x 96 tests
4X Lysis Buffer	1 x 10ml
GR Dye	1 x 75µl
Methylcellulose Medium	1 x 15ml

Relevance	Hematopoietic stem cells (HSC) are well-characterized, tissue-specific stem cells that exhibit remarkable self-renewal capacity and are responsible for the life-long maintenance of the hematopoietic system. HSC are rare cells that reside in adult bone marrow where hematopoiesis is continuously taking place, but can also be found in cord blood, fetal liver, adult spleen and peripheral blood. Throughout the life span, hematopoiesis continuously replenishes the various
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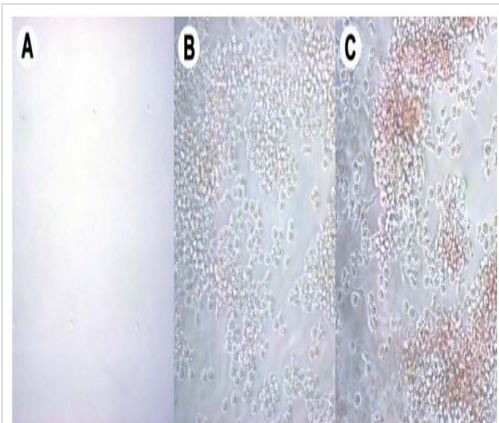
lymphoid, myeloid and erythroid-megakaryocyte lineages, but also to maintain a small pool of HSC with the self-renewal capacity that is capable of carrying on hematopoiesis. From HSC to mature blood cells, extensive proliferation and expansion occurs that results in the production of millions of blood cells.

Images



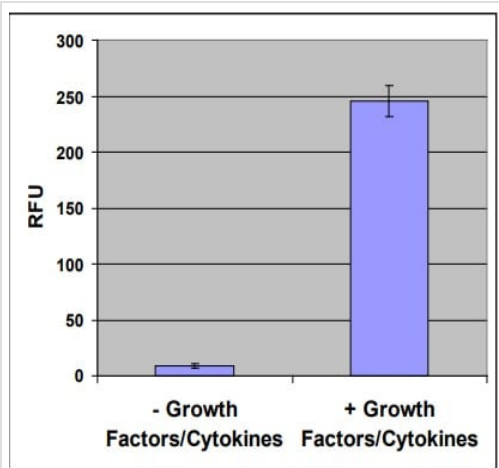
CD34+ Cell Dose Curve.

Human bone marrow derived CD34+ Hematopoietic Progenitor Cells were resuspended at 2×10^6 cells/mL and titrated 1:2 in resuspension medium, followed by addition of Cell Lysis Buffer, and GR Dye detection (as described in the Cell Dose Section).



Colony Formation.

Human bone marrow derived CD34+ Hematopoietic Progenitor Cells were seeded at 3000 cells/well and cultured for 7 days in the presence or absence of growth factors/cytokines (50 ng/mL SCF, 10 ng/mL hIL-3, 10 ng/mL hGM-CSF, 3 U/mL hEPO). Colony quantitation was determined according to the assay protocol. Photographs were taken after 7-day culture for Panel A (without growth factor/cytokine supplement) and Panel B (with growth factor/cytokine supplement). Panel (C) demonstrates growth after 10 days with growth factors/cytokines (hemoglobin clearly visible).



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