

# Primary cells and media

## Contents

### Cryopreserved human primary cells 3

|                                                          |   |
|----------------------------------------------------------|---|
| Adipose (fat) cells – Normal and diseased                | 3 |
| Airway cells – Normal and diseased                       | 3 |
| Cardiac cells – Normal and diseased                      | 3 |
| Dermal cells – Normal and diseased                       | 4 |
| Diabetic (Type 1 and 2)                                  | 4 |
| Endothelial cells – Normal                               | 4 |
| Epithelial cells - Normal and diseased                   | 5 |
| Fibroblasts – Normal and diseased                        | 5 |
| Progenitor cells – Normal                                | 5 |
| Prostate cells – Normal                                  | 5 |
| Renal cells – Normal and diseased                        | 5 |
| Skeletal and skeletal muscle cells – Normal and diseased | 5 |
| Smooth muscle cells – Normal and diseased                | 6 |
| Stem cells – Normal                                      | 6 |

### Cryopreserved animal primary cells 6

|                  |   |
|------------------|---|
| Cardiac cells    | 6 |
| Neural cells     | 6 |
| Other cell types | 6 |

### Cryopreserved hepatocytes 7

|                                                         |   |
|---------------------------------------------------------|---|
| Human hepatocytes and non-parenchymal cells – Plateable | 7 |
| Human hepatocytes – Plateable                           | 7 |
| Human hepatocytes – Suspension                          | 7 |
| Animal hepatocytes – Plateable                          | 7 |
| Animal hepatocytes – Suspension                         | 8 |

### Fresh human and animal primary cells

These are available upon request. Contact our Scientific Support Team for additional details.



### Hematopoietic and immune cells 8

|                                         |    |
|-----------------------------------------|----|
| B cells                                 | 8  |
| CD14 <sup>+</sup> monocytes             | 8  |
| CD34 <sup>+</sup> stem/progenitor cells | 8  |
| Dendritic cells                         | 9  |
| Mononuclear cells                       | 9  |
| NK cells                                | 9  |
| Osteoclast Precursors                   | 9  |
| T cells                                 | 9  |
| Stromal cells                           | 10 |
| Whole tissue                            | 10 |

Lonza offers a comprehensive collection of primary cells and media products supporting many research areas. Our brand is well-recognized for its outstanding Scientific Support Team and its dedication to consistent, high-performing products for more than 40 years.

Lonza's Cryopreserved Human Primary cells are:

- **Easy-to-use** – Removes time-dependencies with tissue procurement and isolations. Ready-to-use cells.
- Optimized growth media and protocols to optimally support consistent growth of primary cells while maintaining the tissue-specific characteristics
- **Ideal for Scale Up** – cells are produced as large batches. Same batch can be stored, archived and utilized as needed for long-term studies
- **Authenticated** – Thorough quality control testing completed to assure cell identity
  - HLA and other marker characterization enables broad screening for cross reactivity testing
- **Guaranteed to Perform** – When used with recommended media, reagents and protocols
- **Adherent to Procurement Standards** – All tissue utilized for our human cell products is ethically obtained with documented, legal permission for research use.

Upon request, additional donor information including medical history may be provided both for both normal cells and cells from diseased individuals.

#### Contact Scientific Support for further 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 vivo* procedures. Product Warranty – Cultures have a finite lifespan *in vitro*. Lonza guarantees the performance of its cells up to two years from purchase only if appropriate Clonetics® or Poietics® Media and Reagents are used exclusively, and the recommended storage and use protocols are followed. Cell and media performance is not guaranteed if any modifications are made to the complete cell system.

