

Resource Summary Report

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MC3T3-E1 Subclone 14

RRID:CVCL_5437

Type: Cell Line

Proper Citation

(CLS Cat# 305185, RRID:CVCL_5437)

Cell Line Information

URL: https://web.expasy.org/cellosaurus/CVCL_5437

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Description: Cell line MC3T3-E1 Subclone 14 is a Spontaneously immortalized cell line with a species of origin *Mus musculus*

Sex: Sex unspecified

Defining Citation: [PMID:10352097](#)

Comments: Breed/subspecies: C57BL/6., Derived from sampling site: Bone; calvaria. Cell type=Osteoblast., Characteristics: Exhibits high levels of osteoblast differentiation after growth in ascorbic acid and 3 to 4 mM inorganic phosphate. Forms a well mineralized extracellular matrix (ECM) after 10 days (ATCC).

Category: Spontaneously immortalized cell line

Organism: *Mus musculus*

Name: MC3T3-E1 Subclone 14

Synonyms: MC3T3-E1 SUBCLONE 14

Cross References: CLO:CLO_0007583, ATCC:CRL-2594, BCRJ:0285, CCRID:3101MOUGNM15, CLS:305185, KCB:KCB 200786YJ, Wikidata:Q54904202

ID: CVCL_5437

Vendor: CLS

Catalog Number: 305185

Hierarchy: CVCL_0409

Ratings and Alerts

No rating or validation information has been found for MC3T3-E1 Subclone 14.

No alerts have been found for MC3T3-E1 Subclone 14.

Data and Source Information

Source: [Cellosaurus](#)

Usage and Citation Metrics

We found 10 mentions in open access literature.

Listed below are recent publications. The full list is available at [FDI Lab - SciCrunch.org](#).

Gong Y, et al. (2023) Loss of RanGAP1 drives chromosome instability and rapid tumorigenesis of osteosarcoma. *Developmental cell*, 58(3), 192.

Sautchuk R, et al. (2022) Transcriptional regulation of cyclophilin D by BMP/Smad signaling and its role in osteogenic differentiation. *eLife*, 11.

Song P, et al. (2022) Canagliflozin promotes osteoblastic MC3T3-E1 differentiation via AMPK/RUNX2 and improves bone microarchitecture in type 2 diabetic mice. *Frontiers in endocrinology*, 13, 1081039.

Gong Y, et al. (2021) Vangl2 limits chaperone-mediated autophagy to balance osteogenic differentiation in mesenchymal stem cells. *Developmental cell*, 56(14), 2103.

Xue F, et al. (2021) 7,8-Dihydroxyflavone modulates bone formation and resorption and ameliorates ovariectomy-induced osteoporosis. *eLife*, 10.

Deng Z, et al. (2020) Def6 regulates endogenous type-I interferon responses in osteoblasts and suppresses osteogenesis. *eLife*, 9.

Xu J, et al. (2020) High-Dose TGF- β 1 Impairs Mesenchymal Stem Cell-Mediated Bone Regeneration via Bmp2 Inhibition. *Journal of bone and mineral research : the official journal of the American Society for Bone and Mineral Research*, 35(1), 167.

Müller KH, et al. (2019) Poly(ADP-Ribose) Links the DNA Damage Response and

Biomineralization. Cell reports, 27(11), 3124.

Sun X, et al. (2018) TGF- β inhibits osteogenesis by upregulating the expression of ubiquitin ligase SMURF1 via MAPK-ERK signaling. Journal of cellular physiology, 233(1), 596.

Worton LE, et al. (2017) Ectodermal-Neural Cortex 1 Isoforms Have Contrasting Effects on MC3T3-E1 Osteoblast Mineralization and Gene Expression. Journal of cellular biochemistry, 118(8), 2141.