

TECHNICAL DATA SHEET

PureStem® ES-335 Meso-latp Progenitor

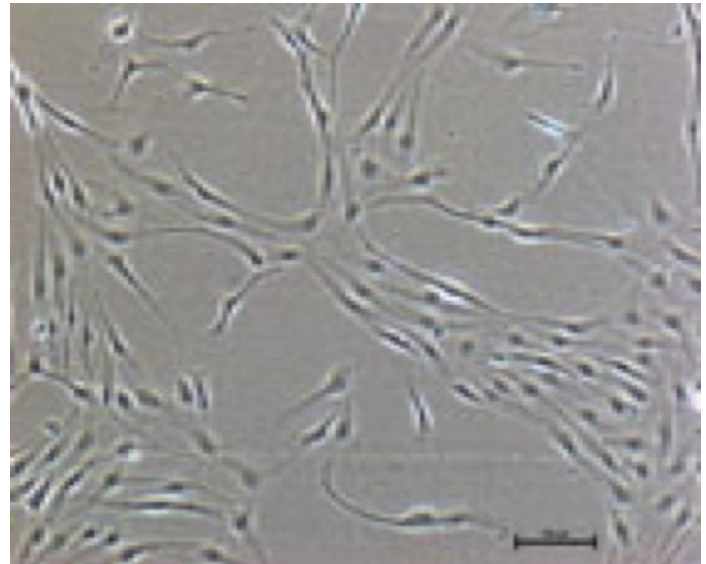
Catalog Number: ES-335

OVERVIEW

PureStem® ES-335, Meso-latp Progenitor expresses vascular endothelium cell surface markers (VWF, TEK, PECAM1, CD34, CDH5, KDR) as well as early endothelial markers (TAL1, ETV2, GATA2). This embryotic progenitor also expresses markers specific to undifferentiated venous/ arterial stage cells (EFNB2, NRP1) and venous/lymphatic cells (LYVE1, NRP2 and SOX18).

In angiogenic differentiation conditions PureStem ES-335, Meso-latp Progenitor demonstrates tube formation.

PureStem ES-335, Meso-latp Progenitor has been clonally derived from the NIH registered human ES Cell International line ESI-017.



NOTES ON NOMENCLATURE

PureStem progenitors are named by embryologist and cell biologists based on fate mapping the progenitors' undifferentiated and differentiated gene expression using annotated genetic expression interpretations found on LifeMap Discovery™ and classic embryology terminology. The following standardized system is used by BioTime, Inc. and/or all of its subsidiaries:

Meso (Mesoderm):

cor (chordamesoderm: notochord); **prx** (paraxial or somatic mesoderm: head; somites; skeletal muscle; cartilage & IVD; dermis; tendons; endothelial cells); **int** (Intermediate: kidney; gonads); **latp** (Lateral Plate: circulatory system; body cavity; extra-embryonic tissues; Adipose; limb bones and cartilage)

Ecto (Ectoderm):

surf (surface ectoderm: epidermis; hair; nails; subacaceous glands; olfactory epithelium; mouth (anterior pituitary, tooth enamel, cheek epithelium); lens, cornea)

NCr (Neural Crest):

pns (peripheral nervous system); **end** (endocrine and paraendocrine); **pig** (pigment Cells); **fac** (facial cartilage and bone); **con** (connective tissue and stroma: corneal endothelium and stroma; tooth papille; dermis, smooth muscle, adipose tissue of skin head and neck; connective tissue of salivary, lachrymal, thymus, thyroid, and pituitary glands; connective tissue of smooth muscle in arteries of aortic arch origin)

Endo (Endoderm):

pnc (pancreas); **prs** (prostate); **git** (GI tract); **lvr** (liver); **thy** (thyroid)

PRODUCT INFORMATION

Differentially expressed positive mRNA markers (by microarray):

TAL1, S1PR1, PDGFB, NELL2, KDR, GATA2, EFNB2, ANGPT2, VWF, TIE1, TEK, SOX18, CD31, LYVE1, LMO2, CDH5, CD34

Contents:

Vial contains >500,000 cells cryopreserved in 1 ml of FBS -10% DMSO

Growth Medium:

PureStem EPM k08 (Cat. No. EM-1008)

Recommended Culture Conditions:

Cells should be plated onto tissue culture grade polystyrene plastic coated with Matrigel™. Medium is prepared by adding EP BioMix 01 (EM-1403) and EP BioMix 06 (EM-1418) to PureStem EP Basal 03 Basal Medium. Following rapid thawing and slow dilution in the final culture medium, the initial seeding density should be approximately 20,000 cells/cm². Cells should be maintained at 37°C in a humidified incubator preferably with 10% CO₂ and 5% oxygen with media change at least twice per week. Upon reaching confluence they should be split, using a short exposure to Accutase™, no more than 1:3 for routine maintenance. Note: confluence for more than two days may lead to terminal differentiation.

Population Doubling Time:

Approximately 72 hours.

Population Doubling:

PureStem ES-335, Meso-lap Progenitor is sold at passage 10 (passage 1: original clonal isolate at confluence in 1.9 cm₂ well), which corresponds to approximately 12 doublings since the first passage and approximately 30 doublings since its original clonal plating. This embryonic progenitor displays a finite lifespan in vitro, and when properly maintained in BioTime's growth medium will reach at least 8 population doublings.

Sterility:

This embryonic progenitor is negative for bacterial and fungal contamination

Thaw Test Result:

>50% viability, >25% attachment, growth to confluence, and maintenance of original morphologic appearance.

Certificates of Analysis:

Available on request

Restrictions:

These cells are provided for research purposes only. They are not for human use, and may not be used for commercial purposes. The user is responsible for proper handling upon receipt. Human sourced materials such as PureStem lines should be handled under Biosafety Level 2 conditions.

Manufacturer:

BioTime, Inc.

PRODUCT WARRANTY

BioTime, Inc. and/or its subsidiaries warrants its products as set forth in the General Terms and Conditions of Sale found on ESI BIO's website at www.esibio.com/termsandconditions.

DISCLAIMER

BIOTIME, INC. AND/OR ALL ITS SUBSIDIARIES PRODUCTS MAY CONTAIN HUMAN OR OTHER ANIMAL SOURCE MATERIAL; TREAT AS POTENTIALLY INFECTIOUS. ALWAYS USE PROPER HANDLING TECHNIQUES. PRODUCTS SHOULD BE HANDLED AND USED ONLY BY PEOPLE TRAINED IN PROPER LABORATORY SAFETY PROCEDURES AT BIO-SAFETY LEVEL 2 OR HIGHER AS RECOMMENDED BY THE CDC FOR ANY HUMAN OR OTHER ANIMAL SOURCED MATERIAL.

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