

## With Final BulletKit® Concentrations



## Tailored primary cell media to accelerate your airway research

At Lonza, we offer a wide array of normal and diseased human airway cells including epithelial, smooth muscle, fibroblast, and endothelial cells isolated from various donors. Cells from donors diagnosed with conditions like asthma, COPD, cystic fibrosis, or idiopathic pulmonary fibrosis (IPF) are also available with detailed donor information available upon request.

Our primary cell media is specifically tailored for airway cells, ensuring consistent growth and differentiation. Our BulletKit® media contains essential growth factors and hormones, maintaining cell-specific characteristics. This media supports the establishment of complex co-culture models and advanced cell culture techniques. In addition, our air-liquid interface (B-ALI™) media facilitates physiologically relevant research on small airway epithelial cells that mimics the *in vivo* conditions found in the human airway.

**Find the best specialty media for your application:**

**B-ALI™ Bronchial Air-Liquid Interface Medium**  
**BulletKit® (00193514)**

- 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, when used with our B-ALI™ guaranteed bronchial epithelial cells (CC-2540S).

**BEGM®** Bronchial Epithelial Cell Growth Medium  
**BulletKit®** (CC-3170)

- Specially designed to support the growth of human bronchial epithelial cells. BEGM® is serum-free and has been optimized to grow cells from normal and diseased tissues.

**EGM® 2 Endothelial Cell Growth Medium-2 BulletKit®  
(CC-3162)**

- EGM®-2 performs best with certain HUVECs, aortic and pulmonary artery endothelial cells. It contains both FBS and VEGF for rapid proliferation but does not contain BBE.

**EGM® 2 MV Microvascular Endothelial Cell Growth  
Medium-2 BulletKit® (CC-3202)**

- Optimized for human coronary and iliac artery cells and microvascular cells, including lung microvascular endothelial cells, EGM® 2 MV contains FBS and VEGF but no BBE.

### FGM® 2 Fibroblast Growth Medium-2 BulletKit® (CC-3132)

- Developed to support the growth of most primary human fibroblasts including lung and dermal fibroblasts.

### SAGM™ Small Airway Epithelial Cell Growth Medium BulletKit® (CC-3118)

- SAGM™ is serum-free and optimized for human small airway epithelial cells from normal and diseased tissue.

### S-ALI™ BulletKit® Small Airway Air-Liquid Interface BulletKit® (CC-4539)

- Similar to our B-ALI™ BulletKit®, S-ALI™ promotes full differentiation of the small airway epithelium expressed by the formation of a polarized epithelium with good barrier function, secretory phenotype and ciliogenesis. Best when used with our B-ALI™ guaranteed small airway epithelial cells (CC-2547S).

### SmGM® 2 Smooth Muscle Growth Medium-2 BulletKit® (CC-3182)

- Developed for the maintenance and expansion of human smooth muscle cells from various tissue origins including cardiac, airway, prostate and more.

|                                      | B-ALI™ | BEGM® | EGM® 2 | EGM® 2 MV | FGM® 2 | SAGM™ | S-ALI™ | SmGM® 2 |
|--------------------------------------|--------|-------|--------|-----------|--------|-------|--------|---------|
| Bronchial Epithelial Cells           | ✓      | ✓     |        |           |        |       |        |         |
| Bronchial Smooth Muscle Cells        |        |       |        |           |        |       |        | ✓       |
| Lung Microvascular Endothelial Cells |        |       |        | ✓         |        |       |        |         |
| Lung Fibroblasts                     |        |       |        |           | ✓      |       |        |         |
| Pulmonary Artery Endothelial Cells   |        |       | ✓      |           |        |       |        |         |
| Pulmonary Smooth Muscle Cells        |        |       |        |           |        |       |        | ✓       |
| Small Airway Epithelial Cells        |        |       |        |           |        | ✓     | ✓      |         |

### B-ALI™ Bronchial Air-Liquid Interface Medium BulletKit® (00193514)

1 x B-ALI™ Basal Media (00193516), 250 mL  
 1 x B-ALI™ Differentiation Media (00193517), 500 mL  
 1 x B-ALI™ SingleQuotes® Supplement Pack (00193515)

| SingleQuotes® Supplements | Volume  | Final concentration                            |
|---------------------------|---------|------------------------------------------------|
| Transferrin               | 0.75 mL | 10.00 µg/mL                                    |
| B-ALI-Inducer             | 1.00 mL | 0.03 µg/mL                                     |
| BPE                       | 3.00 mL | 52.00 µg/mL                                    |
| Epinephrine               | 0.75 mL | 0.50 µg/mL                                     |
| GA-1000                   | 0.75 mL | Gentamicin: 30 µg/mL<br>Amphotericin: 15 ng/mL |
| hEGF                      | 0.75 mL | 0.50 ng/mL                                     |
| Hydrocortisone            | 0.75 mL | 0.50 µg/mL                                     |
| Insulin                   | 0.75 mL | 5.00 µg/mL                                     |
| Retinoic Acid             | 0.75 mL | 0.10 ng/mL                                     |
| Triiodothyronine          | 0.75 mL | 6.50 ng/mL                                     |

