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 β-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™ guaranteed SAEC ≥500,000 cells
CC-4539 S-ALI™ 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

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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, 5th edition. If you require further information, please contact your site safety officer or Scientific Support.

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