## Cryopreserved human primary cells

| Cell abbreviation                                | Description                                                            | Cell cat. no.    | Recommended medium  | Bulletkit® cat. no. | Basal cat. no. | SingleQuot® cat. no. |
|--------------------------------------------------|------------------------------------------------------------------------|------------------|---------------------|---------------------|----------------|----------------------|
| <b>Adipose (fat) cells – Normal and diseased</b> |                                                                        |                  |                     |                     |                |                      |
| ADSC                                             | Adipose-derived stem cells                                             | PT-5006          | ADSC™ Bulletkit®    | PT-4505             | PT-3273        | PT-4503              |
| Pr-Ad-S                                          | Preadipocytes - subcutaneous                                           | PT-5001, PT-5020 | PGM™ 2 Bulletkit®   | PT-8002             | PT-8202        | PT-9502              |
| Pr-Ad-V                                          | Preadipocytes - visceral                                               | PT-5005          | PGM™ 2 Bulletkit®   | PT-8002             | PT-8202        | PT-9502              |
| <b>Airway cells – Normal and diseased</b>        |                                                                        |                  |                     |                     |                |                      |
| SAEC                                             | Small airway epithelial cells                                          | CC-2547          | SAGM™ Bulletkit®    | CC-3118             | CC-3119        | CC-4124              |
| SAEC-ALI                                         | Small airway epithelial cells guaranteed for ALI differentiation       | CC-2547S         | S-ALI™ Bulletkit®   | CC-4539             |                |                      |
| NHBE with RA                                     | Bronchial/Tracheal epithelial cells with retinoic acid                 | CC-2540          | BEGM® Bulletkit®    | CC-3170             | CC-3171        | CC-4175              |
| NHBE without RA                                  | Bronchial/Tracheal epithelial cells without retinoic acid              | CC-2541          | BEGM® Bulletkit®    | CC-3170             | CC-3171        | CC-4175              |
| NHBE-ALI                                         | Bronchial/tracheal epithelial cells guaranteed for ALI differentiation | CC-2540S         | B-ALI™ Bulletkit®   | 193514              | N/A            | N/A                  |
| NHLF                                             | Lung fibroblasts                                                       | CC-2512          | FGM® 2 Bulletkit®   | CC-3132             | CC-3131        | CC-4126              |
| HMVEC-L                                          | Lung microvascular endothelial cells                                   | CC-2527          | EGM® 2MV Bulletkit® | CC-3202             | CC-3156        | CC-4147              |
| HPAEC                                            | Pulmonary artery endothelial cells                                     | CC-2530          | EGM® 2 Bulletkit®   | CC-3162             | CC-3156        | CC-4176              |
| BSMC                                             | Bronchial smooth muscle cells                                          | CC-2576          | SmGM® 2 Bulletkit®  | CC-3182             | CC-3181        | CC-4149              |
| PASMC                                            | Pulmonary artery smooth muscle cells                                   | CC-2581          | SmGM® 2 Bulletkit®  | CC-3182             | CC-3181        | CC-4149              |
| DHBE-As                                          | (Asthma) Bronchial epithelial cells                                    | 194911           | BEGM® Bulletkit®    | CC-3170             | CC-3171        | CC-4175              |
| DHBE-As-ALI                                      | (Asthma) Bronchial epithelial cells guaranteed for ALI differentiation | 194911S          | B-ALI™ Bulletkit®   | 193514              |                |                      |
| DBSMC-As                                         | (Asthma) Bronchial smooth muscle cells                                 | 194850           | SmGM® 2 Bulletkit®  | CC-3182             | CC-3181        | CC-4149              |
| D-SAEC-As                                        | (Asthma) Small airway epithelial cells                                 | CC-2932          | SAGM™ Bulletkit®    | CC-3118             | CC-3119        | CC-4124              |
| DHBE-COPD                                        | (COPD) Bronchial epithelial cells                                      | 195275           | BEGM® Bulletkit®    | CC-3170             | CC-3171        | CC-4175              |
