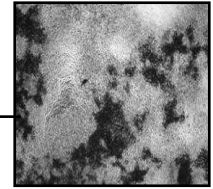


Clonetics® Rat Calvariae Osteoblast Cells

Technical Data Sheet



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.

Characterization of Cells

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

Recommended Medium

The recommended media for the rat calvariae osteoblasts is DMEM with 4.5 g/L glucose supplemented with either the Rat MSCGM™ SingleQuots® Kit (growth) or the rMSC Osteogenic SingleQuots® Kit (differentiation). The Rat MSCGM™ SingleQuots® Kit contains sufficient amounts for supplementing 500 ml DMEM. The rMSC Osteogenic SingleQuots® Kit contains sufficient amounts for supplementing 170 ml DMEM. Depending on the number of wells set up for mineralization studies, 2 or more rMSC Osteogenic SingleQuots® Kits may be needed.

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 |

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.

Ordering Information

| | | |
|-----------|----------------------------------|---|
| R-Ost-583 | Rat Calvariae Osteoblasts | ≥ 0.5 million cells in a 0.25 ml cell suspension |
| 12-604F | DMEM, high glucose | 500 ml |
| 00192820 | Rat MSCGM™ SingleQuots® Kit | 1 Kit |
| 00192829 | rMSC Osteogenic SingleQuots® Kit | 1 Kit |
| PA-1503 | OsteoImage™ Mineralization Assay | 500 tests |

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.