

MC3T3-E1 | 305187

General information

Description	MC3T3-E1 is a clonal cell line derived from the fibroblasts of a Swiss-3T3 mouse embryo. It is a derivative of the 3T3 cell line, which was established from a mouse embryo fibroblast. MC3T3-E1 cells are characterized by their ability to form colonies and are commonly used in research on cell growth, differentiation, and gene expression.
Organism	Mouse
Tissue	Embryo, Fibroblast
Applications	Cell culture, Gene expression, Differentiation studies
Synonyms	Mc3T3-E1, MC3T3E1, MC-3T3-E1, MC 3T3-E1

Characteristics

Breed/Subspecies	C57BL/6
Age	Adult
Gender	Male
Morphology	Embryo fibroblast
Cell type	Fibroblast
Growth properties	Adherent

Identification and documentation

Citation	MC3T3-E1 (Cytion 305187)
Biosafety level	1
NCBI_TaxID	10090
CellosaurusAccession	CVCL_0409

Product sheet

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Cell Line: MC3T3-E1

Tumorigenic Yes, tumorigenic in SCID mice

Products Cell Culture Media

Media

Culture Medium MEM, w: 2.0 mM L-glutamine, w: 10% FBS, w: 1.0 mM β -mercaptoethanol, w: 2.2g/L N

Supplements 10% FBS

Dissociation Reagent Trypsin

Doubling time 24-48 hours

Subculturing Cells are grown in MEM supplemented with 10% FBS. When cells reach confluence, they are trypsinized and seeded into new flasks. Cells are typically passaged every 3-5 days.

Fluid renewal 2-3 times per week

Freeze medium MEM supplemented with 10% FBS and 10% DMSO

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Thawing and
Culturing Cells

1. 将细胞冻存管放入 37°C 水浴中快速解冻，离心 5 分钟，弃去上清液，将细胞重悬于 1 mL 完全培养基中，接种于 25 cm² 培养瓶中。
2. 将细胞放入培养箱中，在 37°C、5% CO₂ 条件下培养 24 小时，使细胞贴壁。
3. 24 小时后，更换新鲜完全培养基，继续培养 37 天，直至细胞汇合度达到 80% 以上。
4. 当细胞汇合度达到 80% 以上时，可进行传代培养。
5. 将细胞消化后，接种于 15 mL 离心管中，离心 5 分钟，弃去上清液，将细胞重悬于 1 mL 完全培养基中。
6. 将细胞接种于 25 cm² 培养瓶中，接种量为 3 × 10⁵ 个/瓶。
7. 将细胞放入培养箱中，在 37°C、5% CO₂ 条件下培养 24 小时，使细胞贴壁。
8. 24 小时后，更换新鲜完全培养基，继续培养。

Incubation
Atmosphere

37°C, 5% CO₂, 饱和湿度

Flask Coating

无需涂布

Freezing
Procedure

将细胞消化后，接种于 15 mL 离心管中，离心 5 分钟，弃去上清液，将细胞重悬于 1 mL 完全培养基中。

Shipping
Conditions

将细胞放入培养箱中，在 37°C、5% CO₂ 条件下培养 24 小时，使细胞贴壁。

Storage
Conditions

将细胞放入培养箱中，在 37°C、5% CO₂ 条件下培养 24 小时，使细胞贴壁。

细胞特性与用途

Sterility

细胞经严格灭菌处理，不含支原体、病毒、真菌、细菌等污染物。PCR 检测结果显示，细胞中不含任何外源 DNA。