| DHBE-COPD-ALI                                    | (COPD) Bronchial epithelial cells guaranteed for ALI differentiation   | 195275S          | B-ALI™ Bulletkit®   | 193514              | N/A            | N/A                  |
| DHLF-COPD                                        | (COPD) Lung fibroblasts                                                | 195277           | FGM® 2 Bulletkit®   | CC-3132             | CC-3131        | CC-4126              |
| D-SAEC-COPD                                      | (COPD) Small airway epithelial cells                                   | CC-2934          | SAGM™ Bulletkit®    | CC-3118             | CC-3119        | CC-4124              |
| DHBE-CF                                          | (Cystic Fibrosis) Bronchial/Tracheal epithelial cells                  | 196979           | BEGM® Bulletkit®    | CC-3170             | CC-3171        | CC-4175              |
| DHLF-CF                                          | (Cystic Fibrosis) Lung fibroblasts                                     | 194843           | FGM® 2 Bulletkit®   | CC-3132             | CC-3131        | CC-4126              |
| D-SAEC-CF                                        | (Cystic Fibrosis) Small airway epithelial cells                        | CC-2933          | SAGM™ Bulletkit®    | CC-3118             | CC-3119        | CC-4124              |
| D-HPAEC-Diab T1                                  | (Diabetic Type 1) Pulmonary artery endothelial cells                   | CC-2923          | EGM® 2 Bulletkit®   | CC-3162             | CC-3156        | CC-4176              |
| DHLF-IPL                                         | (Idiopathic Lung Fibrosis) Lung fibroblasts                            | CC-7231          | FGM® 2 Bulletkit®   | CC-3132             | CC-3131        | CC-4126              |
| <b>Cardiac cells – Normal and diseased</b>       |                                                                        |                  |                     |                     |                |                      |
| HAEC                                             | Aortic endothelial cells                                               | CC-2535          | EGM® 2 Bulletkit®   | CC-3162             | CC-3156        | CC-4176              |
| AoSMC                                            | Aortic smooth muscle cells                                             | CC-2571          | SmGM® 2 Bulletkit®  | CC-3182             | CC-3181        | CC-4149              |
| HCAEC                                            | Coronary artery endothelial cells                                      | CC-2585          | EGM® 2MV Bulletkit® | CC-3202             | CC-3156        | CC-4147              |
| CASMC                                            | Coronary artery smooth muscle cells                                    | CC-2583          | SmGM® 2 Bulletkit®  | CC-3182             | CC-3181        | CC-4149              |
| HMVEC-C                                          | Cardiac microvascular endothelial cells                                | CC-7030          | EGM® 2MV Bulletkit® | CC-3202             | CC-3156        | CC-4147              |
| AoAF                                             | Aortic adventitial fibroblasts                                         | CC-7014          | SCGM™ Bulletkit®    | CC-3205             | CC-3204        | CC-4181              |
| NHCF-A                                           | Atrial cardiac fibroblasts                                             | CC-2903          | FGM® 3 Bulletkit®   | CC-4526             | CC-3131        | CC-4525              |
| NHCF-V                                           | Ventricle cardiac fibroblasts                                          | CC-2904          | FGM® 3 Bulletkit®   | CC-4526             | CC-3131        | CC-4525              |
| HPAEC                                            | Pulmonary artery endothelial cells                                     | CC-2530          | EGM® 2 Bulletkit®   | CC-3162             | CC-3156        | CC-4176              |
| PASMC                                            | Pulmonary artery smooth muscle cells                                   | CC-2581          | SmGM® 2 Bulletkit®  | CC-3182             | CC-3181        | CC-4149              |
| D-HPAEC-Diab T1                                  | (Diabetic Type 1) Pulmonary artery endothelial cells                   | CC-2923          | EGM® 2 Bulletkit®   | CC-3162             | CC-3156        | CC-3156              |
| D-CASMC-Diab T1                                  | (Diabetic Type 1) Coronary artery smooth muscle cells                  | CC-2917          | SmGM® 2 Bulletkit®  | CC-3182             | CC-3181        | CC-3181              |
| D-HAEC-Diab T2                                   | (Diabetic Type 2) Aortic endothelial cells                             | CC-2920          | EGM® 2 Bulletkit®   | CC-3162             | CC-3156        | CC-3156              |
| D-HCAEC-Diab T2                                  | (Diabetic Type 2) Coronary artery endothelial cells                    | CC-2922          | EGM® 2MV Bulletkit® | CC-3202             | CC-3156        | CC-3156              |

