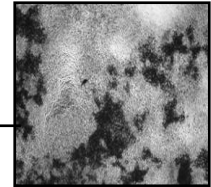


Rat Calvariae Osteoblast Cells

Technical data sheet



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I. Introduction

Ready to use Rat Calvariae Osteoblasts dissociated from Sprague-Dawley rat embryos (E20, E21) offer an excellent model system for the study of osteoblastic growth and mineralization. Cells are cryopreserved at dissection and each vial of osteoblasts contains ≥ 0.35 million viable cells. This will seed into approximately three 6-well plates for mineralization studies, three T-25 flasks or one T-75 flask for proliferation studies using the recommended plating densities and medium. Rat osteoblasts will undergo at least 12 population doublings. For mineralization studies, it is recommended to plate cells **directly out of cryopreservation** into multi-well plates. Upon inducing differentiation, cells require 3 to 5 weeks to sufficiently form mineralized nodules.

II. Characterization of cells

Each lot of rat calvariae osteoblasts is tested for mineralization using Alizarin Red.

III. Recommended medium

The recommended media for the rat calvariae osteoblasts is DMEM with 4.5 g/L glucose supplemented with either MSCGM™ hMSC SingleQuots™ Kit, PT-4105 (growth) or the hMSC Osteogenic Differentiation SingleQuots™ Kit, PT-4120 (differentiation). The MSCGM™ SingleQuots™ Kit contains sufficient amounts for supplementing 500 mL DMEM. Depending on the number of wells set up for mineralization studies, (2) or more hMSC Osteogenic SingleQuots™ Kits may be needed to support entire differentiation.

IV. Performance

Recommended seeding density for subculture:

Volume of plating media	Seeding density	Plating format
3 mL per well	7000 cells/mL or 21,000 cells/well	6-well plate
5 mL per flask	5000 cells/cm ² or 125,000 cells/flask	T-25 flask
15 mL per flask	5000 cells/cm ² or 375,000 cells/flask	T-75 flask

V. Quality control

The cells test negative for mycoplasma and bacteria. Cell viability, morphology and proliferative capacity are measured after recovery from cryopreservation. A Certificate of Analysis (COA) for each lot is shipped with each order. COAs for all other products are available upon request.

VI. Ordering information

Cat. No.	Product	Description
R-OST-583	Rat Calvariae Osteoblasts	≥ 0.5 million cells in a 0.25 mL cell suspension
12-604F	DMEM, High Glucose	500 mL
PT-4105	MSCGM™ hMSC SingleQuots™ Kit	1 Kit
PT-4120	hMSC Osteogenic Differentiation SingleQuots™ Kit	1 Kit
PA-1503	OsteoImage™ Mineralization Assay	500 tests

VII. Product warranty

CULTURES HAVE A FINITE LIFESPAN IN VITRO. Lonza guarantees cell performance only when the approved media and supplements are used.

THESE PRODUCTS ARE FOR RESEARCH USE ONLY. Not approved for human or veterinary use, for application to humans or animals, or for use in vitro diagnostic or clinical procedures. **WARNING:** Handle as a potentially biohazardous material under Biosafety Level 1 containment. These cells are not known to contain an agent known to cause disease in healthy adult humans. These cells have not been screened for Hepatitis B, human immunodeficiency viruses or other adventitious agents. If you require further information, please contact your site Safety Officer or Scientific Support.