

MG-63 | 300441

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Description

MG-63 is a highly proliferative, osteoblastic cell line derived from a 14-year-old patient with osteosarcoma. The cells are maintained in DMEM supplemented with 10% fetal bovine serum (FBS) and 1% penicillin-streptomycin. MG-63 cells are characterized by their ability to form mineralized nodules in vitro and to form osteoid nodules in vivo. The cells are highly sensitive to bisphosphonates and are used as a model for studying the effects of these drugs on bone metabolism. MG-63 cells are also used for studying the effects of various growth factors and cytokines on bone formation. The cells are highly sensitive to oxidative stress and are used for studying the effects of oxidative stress on bone metabolism. MG-63 cells are highly sensitive to oxidative stress and are used for studying the effects of oxidative stress on bone metabolism.

Organism Human

Tissue Bone

Disease Osteosarcoma

Metastatic site Lung, Liver, Brain

Synonyms M-G63, MG63

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Age 14 years

Gender Male

Ethnicity Caucasian

Morphology Epithelial, rounded cells

Growth properties Adherent, high proliferation

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Citation MG-63 (ATCC CRL-1435) | 300441

Biosafety level 1

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NCBI_TaxID 9606

CellosaurusAccession CVCL_0426

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Receptors expressed TGF-β1 (TGF-β1 receptor type I and II)

Products

XXXXXXXXXX

Culture Medium DMEM: DMEM:Ham's F12 (1:1) 3.1 mg/ml insulin 2.5 mg/ml transferrin 15 mg/ml selenium (15 mg/ml insulin, transferrin, selenium)

Supplements 10% FBS

Dissociation Reagent

Subculturing 1:2 to 1:10 in DMEM:DMEM:Ham's F12 (1:1) 3.1 mg/ml insulin 2.5 mg/ml transferrin 15 mg/ml selenium (15 mg/ml insulin, transferrin, selenium) + 10% FBS

Seeding density 1 x 10^4 / well

Fluid renewal 2-3 times per week

Post-Thaw Recovery 4-6 weeks

Freeze medium 10% FBS + 10% DMSO

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Thawing and Culturing Cells

1. Thaw the vial in a 37°C water bath. Transfer the cells to a 15 mL centrifuge tube and centrifuge at 300 × g for 5 minutes. Remove the supernatant and resuspend the cells in 10 mL of DMEM supplemented with 10% FBS. Seed the cells into a T75 flask.
2. Incubate the cells in a 37°C incubator with 5% CO₂ until they reach 70-80% confluency.
3. Harvest the cells by trypsinization. Seed the cells into a T75 flask with DMEM supplemented with 10% FBS.
4. Incubate the cells in a 37°C incubator with 5% CO₂ until they reach 70% confluency.
5. Harvest the cells by trypsinization. Seed the cells into a T75 flask with DMEM supplemented with 10% FBS.
6. Incubate the cells in a 37°C incubator with 5% CO₂ until they reach 70% confluency.
7. Harvest the cells by trypsinization. Seed the cells into a T75 flask with DMEM supplemented with 10% FBS.
8. Incubate the cells in a 37°C incubator with 5% CO₂ until they reach 70% confluency.

Incubation Atmosphere 37°C, 5% CO₂

Flask Coating None

Freezing Procedure Harvest cells by trypsinization, resuspend in freezing medium, and store at -150°C.

Shipping Conditions Dry ice, -78°C

Storage Conditions -150°C to -196°C

MG-63 / HLA

Sterility Sterility testing: PCR

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XXXXXXXX HLA

A*: '01:01:01
B*: '08:01:01
C*: '07:01:01
DRB1*: '03:01:01
DQA1*: '05:01:01
DQB1*: '02:01:01
DPB1*: '01:01:01, '04:02:01
E: '01:01:01