| Cell abbreviation                         | Description                                                               | Cell cat. no.             | Recommended medium                 | Bulletkit® cat. no. | Basal cat. no. | SingleQuot® cat. no. |
|-------------------------------------------|---------------------------------------------------------------------------|---------------------------|------------------------------------|---------------------|----------------|----------------------|
| <b>Dermal cells – Normal and diseased</b> |                                                                           |                           |                                    |                     |                |                      |
| HMVEC-dAd                                 | Adult dermal microvascular endothelial cells (blood and lymphatic mix)    | CC-2543                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| HMVEC-dNeo                                | Neonatal dermal microvascular endothelial cells (blood and lymphatic mix) | CC-2505                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| HMVEC-dNeo Pooled                         | Neonatal dermal microvascular endothelial cells (blood and lymphatic mix) | CC-2516                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| NHDF-Ad                                   | Adult dermal fibroblasts                                                  | CC-2511                   | FGM® 2 Bulletkit®                  | CC-3132             | CC-3131        | CC-4126              |
| NHDF-Neo                                  | Neonatal dermal fibroblasts                                               | CC-2509                   | FGM® 2 Bulletkit®                  | CC-3132             | CC-3131        | CC-4126              |
| NHEK-Ad                                   | Epidermal keratinocytes, Adult                                            | 192627                    | KGM® Gold Bulletkit®               | 192060              | 192151         | 192152               |
| NHEK-Neo                                  | Epidermal keratinocytes, Neonatal                                         | 192907                    | KGM® Gold Bulletkit®               | 192060              | 192151         | 192152               |
| NHEK-Neo Pooled                           | Epidermal keratinocytes, Neonatal pooled                                  | 192906                    | KGM® Gold Bulletkit®               | 192060              | 192151         | 192152               |
| NHEM-Neo                                  | Neonatal epidermal melanocytes                                            | CC-2504                   | MGM® 4 Bulletkit®                  | CC-3249             | CC-3250        | CC-4435              |
| NHEM-Ad                                   | Adult epidermal melanocytes                                               | CC-2586                   | MGM® 4 Bulletkit® + ET3 Supplement | CC-3249             | CC-3250        | CC-4435, CC- 4510    |
| <b>Diabetic (Type 1 and 2)</b>            |                                                                           |                           |                                    |                     |                |                      |
| D-ADSC-Diab T1                            | (Diabetic Type 1) Adipose-derived stem cells                              | PT-5007                   | ADSC™ Bulletkit®                   | PT-4505             | PT-3273        | PT-4503              |
| D-HPAEC-Diab T1                           | (Diabetic Type 1) Pulmonary artery endothelial cells                      | CC-2923                   | EGM® 2 Bulletkit®                  | CC-3162             | CC-3156        | CC-4176              |
| D-PrAd-S-Diab T1                          | (Diabetic Type 1) Subcutaneous preadipocyte cells                         | PT-5021                   | PGM™ 2 Bulletkit®                  | PT-8002             | PT-8202        | PT-9502              |
| D-PrAd-V-Diab T1                          | (Diabetic Type 1) Visceral preadipocyte cells                             | PT-5023                   | PGM™ 2 Bulletkit®                  | PT-8002             | PT-8202        | PT-9502              |
| D-CASMC-Diab T1                           | (Diabetic Type 1) Coronary artery smooth muscle cells                     | CC-2917                   | SmGM® 2 Bulletkit®                 | CC-3182             | CC-3181        | CC-4149              |
