



M3:BaseF™ Supplemented Growth Media without Antibiotics

Product Name: M3:BaseF™
Product Codes: M300F-100, M300F-500
Product Use: Highly enriched, serum-free liquid culture medium with various growth factors and supplements; for human stem cells and other progenitor and fastidious cell types. Media users can add serum or other supplements at their concentrations of choice.
Features: GMP quality; sterile; USP grade materials; contains antibiotics.

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General Description

M3:BaseF is a proprietary, multi-factor supplemented basal culture media in the M3™ Media Family and subfamily (Table 1). M3:BaseF™ is a serum-free, highly enriched, phenol red-containing, high performance liquid culture media for human stem cells and other progenitor and fastidious cell types, including human tumor cells and tissues. Its counterpart xeno-free (XF) M3Z™ formula without phenol red is M3Z:MaxF™.

Formulation and Packaging

GMP manufactured M3:BaseF™ is a complex growth media that contains salts, sugars, amino acids, peptides, and multiple growth-promoting components in supplement mix (SMX). The M3:BaseF™ is packaged in 100 mL and 500 mL bottles. Serum or other culture and growth factors are usually added per the needs of each tissue or cell-type, and an intended use. The chemically defined media M3:D™ is the platform formula of salts, sugars, amino acids, and buffers to which supplements are added to formulate M3:BaseF™. M3:D™ is used as the defined “control”, “holding” or “shift-down” media in studies where M3:BaseF™ supplemented media are being used for growth or in vitro testing, and a control group without growth stimulating factors is needed.

Use and Methods

Tables 2 and 3, respectively focused on humans and animals, show an extensive experience with many types of tissues and derived cell cultures have successfully used M3™ media for culture initiation and in vitro expansion. A variety of methods to support cell monolayers and/or suspension cell growth have been used with suitable, supplemented M3™ media. Substrates have included standard cell culture plastics, complex biomatrices, meshes and engineered scaffolds.

Specifications

Visual
 pH (USP <791>)
 Osmolality (USP<785>)
 Sterility: SC (USP <71>)
 Sterility: fTG (USP <71>)
 Mycoplasma (USP <63>)
 Endotoxin (USP <85>)
 Expiration

Acceptance Criteria

Clear, red to red/orange (with phenol red)
 6.8 to 7.7
 310 mmol/kg to 370 mmol/kg
 No microbial growth
 No microbial growth
 None detected
 <5.0 EU/mL
 18 months from date of manufacture

Table 1. M3™ Media Family: M3™ and M3Z™ Subfamilies

M3™ Media Subfamily (With Phenol Red)				
Media Designation	Product Code	Anti-biotics	SMX	Serum (Source)
M3:D™	M3DEF	No	No	No
M3:BaseF™	M300F	No	Yes	No
M3:BaseA™	M300A	Yes	Yes	No
M3:10A™	M310A	Yes	Yes	Yes (10% FBS)
M3Z™ XF Media Subfamily (No Phenol Red)				
Media Designation	Product Code	Anti-biotics	SMX-XF	Serum (Source)
M3Z:MB™	M3ZMB	No	No	No
M3Z:MaxF™	M3ZF	No	Yes	No
M3Z:MaxA™	M3ZA	Yes	Yes	No
M3Z:Max10™	M3Z10	No	Yes	Yes (10% huS)
M3Z:Max10A™	M3Z10A	Yes	Yes	Yes (10% huS)

Legend. The M3™ Media Family includes M3™ and M3Z™ Subfamilies. M3™ media use M3:D™ as the platform media, which is chemically defined, contains phenol red (pH indicator), has some animal derived elemental components, but no growth factors, proteins or complex supplement mix (SMX). The M3™ media suffix designations of “F” and “A” refer, respectively, to “Free (F) of phenol red and antibiotics”, contains “Antibiotics” (A: gentamicin [50 µg/mL]; clindamycin [6.5 µg/mL] and/ or Amphotericin B [2.5 µg/mL]. Media designation “10” refers to 10% percent fetal bovine serum (FBS). M3Z™ media use M3Z:MB™ as platform media, which is chemically defined, has no phenol red, is free of animal derived components (i.e., “xeno free” [XF]), but no growth factors, proteins or complex XF supplement mix (SMX-XF). The M3Z™ media suffix designations of “F” and “A” refer, respectively, as “Free (F) of antibiotics”, contains “Antibiotics” (A: gentamicin [50 µg/mL]; clindamycin [6.5 µg/mL] only). The number “10” in the M3Z™ media designation refers to 10% human AB serum (hS) supplement.

M3:BaseF™. Supplemented Growth Media without Antibiotics



Manufacturing

M3:BaseF™ is manufactured by sterile 0.22 µm filtration and packaging, using cGMP standards in an ISO Class 7 clean room and ISO Class 5 biosafety cabinet and using USP Standards for QC testing. Raw materials are pre-tested and the final product is checked for endotoxin, sterility (bacteria, fungi, and mycoplasma) and other quality specifications and criteria prior to release and preparation of the Certificate of Analysis.

Storage of M3:BaseF™ Media

M3:BaseF™ is refrigerated at 2°C to 8°C when not in use. Do not freeze. The shelf-life is 18 months from the manufacturing date.