### BEGM® Bronchial Epithelial Cell Growth Medium BulletKit® (CC-3170)

1 x BEBM® Basal Medium (CC-3171), 500 mL  
 1 x BEGM® SingleQuotes® Supplement Pack (CC-4175)

| SingleQuotes® Supplements | Volume  | Final concentration                            |
|---------------------------|---------|------------------------------------------------|
| BPE                       | 2.00 mL | 52.00 µg/mL                                    |
| Insulin                   | 0.50 mL | 5.00 µg/mL                                     |
| Hydrocortisone            | 0.50 mL | 0.50 µg/mL                                     |
| GA-1000                   | 0.50 mL | Gentamicin: 30 µg/mL<br>Amphotericin: 15 ng/mL |
| Retinoic Acid             | 0.50 mL | 0.10 ng/mL                                     |
| Transferrin               | 0.50 mL | 10.00 µg/mL                                    |
| Triiodothyronine          | 0.50 mL | 6.50 ng/mL                                     |
| Epinephrine               | 0.50 mL | 0.50 µg/mL                                     |
| hEGF                      | 0.50 mL | 0.50 ng/mL                                     |

### EGM® 2 Endothelial Cell Growth Medium-2 BulletKit® (CC-3162)

1 x EBM® 2 Basal Medium (CC-3156), 500 mL  
1 x EGM® 2 SingleQuotes® Supplement Pack (CC-4176)

| SingleQuotes® Supplements | Volume   | Final concentration                            |
|---------------------------|----------|------------------------------------------------|
| FBS                       | 10.00 mL | 2%                                             |
| Hydrocortisone            | 0.20 mL  | 0.20 µg/mL                                     |
| hFGF-B                    | 2.00 mL  | 4 ng/mL                                        |
| VEGF                      | 0.50 mL  | 2 ng/mL                                        |
| R3-IGF-1                  | 0.50 mL  | 5 ng/mL                                        |
| Ascorbic Acid             | 0.50 mL  | 75.00 µg/mL                                    |
| hEGF                      | 0.50 mL  | 10 ng/mL                                       |
| GA-1000                   | 0.50 mL  | Gentamicin: 30 µg/mL<br>Amphotericin: 15 ng/mL |
| Heparin                   | 0.50 mL  | 1 ng/mL                                        |

### EGM® 2 MV Microvascular Endothelial Cell Growth Medium-2 BulletKit® (CC-3202)

1 x EBM® 2 Basal Medium (CC-3156), 500 mL  
1 x EGM® 2 MV SingleQuotes® Supplement Pack (CC-4147)

| SingleQuotes® Supplements | Volume   | Final concentration                            |
|---------------------------|----------|------------------------------------------------|
| FBS                       | 25.00 mL | 5%                                             |
| Hydrocortisone            | 0.20 mL  | 0.20 µg/mL                                     |
| hFGF-B                    | 2.00 mL  | 4 ng/mL                                        |
| VEGF                      | 0.50 mL  | 2 ng/mL                                        |
| R3-IGF-1                  | 0.50 mL  | 5 ng/mL                                        |
| Ascorbic Acid             | 0.50 mL  | 75.00 µg/mL                                    |
| hEGF                      | 0.50 mL  | 10 ng/mL                                       |
| GA-1000                   | 0.50 mL  | Gentamicin: 30 µg/mL<br>Amphotericin: 15 ng/mL |

### FGM® 2 Fibroblast Growth Medium-2 BulletKit® (CC-3132)

1 x FBM® Basal Medium (CC-3131), 500 mL  
1 x FGM® 2 SingleQuotes® Supplement Pack (CC-4126)

| SingleQuotes® Supplements | Volume   | Final concentration                            |
|---------------------------|----------|------------------------------------------------|
| FBS                       | 10.00 mL | 2%                                             |
| Insulin                   | 0.50 mL  | 5.00 µg/mL                                     |
| hFGF-B                    | 0.50 mL  | 1.00 ng/mL                                     |
| GA-1000                   | 0.50 mL  | Gentamicin: 30 µg/mL<br>Amphotericin: 15 ng/mL |