| D-ADSC-Diab T2                            | (Diabetic Type 2) Adipose-derived stem cells                              | PT-5008                   | ADSC™ Bulletkit®                   | PT-4505             | PT-3273        | PT-4503              |
| D-HAEC-Diab T2                            | (Diabetic Type 2) Aortic endothelial cells                                | CC-2920                   | EGM® 2 Bulletkit®                  | CC-3162             | CC-3156        | CC-4176              |
| D-HCAEC-Diab T2                           | (Diabetic Type 2) Coronary artery endothelial cells                       | CC-2922                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| D-HSMM-Diab T2                            | (Diabetic Type 2) Muscle myoblasts                                        | CC-2901                   | SkGM® 2 Bulletkit®                 | CC-3245             | CC-3246        | CC-3244              |
| D-RPTEC-Diab T2                           | (Diabetic Type 2) Renal proximal tube epithelial cells                    | CC-2925                   | REGM™ Bulletkit®                   | CC-3190             | CC-3191        | CC-4127              |
| D-PrAd-S-Diab T2                          | (Diabetic Type 2) Subcutaneous preadipocyte cells                         | PT-5022                   | PGM™ 2 Bulletkit®                  | PT-8002             | PT-8202        | PT-9502              |
| D-PrAd-V-Diab T2                          | (Diabetic Type 2) Visceral preadipocyte cells                             | PT-5024                   | PGM™ 2 Bulletkit®                  | PT-8002             | PT-8202        | PT-9502              |
| <b>*Endothelial cells – Normal</b>        |                                                                           |                           |                                    |                     |                |                      |
| HAEC                                      | Aortic endothelial cells                                                  | CC-2535                   | EGM® 2 Bulletkit®                  | CC-3162             | CC-3156        | CC-4176              |
| HCAEC                                     | Coronary artery endothelial cells                                         | CC-2585                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| HIAEC                                     | Iliac artery endothelial cells                                            | CC-2545                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| HPAEC                                     | Pulmonary artery endothelial cells                                        | CC-2530                   | EGM® 2 Bulletkit®                  | CC-3162             | CC-3156        | CC-4176              |
| HUVEC*                                    | Umbilical vein endothelial cells                                          | See table below           | N/A                                | N/A                 | N/A            | N/A                  |
| HUVEC-XL*                                 | Umbilical vein endothelial cells                                          | 191027<br>See table below | EGM® 2 Bulletkit®                  | CC-3162             | CC-3156        | CC-4176              |
| HMVEC-C                                   | Cardiac microvascular endothelial cells                                   | CC-7030                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| HMVEC-L                                   | Lung microvascular endothelial cells (blood and lymphatic mix)            | CC-2527                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| HMVEC-dAd                                 | Adult dermal microvascular endothelial cells (blood and lymphatic mix)    | CC-2543                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| HMVEC-dNeo                                | Neonatal dermal microvascular endothelial cells (blood and lymphatic mix) | CC-2505                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| HMVEC-Bd                                  | Bladder microvascular endothelial cells                                   | CC-7016                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |
| UtMVEC-Myo                                | Uterine microvascular endothelial cells                                   | CC-2564                   | EGM® 2MV Bulletkit®                | CC-3202             | CC-3156        | CC-4147              |

