

Bronchial/Tracheal Epithelial Cell Systems

NHBE & DHBE

Introduction

Lonza's Bronchial/Tracheal Epithelial Cell Systems contain Normal Human Bronchial/Tracheal Epithelial Cells (NHBE) or Diseased Human Bronchial/Tracheal Epithelial Cells (DHBE) and optimized media for their growth. Each System can quickly generate NHBE or DHBE cultures for experimental applications in cancer research, respiratory disease, cellular function and differentiation. Lonza's Bronchial/Tracheal Epithelial Cell Systems are convenient and easy to use, allowing the researcher to focus on results. There are three types of DHBE available – cells isolated from donors with cystic fibrosis (CF), asthma (AS), and COPD. Cryopreserved NHBE, DHBE-AS, and DHBE-COPD are shipped as frozen primaries. Cryopreserved DHBE-CF are shipped in as passage two. Proliferating NHBE, DHBE-AS, and DHBE-COPD are shipped in the second passage. Proliferating DHBE-CF are shipped in the third passage.

Lonza's cells, medium and reagents are quality tested together and guaranteed to give optimum performance as a complete cell system.

Cell system components (need to be purchased separately)

- One Bronchial/Tracheal Epithelial Cell Product – Normal or Diseased (Cryopreserved or Proliferating)
- One Bronchial Epithelial Cell Medium BulletKit™ - 500 mL
BEGM™ BulletKit™ (CC-3170) contains one 500 mL bottle of Bronchial Epithelial Cell Basal Medium and the following growth supplements: BPE, 2 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-1000, 0.5 mL.

- One Reagent Pack™ (CC-5034), Containing:

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

Characterization of cells

Routine characterization of NHBE and DHBE cells includes morphological observation throughout serial passages.

Performance

Recommended seeding density for subculture	3,500 cells/cm ²
Typical time from subculture to confluent monolayer	6 - 9 days
NHBE additional population doublings guaranteed using Lonza's Media System	15
DHBE additional population doublings guaranteed using Lonza's System	Tested through 3 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, morphology and proliferative capacity are measured after recovery from cryopreservation. Lonza's 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. COA for all other products are available upon request.

Ordering information

Cryopreserved cells

Cat. no.	Product	Description
CC-2540	NHBE w/ Retinoic Acid	≥ 500,000 cells
CC-2541	NHBE w/o Retinoic Acid	≥ 500,000 cells
00196979	DHBE-CF (cystic fibrosis) w/ Retinoic Acid	≥ 500,000 cells
00194911	DHBE-AS (asthma) w/ Retinoic Acid	≥ 500,000 cells
00195275	DHBE-COPD w/ Retinoic Acid	≥ 500,000 cells

Proliferating cells – flasks and multiwell plates:

NHBE w/ retinoic acid

Cat. no.	Description
CC-2640	T-25 Flask
CC-0225	T-75 Flask
CC-0136	96-well Plate

NHBE w/o retinoic acid

Cat. no.	Description
CC-2641	T-25 Flask
CC-0285	T-75 Flask
CC-0100	96-well Plate

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

Cat. no.	Product	Description
CC-3170	BEGM™ BulletKit™, BEBM™ plus SingleQuots™ of Growth Supplements	500 mL
CC-3171	BEEM™, Bronchial Epithelial Cell Basal Medium	500 mL
CC-4175	BEGM™ SingleQuots™, Formulates BEBM™ to BEGM™	
CC-5034	ReagentPack™	
	Trypsin Neutralizing Solution	100 mL
	Trypsin/EDTA Solution	100 mL
	HEPES Buffered Saline Solution	100 mL

When placing an order or for technical service, please refer to the product numbers and descriptions listed above. For a complete listing of all Lonza's primary cell 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.

Product warranty

CULTURES HAVE A FINITE LIFESPAN *IN VITRO*. Lonza guarantees the performance of its cells only if Lonza's 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. Cryopreserved NHBE and DHBE are assured to be viable and functional when thawed and maintained properly.

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: LONZA'S CELL 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, 5th Edition. If you require further information, please contact your site Safety Officer or Scientific Support.