

# Renaissance Essential Tumor Medium (RETM)

## For Use Instructions

### I. Materials

Product	
Product Name	Renaissance™ Essential Tumor Medium (RETM)
Description	Renaissance™ Essential Tumor Medium is a cell line derivation and maintenance medium specifically formulated for the extended <i>in vitro</i> propagation of patient cancer cells derived from a number of different tissues.
Catalog #	CM-0001
Size	500 mL RETM basal medium (CM-0001-A1)
	15 mL RETM supplement (CM-0001-P1)
Storage & Stability	Store basal medium at 4°C. Store supplement at –20°C. Media and supplement are stable for a minimum of 3 months from date of receipt, when stored as directed.
Quality Control	Primary human cancer cells are cultured in Renaissance™ Essential Tumor Medium and tested for proliferation and morphology during culture over three continuous passages. Product sterility is confirmed by negative test results for bacteria, fungi, and mycoplasma.

### II. General Guidelines

Due to the variation in biology and quality of each tumor specimen, optimization of culture conditions is required for each new sample. These guidelines describe how to optimize the Renaissance Essential Tumor cell culture system for the derivation of cell lines from human tissue samples.

1. Use 0.4 mL of Renaissance™ Essential Tumor Medium per cm<sup>2</sup> culture surface area.  
**Note:** Limiting the culture medium volume will negatively impact culture health.
2. Test cell attachment on different culture surfaces for each new specimen.
3. Use medium color as an indicator to determine when to change the medium. Replace the medium when it becomes orange to orange-yellow in order to replenish nutrients and maintain pH.
4. Inhibiting Fibroblast Overgrowth. Varying the concentration of heat-inactivated fetal bovine serum (FBS) in the Renaissance™ Essential Tumor Medium will inhibit fibroblast overgrowth. Begin new cultures with a minimal amount of heat-inactivated FBS (1–5%). Once the cultures appear free of fibroblastic growth, test varying levels of FBS (1–10%) to further promote the growth and expansion of the cancer cells.
5. Test new specimens for growth in both atmospheric oxygen (approximately 20% O<sub>2</sub>) and hypoxic (2–5% O<sub>2</sub>) conditions if available.

### III. RETM Complete Medium

Combine the following to make RETM Complete Medium:

1. 500 mL RETM basal medium
2. 15 mL RETM supplement (15 mL, thawed briefly in a 37°C water bath)
3. 125 µL Cholera Toxin (100 µg/mL stock solution in cell culture grade water)  
**Note:** Protection should be worn when handling Cholera Toxin. Any media spills should be cleaned immediately and environments should be wiped down (70% ethanol and bleach) after working with the media.
4. 35 mL heat-inactivated FBS
5. Pen/strep or other antibiotics (if desired)