| *HUVEC type                         | Characteristics                                                                                                                        | Catalog number                                                  |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Isolated in EGM® Media              | Isolated in absence of defined growth factors. Contains BBE. No exogenous VEGF                                                         | CC-2517 (single donor), CC-2519 (pooled donor)                  |
| Isolated in EGM®-Plus Media         | Improved version of part number CC-2517. Offers faster proliferation rates than HUVEC isolated in EGM® Growth Media. No exogenous VEGF | CC-2935 (single donor)                                          |
| Isolated in EGM® 2 Media            | Isolated in presence of growth factors such as VEGF, rhFGF, rhEGF, and others. Does not contain BBE                                    | C2517A (single donor), C2519A (pooled donor) 00191027 (XL size) |
| Pre-screened HUVECs in EGM® 2 Media | Screened for angiogenesis markers and test positive for expression of eNOS, Axl, Tie-2 and VEGFr2                                      | C2517AS (single donor), C2519AS (pooled donor)                  |

\* Please see section Diabetes Type 1 and 2 for diseased endothelial cells

| Cell abbreviation                                        | Description                                                            | Cell cat. no.    | Recommended medium               | Bulletkit® cat. no. | Basal cat. no.   | SingleQuot® cat. no. |
|----------------------------------------------------------|------------------------------------------------------------------------|------------------|----------------------------------|---------------------|------------------|----------------------|
| Epithelial cells - Normal and diseased                   |                                                                        |                  |                                  |                     |                  |                      |
| HMEC                                                     | Mammary epithelial cells                                               | CC-2551          | MEGM® Bulletkit®                 | CC-3150             | CC-3151          | CC-4136              |
| PrEC                                                     | Prostate epithelial cells                                              | CC-2555          | PrEGM™ Bulletkit®                | CC-3166             | CC-3165          | CC-4177              |
| SAEC                                                     | Small airway epithelial cells                                          | CC-2547          | SAGM™ Bulletkit®                 | CC-3118             | CC-3119          | CC-4124              |
| SAEC-ALI                                                 | Small airway epithelial cells guaranteed for ALI differentiation       | CC-2547S         | S-ALI™ Bulletkit®                | CC-4539             | N/A              | N/A                  |
| NHBE with RA                                             | Bronchial epithelial cells with retinoic acid                          | CC-2540          | BEGM® Bulletkit®                 | CC-3170             | CC-3171          | CC-4175              |
| NHBE without RA                                          | Bronchial epithelial cells without retinoic acid                       | CC-2541          | BEGM® Bulletkit®                 | CC-3170             | CC-3171          | CC-4175              |
| NHBE-ALI                                                 | Bronchial epithelial cells guaranteed for ALI differentiation          | CC-2540S         | B-ALI™ Bulletkit®                | 193514              | N/A              | N/A                  |
| HRCE                                                     | Cortical epithelial cells                                              | CC-2554          | REGM™ Bulletkit®                 | CC-3190             | CC-3191          | CC-4127              |
| HRE                                                      | Renal epithelial cells                                                 | CC-2556          | REGM™ Bulletkit®                 | CC-3190             | CC-3191          | CC-4127              |
| RPTEC                                                    | Renal proximal tube epithelial cells                                   | CC-0168          | REGM™ Bulletkit®                 | CC-3190             | CC-3191          | CC-4127              |
| DHBE-As                                                  | (Asthma) Bronchial epithelial cells                                    | 194911           | BEGM® Bulletkit®                 | CC-3170             | CC-3171          | CC-4175              |
| DHBE-As-ALI                                              | (Asthma) Bronchial epithelial cells guaranteed for ALI differentiation | 194911S          | B-ALI™ Bulletkit®                | 193514              | N/A              | N/A                  |
| DHBE-COPD                                                | (COPD) Bronchial epithelial cells                                      | 195275           | BEGM® Bulletkit®                 | CC-3170             | CC-3171          | CC-4175              |
| DHBE-COPD-ALI                                            | (COPD) Bronchial epithelial cells guaranteed for ALI differentiation   | 195275S          | B-ALI™ Bulletkit®                | 193514              | N/A              | N/A                  |
| D-SAEC-COPD                                              | (COPD) Small airway epithelial cells                                   | CC-2934          | SAGM™ Bulletkit®                 | CC-3118             | CC-3119          | CC-4124              |
| DHBE-CF                                                  | (Cystic Fibrosis) Bronchial epithelial cells                           | 196979           | BEGM® Bulletkit®                 | CC-3170             | CC-3171          | CC-4175              |
| D-SAEC-CF                                                | (Cystic Fibrosis) Small airway epithelial cells                        | CC-2933          | SAGM™ Bulletkit®                 | CC-3118             | CC-3119          | CC-4124              |
| D-RPTEC-Diab T2                                          | (Diabetic Type 2) Renal proximal tube epithelial cells                 | CC-2925          | REGM™ Bulletkit®                 | CC-3190             | CC-3191          | CC-4127              |
| Fibroblasts – Normal and diseased                        |                                                                        |                  |                                  |                     |                  |                      |
