reachbio
RESEARCH LABS

colonyGEL™
Methylcellulose-Based Media for CFC Assays

Methylcellulose-Based Media for CFC Assays

Human | Mouse | Rat | Non-Human Primate | Canine

ColonyGEL™ methylcellulose-based media is optimized for the differentiation and enumeration of myeloid, erythroid and mixed-lineage hematopoietic progenitors from bone marrow, cord blood, mobilized peripheral blood, peripheral blood, mouse fetal liver and mouse spleen cells. Enriched cell populations such as $CD34^+$ and $CD133^+$ cells can also be used in ColonyGEL™ media.

Using only the highest quality, pre-screened components, ColonyGEL™ is guaranteed to meet or exceed the performance of the current gold standard media (Table 1). ColonyGEL™ combines uncompromising quality and performance with **GREAT** value.

ColonyGEL™ Performance Meets or Exceeds the Gold Standard

	CFU-E		BFU-E		CFU-GM		CFU-GEMM		Total CFC	
	■	■	■	■	■	■	■	■	■	■
Cord Blood	ND*	ND*	20 +/- 1	16 +/- 4	31 +/- 2	23 +/- 3	1 +/- 1	1 +/- 0	52 +/- 2	40 +/- 5
Bone Marrow	6 +/-2	5 +/- 2	32 +/- 7	29 +/- 4	67 +/- 2	54 +/- 4	1 +/- 1	ND*	106 +/- 7	88 +/- 2
Mobilized Peripheral Blood	ND*	ND*	33 +/- 3	31 +/- 3	64 +/- 5	60 +/- 2	ND*	ND*	97 +/- 7	91 +/- 3

■ ColonyGEL™ ■ Competitor

Table 1. CFC assays were initiated in a methylcellulose-based medium containing rh-IL-3, rh-GM-CSF, rh-SCF and Epo and using cells derived from normal human bone marrow (2×10^4/culture), cord blood (1×10^4/ culture) and mobilized peripheral blood (5×10^4/ culture). Erythroid (BFU-E), myeloid (CFU-GM) and multi-potential (CFU-GEMM) progenitors were enumerated following 14 days in culture.

*ND – None Detected. Colonies derived from CFU-E are not typically found in cord blood and mobilized peripheral blood. CFU-GEMM-derived colonies are extremely rare and therefore, may not be detected.

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colonyGEL™

Colony Identification

COLONY TYPE	DEFINITION
CFU-GM	Colony-Forming Unit – Granulocyte Macrophage is capable of producing colonies with 40 or more granulocyte–monocyte and/or macrophage cells
CFU-G	Colony-Forming Unit – Granulocyte produces a colony with >40 granulocytes
CFU-M	Colony-Forming Unit – Macrophage produces a colony with >40 macrophages
BFU-E	This Burst-Forming Unit - Erythroid colony-forming cell is considered to be more primitive, generating larger colonies containing >200 erythroblasts
CFU-E	Colony-Forming Unit - Erythroid is an erythroid progenitor that produces a colony containing 1 or 2 clusters of 8-200 erythroblasts. CFU-E progenitors are less primitive, have lower proliferative potential and therefore, colonies are generally small when compared to colonies derived from BFU-E.
CFU-GEMM	Colony-Forming Unit – Granulocyte Erythroid Macrophage Megakaryocyte mixed-lineage colony-forming cell generates very large colonies containing >200 erythroid cells and >20 myeloid cells
CFU-MM	Colony-Forming Unit – Multiple Myeloid Leukemic Progenitors producing a range of colony numbers. Confirmation through surface phenotype (plucked colonies) CD138+ (multiple myeloma)

Recommended Plating Concentration for Human and Mouse Cells[1]

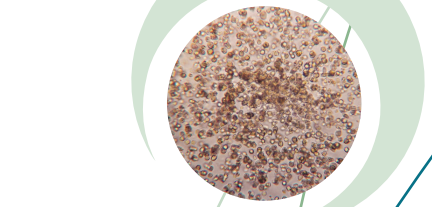
HUMAN CELLS	
Cell Source	Cells per 35 mm Dish
Bone Marrow (NH_4Cl Treated)	2×10^4
Bone Marrow (Light Density)	1×10^4
Bone Marrow $CD34^+$ Enriched	500
Bone Marrow $CD133^+$ Enriched	250
Fresh Cord Blood (Unprocessed)	3×10^4
Frozen Cord Blood (Unprocessed)	5×10^4
Cord Blood $CD34^+$ Enriched	500
Cord Blood $CD133^+$ Enriched	250
Mobilized Peripheral Blood (normal donor)	$2 - 5 \times 10^4$
Mobilized Peripheral Blood $CD34^+$ (Enriched)	500
Mobilized Peripheral Blood $CD133^+$ Cells	250
Peripheral Blood (Light Density)	1×10^5

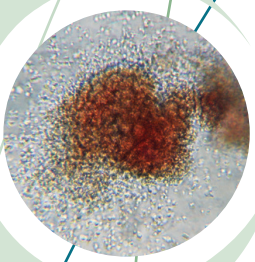
MOUSE CELLS	
Cell Source	Cells per 35 mm Dish*
Bone Marrow (Untreated)	$2x10^4$
Spleen (NH_4Cl Treated)	$2x10^5$
Peripheral Blood (NH_4Cl Treated)	$3x10^5$
Day 14 Fetal Liver	$2x10^4$

* Plating concentrations may vary depending on mouse strain

ColonyGEL™ Product List

CATALOG #	PRODUCT DESCRIPTION	UNIT SIZE
1100	ColonyGEL™ 1100 – Stock Methylcellulose Medium	100 mL
HUMAN		
1101	ColonyGEL™ 1101 – Base Medium	90 mL
1102	ColonyGEL™ 1102 – Complete Medium	100 mL
1103	ColonyGEL™ 1103 – Complete Medium without Epo	100 mL
1104	ColonyGEL™ 1104 – High Cytokine Formulation	100 mL
1150	ColonyGEL™ 1150 – Multiple Myeloma CFC Medium	100 mL
MOUSE		
1201	ColonyGEL™ 1201 – Base Medium	90 mL
1202	ColonyGEL™ 1202 – Complete Medium	100 mL
1203	ColonyGEL™ 1203 – Complete Medium without Epo	100 mL
1205	ColonyGEL™ 1205 – Pre-B Cell Medium	100 mL
RAT		
1301	ColonyGEL™ 1301 – Base Medium	90 mL
1303	ColonyGEL™ 1303 – Complete Medium without Epo	100 mL
NON-HUMAN PRIMATE		
1401	ColonyGEL™ 1401 – Base Medium	90 mL
1402	ColonyGEL™ 1402 – Complete Medium	100 mL
1403	ColonyGEL™ 1403 – Complete Medium without Epo	100 mL
CANINE		
1501	ColonyGEL™ 1501 – Base Medium	90 mL
1503	ColonyGEL™ 1503 – Complete Medium without Epo	100 mL
ACCESSORY PRODUCTS		
3011		Pkg of 25





[1] Periera et. al. (2007). Hematopoietic Colony-Forming Cell Assays. In Vemuri (Ed.), Methods in Molecular Biology, vol. 407: Stem Cell Assays (pp. 177-208). New Jersey: Humana Press.