

Data Sheet

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BCRJ Code:	0079
Cell Line:	EOMA
Species:	Mus musculus
Vulgar Name:	Mouse/129
Tissue:	Tumor
Cell Type:	Endothelial
Morphology:	Endothelial
Disease:	Hemangioendothelioma
Growth Properties:	Adherent
Age/Ethnicity:	ADULT /
Derivation:	The EOMA cell line was originally derived in 1980 from a mixed hemangioendothelioma arising in an adult mouse.
Tumor Formation::	Yes, in syngeneic mice
Products:	angiotensin converting enzyme (ACE) thrombospondin cathepsin L endostatin interleukin-6 (interleukin 6, IL-6)
Biosafety:	1

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Additional Info:

The cells synthesize angiotensin-converting enzyme, express surface receptors for acetylated low density lipoprotein, produce thrombospondin and show intracellular staining with an antibody to von Willebrand factor. Cathepsin L is secreted by EOMA cells and is responsible for the generation of endostatin L. Although constitutive cytokine gene expression exists in EOMA cells, the level of IL-6 mRNA is prominently elevated by incubation with Liposome encapsulated hemoglobin (LEH). The cells constitutively express the vascular addressin identified by antibody MECA-99. EOMA cells exhibit characteristic endothelial cell properties, such as rearrangement into tubelike structures on Matrigel and retention of cobblestone morphology at confluence. They behave in vitro in a manner similar to microvascular endothelial cells.

Culture Medium:

Dulbecco's Modified Eagle's Medium (DMEM) modified to contain 4 mM L-glutamine, 4500 mg/L glucose, 1 mM sodium pyruvate and fetal bovine serum to a final concentration of 10%.

Subculturing:

Volumes used in this protocol are for 75 cm² flask; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes. T-75 flasks are recommended for subculturing this product. Remove and discard culture medium. Briefly rinse the cell layer with PBS without calcium and magnesium to remove all traces of serum that contains trypsin inhibitor. Add 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes). Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting. Add appropriate aliquots of the cell suspension to new culture vessels. Incubate cultures at 37°C. NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010.

Subculturing Medium Renewal:

Every 2 to 3 days

Subculturing Subcultivation Ratio:

1:3 to 1:6

Culture Conditions:

Atmosphere: air, 95%; carbon dioxide (CO₂), 5% Temperature: 37°C

Cryopreservation:

95% FBS + 5% DMSO (Dimethyl sulfoxide)



Thawing Frozen Cells:

SAFETY PRECAUTION: It is highly recommended that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submerged in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris.

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes).
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
3. For cells that are sensitive to DMSO it is recommended that the cryoprotective agent be removed immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 5 to 7 minutes.
4. Discard the supernatant and Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio).
5. Incubate the culture in an appropriate atmosphere and temperature (see "Culture Conditions" for this cell line).

NOTE: It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).

References:

47148: Felbor U, et al. Secreted cathepsin L generates endostatin from collagen XVIII. *EMBO J.* 19: 1187-1194, 2000. PubMed: 10716919
51514: Obeso J, et al. A hemangioendothelioma-derived cell line: its use as a model for the study of endothelial cell biology

Depositors:

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ATCC:

CRL-2586

Cellosaurus:

[CVCL_3507](#)