



Clonetics™ Small Airway Epithelial Cell Systems

SAEC & D-SAEC – Technical Sheet

Introduction

Clonetics™ Small Airway Epithelial Cell Systems contain normal human Small Airway Epithelial Cells (SAEC) or Diseased Human Small Airway Epithelial Cells (D-SAEC) from the distal airspace and optimized media for their growth. Each system can quickly generate SAEC or D-SAEC cultures for experimental applications in asthma, inhalation toxicology and pulmonary inflammatory response. Clonetics™ Small Airway Epithelial Cell Systems are convenient and easy to use, allowing the researcher to focus on results. There are three types of D-SAEC available – cells isolated from donors with cystic fibrosis, asthma, and COPD. Cryopreserved SAEC and D-SAEC are shipped as frozen primary cultures or in second passage. Proliferating SAEC are shipped in second or third passage.

Clonetics™ Cells, Medium and Reagents are quality tested together and guaranteed to give optimum performance as a complete Cell System.

Cell System Components (Sold Separately)

- One small airway epithelial cell product – normal or diseased (cryopreserved or proliferating)
- One Small Airway Epithelial Cell Media BulletKit™ Medium - 500 ml

Clonetics™ SAGM™ BulletKit™ (CC-3118) contains 500 ml of Small Airway Epithelial Cell Basal Medium (SABM™ Medium) and the following growth supplements: Bovine Pituitary Extract (BPE), 2 ml; Hydrocortisone, 0.5 ml; human Epidermal Growth Factor (hEGF), 0.5 ml; Epinephrine, 0.5 ml; Transferrin, 0.5 ml; Insulin, 0.5 ml; Retinoic Acid, 0.5 ml; Triiodothyronine,

0.5 ml; Gentamicin/Amphotericin-B, 0.5 ml; Bovine Serum Albumin – Fatty Acid Free (BSA-FAF), 5.0 ml.

- One ReagentPack™ (CC-5034), Containing:

Trypsin/EDTA	100 ml
Trypsin Neutralizing Solution	100 ml
HEPES Buffered Saline Solution	100 ml

Characterization of Cells

Routine characterization of SAEC and D-SAEC includes positive staining for cytokeratin 19 and morphological observation throughout serial passages.

Performance

Recommended seeding density for plating/subculture	2,500 cells/cm ²
Typical time from subculture to confluent monolayer	5 - 9 days
SAEC additional population doublings guaranteed using Clonetics™ Media System	15
D-SAEC additional population doublings guaranteed using Clonetics™ System	Tested through two passages for information only

Quality Control

All cells are performance assayed and test negative for HIV-1, mycoplasma, Hepatitis-B, Hepatitis-C, bacteria, yeast and fungi. Cell viability, cell number, morphology and proliferative capacity are measured after recovery from cryopreservation. Clonetics™ Media are formulated for optimal growth of specific types of normal human cells. Certificates of Analysis

(COA) for each cell strain are shipped with each order. COAs for all other products are available upon request.

Ordering Information

Cryopreserved Small Airway Epithelial Cells (Single Donor):

Cat. No.	Product	Description
CC-2547	SAEC	≥500,000 cells
CC-2933	D-SAEC-CF (cystic fibrosis)	≥500,000 cells
CC-2932	D-SAEC-asthma	≥500,000 cells
CC-2934	D-SAEC-COPD	≥500,000 cells

Proliferating Small Airway Epithelial Cells (Single Donor):

Cat. No.	Product	Description
CC-2647	SAEC (T-25)	Proliferating SAEC in a T-25 flask
CC-0294	SAEC (T-75)	Proliferating SAEC in a T-75 flask
CC-0094	SAEC (96-well plate)	Proliferating SAEC in a 96-well plate

Other proliferating formats are available. Refer to the Lonza website or contact Scientific Support for details.

Small Airway Growth Media (Sold Separately):

Cat. No.	Product	Description
CC-3118	SAGM™ BulletKit™ Medium	500 ml SABM™ Basal Medium plus CC-4124 SingleQuots™ Kit to formulate SAGM™ Medium (growth medium)
CC-3119	SABM™ Basal Medium	Small airway epithelial cell basal medium (500 ml)
CC-4124	SAGM™ SingleQuots™ Kit	Formulates 500 ml of SABM™ Basal Medium to SAGM™ Growth Medium; contains BPE, 2.0 ml; Hydrocortisone, 0.5 ml; hEGF, 0.5 ml; Epinephrine, 0.5 ml; Transferrin, 0.5 ml; Insulin, 0.5 ml; Retinoic Acid, 0.5 ml; Triiodothyronine, 0.5 ml; GA, 0.5 ml; BSA-FAF, 5.0 ml

Subculturing Reagents (Sold Separately):

Cat. No.	Product	Description
CC-5034	ReagentPack™	Provides necessary components for subculture of SAEC and D-SAEC; contains Trypsin/EDTA Solution, 100 ml; Trypsin Neutralizing Solution (TNS), 100 ml; HEPES Buffered Saline Solution, 100 ml

Related Products

Cryopreserved Small Airway Epithelial Cells (Single Donor) Guaranteed for ALI Differentiation in S-ALI™ Media:

Cat. No.	Product	Description
CC-2547S	S-ALI™ guaranteed SAEC	≥500,000 cells

Refer to the Lonza website or contact Scientific Support for details.

Product Warranty

Cultures have a finite lifespan *in vitro*.

Lonza guarantees the performance of its cells in the following manner only if Clonetics™ Media and Reagents are used exclusively, and the recommend protocols are followed. The performance of cells is not guaranteed if any modifications are made to the complete cell system.

1. Clonetics™ SAEC Cryopreserved Cultures are assured for experimental use for 15 population doublings. Clonetics™ D-SAEC Cryopreserved Cultures are tested for two passages for population doublings FIO (For Information Only).
2. Clonetics™ SAEC Proliferating Cultures are assured for experimental use for 10 population doublings. Clonetics™ D-SAEC Proliferating Cultures are assured for experimental use for one passage upon receipt.
3. Additional population doublings and subcultures are possible, but growth rate, biological responsiveness and function deteriorate with subsequent passage.
4. SAEC can become irreversibly contact-inhibited if allowed to reach confluence. To avoid the loss of your cells and forfeiture of your warranty, subculture cells before they reach 80% confluence.

When placing an order or for Scientific Support, please refer to the product numbers and descriptions listed above. For a complete listing of all Clonetics™ Products, refer to the Lonza website or the current Lonza catalog. To obtain a catalog, additional information or want to speak with Scientific Support, you may contact Lonza by web, e-mail, telephone, fax or mail (See page 1 for details).

THESE PRODUCTS ARE FOR RESEARCH USE ONLY. Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* procedures.

WARNING: CLONETICS™ AND POIETICS™ PRODUCTS CONTAIN HUMAN SOURCE MATERIAL, TREAT AS POTENTIALLY INFECTIOUS. Each donor is tested and found non-reactive by an FDA-approved method for the presence of HIV-1, hepatitis B virus and hepatitis C virus. Where donor testing is not possible, cell products are tested for the presence of viral nucleic acid from HIV, hepatitis B virus, and hepatitis C virus. Testing cannot offer complete assurance that HIV-1, hepatitis B virus, and hepatitis C virus are absent. All human-sourced products should be handled at the biological safety level 2 to minimize exposure of potentially infectious products, as recommended in the CDC-NIH manual, [Biosafety in Microbiological and Biomedical Laboratories](#), 5th ed. If you require further information, please contact your site safety officer or Scientific Support.

All trademarks herein are marks of Lonza Group or its subsidiaries.