### SAGM™ Small Airway Epithelial Cell Growth Medium BulletKit® (CC-3118)

1 x SABM™ Basal Medium (CC-3119), 500 mL  
1 x SAGM™ SingleQuotes® Supplement Pack (CC-4124)

| SingleQuotes® Supplements | Volume  | Final concentration                            |
|---------------------------|---------|------------------------------------------------|
| BPE                       | 2.00 mL | 30.00 µg/mL                                    |
| Insulin                   | 0.50 mL | 5.00 µg/mL                                     |
| Hydrocortisone            | 0.50 mL | 0.50 µg/mL                                     |
| GA-1000                   | 0.50 mL | Gentamicin: 30 µg/mL<br>Amphotericin: 15 ng/mL |
| Retinoic Acid             | 0.50 mL | 0.10 ng/mL                                     |
| BSA-FAF                   | 5.00 mL | 500.00 µg/mL                                   |
| Transferrin               | 0.50 mL | 10.00 µg/mL                                    |
| Triiodothyronine          | 0.50 mL | 6.50 ng/mL                                     |
| Epinephrine               | 0.50 mL | 0.50 µg/mL                                     |
| hEGF                      | 0.50 mL | 0.50 ng/mL                                     |

### S-ALI™ Small Airway Air-Liquid Interface Medium BulletKit® (CC-4539)

11 x S-ALI™ Growth Basal Media (CC-3281), 250 mL  
1 x S-ALI™ Differentiation Media (CC-3282), 500 mL  
1 x S-ALI™ SingleQuotes® Supplement Pack (CC-4538)

| SingleQuotes® Supplements | Volume  | Final concentration                            |
|---------------------------|---------|------------------------------------------------|
| Transferrin               | 0.75 mL | 10.00 µg/mL                                    |
| S-ALI-Inducer             | 1.00 mL | 0.03 µg/mL                                     |
| BPE                       | 3.00 mL | 30.00 µg/mL                                    |
| Epinephrine               | 0.75 mL | 0.50 µg/mL                                     |
| GA-1000                   | 0.75 mL | Gentamicin: 30 µg/mL<br>Amphotericin: 15 ng/mL |
| hEGF                      | 0.75 mL | 0.50 ng/mL                                     |
| Hydrocortisone            | 0.75 mL | 0.50 µg/mL                                     |
| Insulin                   | 0.75 mL | 5.00 µg/mL                                     |
| Retinoic Acid             | 0.75 mL | 0.10 ng/mL                                     |
| BSA-FAF                   | 7.50 mL | 500 µg/mL                                      |
| Triiodothyronine          | 0.75 mL | 6.50 ng/mL                                     |

### SmGM™ 2 Smooth Muscle Cell Growth Medium -2 BulletKit® (CC-3182)

1 x SmBM® Basal Medium (CC-3181), 500 mL  
1 x SmGM® 2 SingleQuotes® Supplement Pack (CC-4149)

| SingleQuotes® Supplements | Volume   | Final concentration                            |
|---------------------------|----------|------------------------------------------------|
| FBS                       | 25.00 mL | 5%                                             |
| Insulin                   | 0.50 mL  | 5.00 µg/mL                                     |
| hFGF-B                    | 1.00 mL  | 2.00 ng/mL                                     |
| GA-1000                   | 0.50 mL  | Gentamicin: 30 µg/mL<br>Amphotericin: 15 ng/mL |
| hEGF                      | 0.50 mL  | 0.50 ng/mL                                     |

## Airway Cells

| Catalog # | Description                                                               |
|-----------|---------------------------------------------------------------------------|
| CC-2547   | Small airway epithelial cells                                             |
| CC-2547S  | Small airway epithelial cells guaranteed for B-ALI™ differentiation       |
| CC-2540   | Bronchial/Tracheal epithelial cells with retinoic acid                    |
| CC-2541   | Bronchial/Tracheal epithelial cells without retinoic acid                 |
| CC-2540S  | Bronchial/tracheal epithelial cells guaranteed for B-ALI™ differentiation |
| CC-2512   | Lung fibroblasts                                                          |
| CC-2527   | Lung microvascular endothelial cells                                      |
| CC-2530   | HPAEC Pulmonary artery endothelial cells                                  |
| CC-2576   | Bronchial smooth muscle cells                                             |
| CC-2581   | Pulmonary artery smooth muscle cells                                      |
| 194911    | (Asthma) Bronchial epithelial cells                                       |
| 194911S   | (Asthma) Bronchial epithelial cells guaranteed for B-ALI™ differentiation |
| 194850    | (Asthma) Bronchial smooth muscle cells                                    |
| CC-2932   | (Asthma) Small airway epithelial cells                                    |
| 195275    | (COPD) Bronchial epithelial cells                                         |
| 195275S   | (COPD) Bronchial epithelial cells guaranteed for B-ALI™ differentiation   |
| 195277    | (COPD) Lung fibroblasts                                                   |
| CC-2934   | (COPD) Small airway epithelial cells                                      |
| 196979    | (Cystic Fibrosis) Bronchial/Tracheal epithelial cells                     |
| 194843    | (Cystic Fibrosis) Lung fibroblasts                                        |
| CC-2933   | (Cystic Fibrosis) Small airway epithelial Cells                           |
| CC-2923   | (Diabetic Type 1) Pulmonary artery endothelial cells                      |
| CC-7231   | (Idiopathic Lung Fibrosis) Lung fibroblasts                               |

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