

TECHNICAL DATA SHEET

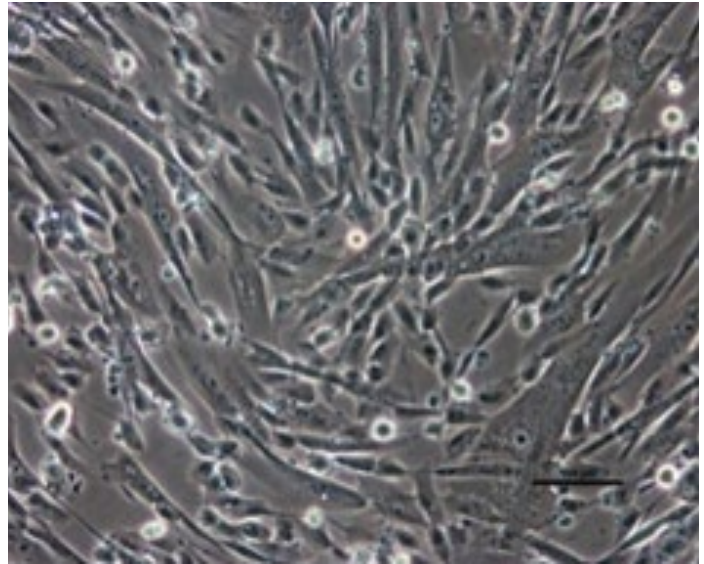
PureStem® Z11, Meso Progenitor

Catalog Number: ES-194

OVERVIEW

PureStem Z11, Meso Progenitor expresses markers specific to smooth muscle cells (MYLK, ACTA2, TAGLN, CNN1) and cardiac muscle cells (MYL4, HAND2, BMP4, TBX3).

This progenitor has been derived from the parental NIH registered Human ES cell line H9 (WA09) (West, M.D. et al, 2008).



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; subacneous 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):

TBX3, TAGLN, MYLK, MYL4, CNN1, BMP4, ACTA2, TNNT2, HAND2, VLDLR

Contents:

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

Growth Medium:

PureStem™ EPM k06 Part number EM-1006

Recommended Culture Conditions:

Cells should be plated onto tissue culture grade polystyrene plastic coated with 0.1% gelatin. Following rapid thawing & slow dilution in final culture medium, the initial seeding density should be ~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 a week. At confluence, split 1:3 for routine maintenance. Note: confluence for more than 2 days may lead to terminal differentiation.

Population Doubling Time:

Approximately 50 hours.

Population Doubling:

PureStem Z11, Meso Progenitor is sold at passage 19 (original clonal isolate in confluent 1.9 cm² well, being P1), which corresponds to approximately 23.5 doublings since the first 1.9 cm² well and approximately 41.5 doublings since its original clonal plating. PureStem Z11, Meso Progenitor displays a finite lifespan in vitro, senescing at approximately > 50 PD. When used with BioTime's culture reagents, this progenitor is guaranteed to scale for a minimum of 10 population doublings.

Sterility:

The embryotic progenitor is negative for HIV (1,2), HBV, HCV, bacteria, mycoplasma, 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:

Cells are for research use only. They are not for human use, and may not be used for commercial purposes. User is responsible for proper handling upon receipt.

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.

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