| AoAF                                                     | Aortic adventitial fibroblasts                                         | CC-7014          | SCGM™ Bulletkit®                 | CC-3205             | CC-3204          | CC-4181              |
| NHCF-A                                                   | Atrial cardiac fibroblasts                                             | CC-2903          | FGM® 3 Bulletkit®                | CC-4526             | CC-3131          | CC-4525              |
| NHCF-V                                                   | Ventricle cardiac fibroblasts                                          | CC-2904          | FGM® 3 Bulletkit®                | CC-4526             | CC-3131          | CC-4525              |
| NHDF-Ad                                                  | Adult dermal fibroblasts                                               | CC-2511          | FGM® 2 Bulletkit®                | CC-3132             | CC-3131          | CC-4126              |
| NHLF                                                     | Lung fibroblasts                                                       | CC-2512          | FGM® 2 Bulletkit®                | CC-3132             | CC-3131          | CC-4126              |
| HPdLF                                                    | Peridontal ligament fibroblasts                                        | CC-7049          | SCGM™ Bulletkit®                 | CC-3205             | CC-3204          | CC-4181              |
| DHLF-As                                                  | (Asthma) Lung fibroblasts                                              | 194912           | FGM® 2 Bulletkit®                | CC-3132             | CC-3131          | CC-4126              |
| DHLF-COPD                                                | (COPD) Lung fibroblasts                                                | 195277           | FGM® 2 Bulletkit®                | CC-3132             | CC-3131          | CC-4126              |
| DHLF-IPL                                                 | (Idiopathic Lung Fibrosis) Lung fibroblasts                            | CC-7231          | FGM® 2 Bulletkit®                | CC-3132             | CC-3131          | CC-4126              |
| Progenitor cells – Normal                                |                                                                        |                  |                                  |                     |                  |                      |
| OCF                                                      | Osteoclast precursors                                                  | 2T-110           | N/A                              | N/A                 | PT-8201          | N/A                  |
| CD34+                                                    | Bone marrow CD34+ progenitor cells (cryopreserved)                     | 2M-101           | N/A                              | N/A                 | N/A              | N/A                  |
| CD34+                                                    | Human cord blood CD34+ progenitor cells (cryopreserved)                | 2C-101           | N/A                              | N/A                 | N/A              | N/A                  |
| Pr-Ad-S                                                  | Preadipocytes - subcutaneous                                           | PT-5001, PT-5020 | PGM™ 2 Bulletkit®                | PT-8002             | PT-8202          | PT-9502              |
| Pr-Ad-V                                                  | Preadipocytes - visceral                                               | PT-5005          | PGM™ 2 Bulletkit®                | PT-8002             | PT-8202          | PT-9502              |
| Prostate cells – Normal                                  |                                                                        |                  |                                  |                     |                  |                      |
| PrEC                                                     | Prostate epithelial                                                    | CC-2555          | PrEGM™ Bulletkit®                | CC-3166             | CC-3165          | CC-4177              |
| Renal cells – Normal and diseased                        |                                                                        |                  |                                  |                     |                  |                      |
| HRCE                                                     | Cortical epithelial cells                                              | CC-2554          | REGM™ Bulletkit®                 | CC-3190             | CC-3191          | CC-4127              |
| HRE                                                      | Renal epithelial cells                                                 | CC-2556          | REGM™ Bulletkit®                 | CC-3190             | CC-3191          | CC-4127              |
| RPTEC                                                    | Renal proximal tube epithelial cells                                   | CC-2553          | REGM™ Bulletkit®                 | CC-3190             | CC-3191          | CC-4127              |
| D-RPTEC-Diab T2                                          | (Diabetic Type 2) Renal proximal tube epithelial cells                 | CC-2925          | REGM™ Bulletkit®                 | CC-3190             | CC-3191          | CC-4127              |
| Skeletal and skeletal muscle cells – Normal and diseased |                                                                        |                  |                                  |                     |                  |                      |
| NHAC-kn                                                  | Articular chondrocytes, knee                                           | CC-2550          | CDM™ Bulletkit®, CGM™ Bulletkit® | CC-3225, CC-3216    | CC-3226, CC-3217 | CC-4408, CC-4409     |
| HPdLF                                                    | Peridontal ligament fibroblasts                                        | CC-7049          | SCGM™ Bulletkit®                 | CC-3205             | CC-3204          | CC-4181              |
| HSMM                                                     | Skeletal muscle myoblasts                                              | CC-2580          | SkGM® 2 Bulletkit®               | CC-3245             | CC-3246          | CC-3244              |
| D-HSMM-Diab T2                                           | (Diabetic Type 2) Muscle myoblasts                                     | CC-2901          | SkGM® 2 Bulletkit®               | CC-3245             | CC-3246          | CC-3244              |

