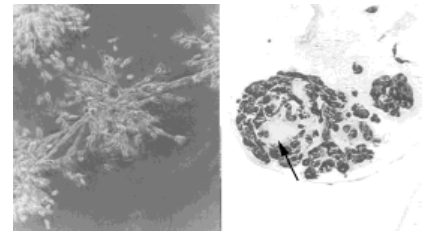


MFLM-4 Cell Line

Catalog Number: AMFLM-4
Quantity: 1ml; 1×10^6 cells

The MFLM-4 cell line is an immortalized, isolated and cloned cell line, derived from mouse fetal lung mesenchyme. MFLM-4 cells express SV40 large T antigen and neomycin-resistance genes. The MFLM-4 cell line was isolated at E14.5 when the developing airways are branched epithelial tubules surrounded by a thick mesenchyme.



Capillary type tubes contained lumens (arrow)

Culture

DMEM, 10% fetal calf serum; 5% CO₂. To maintain EC phenotype, MFLM-4 cells are replated before reaching confluence.

Organism/Strain/Morphology

Mouse, FVB/N Strain, Immature endothelial cell-like.

Tumorigenic

Yes, in nu/nu mice injected subcutaneously with 5×10^5 to 1×10^6 viable MFLM cells.

Supplied As

Frozen cells containing 5% DMSO, 95% fetal calf serum (v/v).

Storage

Use cryopreserved cells to establish cultures immediately upon receipt. If stored prior to culture, it is preferable to store in the vapor phase of liquid N₂. Note- storage prior to culture is likely to result in diminished recovery of viable cells.

Characteristics

Cells express proteins associated with endothelial cell phenotype including CD34, PECAM-1, vonWillebrand factor, VEGFR1 (*flt1*), VEGFR2 (*flk-1*) and cell-surface recognition site for lectin GSL B4. By PCR analysis, MFLM-4 have mRNA transcripts for Tie-1 (very low), Tie-2, Ang-1 and Ang-2. The cells also express vimentin and low levels of smooth muscle alpha actin. MFLM-4 take up acetylated LDL and on culture in Matrigel form tube-like structures with lumens.

Depositors

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Reference

Akeson, A.L., et al. Embryonic Vasculogenesis by Endothelial Precursor Cells Derived from Lung Mesenchyme. *Developmental Dynamics*, 217:11-23, 2000.

Akeson, A.L. *In vitro* Model for Developmental Progression from Vasculogenesis to Angiogenesis with a Murine Endothelial Precursor Cell Line, MFLM-4. *Microvascular Research* 61:75-86, 2001.