Table 2. Human Tissues and Cells in M3™ Media for Oncology and Regenerative Medicine Clinical and Research Applications

Human Tissues	Primary Culture Cell Types or Cell Lines [Media]
Adipose (Fat)	Mesenchymal Stem Cells; Stromal vascular fraction regenerative cells [M3:10™]; adipose cells [M3:30™]
Bone Marrow; Bone, Cartilage, Adipocytes	Hematopoietic and mesenchymal stem cells; various types of renewable progenitor cells; Endothelial cells; entire population [M3:20™]; subsets of cells in other M3™ media; induced bone and cartilage and adipocyte outgrowth and/or induction of differentiation
Colon	Primary epithelial and/or mesenchymal support cells [M3:2™] [M3:10™] and INCELL Cell Line NCM460 [M3:10™]
Gastrointestinal	Primary epithelial cells and/or mesenchymal support cells; [M3:2™] [M3:5™] [M3:10™]
Kidney	Primary epithelial cells and/or mesenchymal support cells; [M3:2™] [M3:5™] [M3:10™]
Liver	Primary epithelial cells and/or mesenchymal support cells; [M3:2™] [M3:5™] [M3:10™]
Muscles (Heart; Peripheral; Smooth)	Pericytes; Mesenchymal or Stromal Stem Cells; regenerative cells [M3:10™]
Nucleus pulposus (NP) Intervertebral Disc	NP stem cells; annulus chondrocytes and mesenchymal stem cells; various types progenitor cells [M3:10™]; etc.
Pancreas	Pancreatic islet beta and acinar cells [M3:5™]; etc.
Peripheral or apheresis blood	Circulating or mesenchymal cells; endothelial cells [M3:20™]; subsets of cells in other M3™ media formulas
Placenta	Hematopoietic, endothelial and mesenchymal stem cells; trophoblasts; syncytiotrophoblasts; various renewable progenitor cells; [M3:10™]; others
Skin (adult; foreskin)	Epidermal keratinocytes co-cultures; Dermal Fibroblasts; Mesenchymal cells [M3:10™]; others
Tumors; various	Epithelial, mesenchymal, lymphoid; [M3:10™]; others
Umbilical Cord	Hematopoietic, endothelial and mesenchymal cells; various types of renewable progenitor cells; [M3:10™]; etc.

Table 3. M3™ Complete, Supplemented Media Have Been Used for Animal Tissues and Cells Cultured for Biomedical Research

Cells and Tissues Derived from Adult, Newborn and/or Fetal Sources	
Animal Tissues	Species & Cultured Cell Types or Cell Lines [Media]
Adipose (Fat)	Rat, mouse, hamster, rabbit; Mesenchymal Stem Cells; Stromal vascular fraction regenerative cells [M3:10™]; adipose cells [M3:30™]
Bone Marrow	Rat, mouse, hamster, rabbit; Hematopoietic and mesenchymal stem cells; various types of renewable progenitor cells; Endothelial cells; entire population [M3:20™]; subsets of cells in other M3™ media
Brain & Neural (Spinal)	Rat, mouse: Progenitors; induced differentiation; [M3:5™] [M3:10™]
Colon; Gastrointestinal	Rat, mouse, hamster; Primary epithelial and/or mesenchymal support cells [M3:2™]; [M3:5™]; [M3:10™] or complex tissues in organ-like cultures
Kidney	Rat, mouse, hamster; Primary epithelial cells and/or mesenchymal support cells; [M3:2™]; [M3:5™]; [M3:10™]
Liver	Rat, mouse, hamster; Primary epithelial cells and/or mesenchymal support cells; [M3:2™]; [M3:5™]; [M3:10™]
Muscles (Peripheral; Heart; Smooth)	Rat, mouse, hamster, rabbit; Pericytes; Mesenchymal or Stromal Stem Cells; regenerative cells [M3:10™]
Pancreas; Other Neuroendocrine	Rat, mouse, hamster; pancreatic islet beta and acinar cells [M3:5™]; other organs (e.g., adrenal)
Peripheral or apheresis blood	Rat, mouse, hamster, rabbit; Circulating or mesenchymal cells; endothelial cells [M3:20™]
Skin (adult; newborn)	Epidermal keratinocytes co-cultures; Dermal Fibroblasts; Mesenchymal cells [M3:10™]; others
Tumors; various	Rat, mouse, hamster; epithelial, mesenchymal, lymphoid; [M3:10™]; etc.

Legend to Tables 2 and 3. Supplemented M3 media formulations may contain various percentages of FBS added to M3Base™. Those media are designated as [M3:%]™. As an example, M3:10 contains 10% v/v FBS. Some media are kept in stock, while others are special manufactured or made by the customers by adding the FBS to the media.

Master Files Applications Note

The M3™ Family of media is in FDA Drug and Device Master Files but have not been tested by INCELL for any specific diagnostic or therapeutic use. To request use of a Master File call, FAX, or email to info@incell.com.

Ordering: Contact INCELL Corporation

Toll Free: 800.364.1765
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Technical Assistance

The scientists at INCELL are available to discuss the media or special needs of your cells, and to assist you in your cell culture applications. Call 1-800-364-1765 or e-mail info@incell.com.

