

## Clonetics™ S-ALI™ air-liquid interface medium

### Technical sheet

#### Introduction

The S-ALI™ small airway air liquid interface medium BulletKit™ provides scientists with a unique tool to investigate new areas of small airway epithelial research in a more physiologically relevant way. Our Clonetics™ S-ALI™ BulletKit™ promotes full differentiation of the airway epithelium expressed by the formation of a polarized epithelium with good barrier function (transepithelial resistance), secretory phenotype (mucin secretion) and ciliogenesis. By using an air-liquid interface small airway model, the next generation tool of *in vitro* respiratory research, scientists can explore small airway epithelial cell differentiation and apply therapies in novel ways.

The S-ALI™ BulletKit™ includes a 250 ml bottle of S-ALI™ growth basal medium, a 500 ml bottle of S-ALI™ differentiation basal medium, and a S-ALI™ SingleQuots™ kit containing: BPE, hydrocortisone, hEGF, epinephrine, insulin, triiodothyronine, transferrin, GA-1000, BSA-FAF, inducer, and retinoic acid.

Specific lots of SAEC normal human small airway epithelial cell lots are screened for use with the Clonetics™ S-ALI™ BulletKit™.

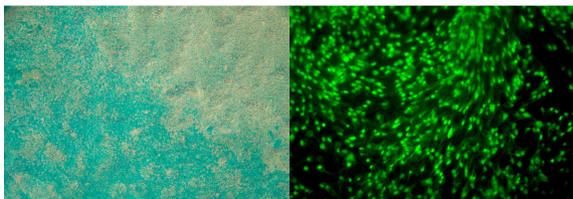


Figure 1A. Differentiated SAEC Cells stained with alcian blue to discern mucin secretion at Day 20. Fig.1B. Differentiated NHBE cells stained for  $\beta$ -tubulin to show presence of cilia at day 25 of S-ALI™ culture.

#### Research applications

- Gene therapy studies such as delivery of genetically engineered cells or gene segments

by way of specifically targeted adenoviral vector delivery

- Host defense
- Gene expression analysis
- Preclinical drug development including inhaled drug formulations, disease models and more
- Airborne toxicant studies
- Department of Defense bio-defense models

#### Characterization of medium

Routine characterization of Clonetics™ S-ALI™ BulletKit™ includes pH, osmolality, sterility, and cell performance. Cell performance testing includes confluency, mucin expression, TEER and presence of cilia.

#### Ordering information

|          |                              |   |
|----------|------------------------------|---|
| CC-2547S | S-ALI™<br>guaranteed<br>SAEC | ≥500,000 cells  |
| CC-4539  | S-ALI™<br>BulletKit™         | Contains S-ALI™ growth basal medium, S-ALI™ differentiation basal medium, and S-ALI™ SingleQuots™ Kit |
| CC-5034  | ReagentPack™                 | Contains 100 ml each of trypsin/EDTA, HEPES, and TNS  |

When placing an order or for technical service, 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 technical service you may contact Lonza by web, e-mail, telephone, fax or mail.

**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 can not 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](#), 5<sup>th</sup> edition. If you require further information, please contact your site safety officer or Scientific Support.

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