

MEC-1 | 305434

General information

Description	MEC-1 is a human B-cell chronic lymphocytic leukemia (CLL) cell line. It is a continuous cell line derived from a patient with CLL. The cell line is characterized by the presence of a B-cell receptor (BCR) gene rearrangement. MEC-1 cells are used for the study of B-cell biology and the development of B-cell malignancies.
Organism	Human
Tissue	B-lymphocytes
Disease	Chronic lymphocytic leukemia
Synonyms	MEC1

Cell characteristics

Age	61 years
Gender	Male
Ethnicity	German
Morphology	Small, round cells
Cell type	B
Growth properties	MEC-1 cells are grown in RPMI 1640 medium supplemented with 10% fetal bovine serum (FBS) and 1% penicillin-streptomycin (P/S). The cells are maintained in a humidified atmosphere of 5% CO ₂ at 37°C.

Cell line identification

Citation	MEC-1 (Cytion 305434)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1870

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EBV-Transformed B-lymphocytes

Viruses Epstein-Barr virus (EBV)

Mutational profile TP53, p.Gln317Profs*20 (c.949dupC) (c.949_950insC), R3HCC1L-HTRA1

Cell line

Culture Medium IMDM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 25 mM HEPES, w: 1.0 mM Sodium Pyruvate, w: 3.024 g/L NaHCO3 (Cytion)

Supplements 10% FBS

Seeding density 3–5 × 10⁵/cm²

Fluid renewal 2–3 times per week

Freeze medium 10% FBS, 10% DMSO (FBS) + 10% DMSO

Thawing and Culturing Cells

1. Thaw cells rapidly in a water bath at 37°C. Transfer cells to a sterile tube and centrifuge at 300 x g for 5 minutes. Remove supernatant and resuspend cells in 10 mL of complete medium.
2. Seed cells into a T25 flask at a density of 3–5 × 10⁵ cells/cm². Incubate at 37°C with 5% CO₂.
3. Monitor cell growth and confluency. Once cells reach 70–80% confluency, passage the cells.
4. Harvest cells by trypsinization and seed into a new T25 flask.
5. Repeat the process for subsequent passages.
6. For long-term storage, harvest cells and resuspend in 1 mL of freeze medium.
7. Store cells in liquid nitrogen.
8. Thaw cells rapidly and resuspend in complete medium.