| Cell abbreviation | Description              | Cell cat. no. | Recommended medium | Bulletkit® cat. no. | Basal cat. no. | SingleQuot® cat. no. |
|-------------------|--------------------------|---------------|--------------------|---------------------|----------------|----------------------|
| NH0st             | Normal human osteoblasts | CC-2538       | OGM™ BulletKit®    | CC-3207             | CC-3208        | CC-4193              |
| OCP               | Osteoclast precursors    | 2T-110        | N/A                | N/A                 | PT-8201        | N/A                  |

#### Smooth muscle cells – Normal and diseased

|                 |                                                       |         |                    |         |         |         |
|-----------------|-------------------------------------------------------|---------|--------------------|---------|---------|---------|
| AoSMC           | Aortic smooth muscle cells                            | CC-2571 | SmGM® 2 Bulletkit® | CC-3182 | CC-3181 | CC-4149 |
| CASMC           | Coronary artery smooth muscle cells                   | CC-2583 | SmGM® 2 Bulletkit® | CC-3182 | CC-3181 | CC-4149 |
| BSMC            | Bronchial smooth muscle cells                         | CC-2576 | SmGM® 2 Bulletkit® | CC-3182 | CC-3181 | CC-4149 |
| PASMC           | Pulmonary artery smooth muscle cells                  | CC-2581 | SmGM® 2 Bulletkit® | CC-3182 | CC-3181 | CC-4149 |
| DBSMC-As        | (Asthma) Bronchial smooth muscle cells                | 194850  | SmGM® 2 Bulletkit® | CC-3182 | CC-3181 | CC-4149 |
| DBSMC-COPD      | (COPD) Bronchial smooth muscle cells                  | 195274  | SmGM® 2 Bulletkit® | CC-3182 | CC-3181 | CC-4149 |
| DBSMC-CF        | (Cystic Fibrosis) Bronchial smooth muscle cells       | 196980  | SmGM® 2 Bulletkit® | CC-3182 | CC-3181 | CC-4149 |
| D-CASMC-Diab T1 | (Diabetic Type 1) Coronary artery smooth muscle cells | CC-2917 | SmGM® 2 Bulletkit® | CC-3182 | CC-3181 | CC-4149 |

#### Stem cells – Normal

|      |                            |         |                                                                                                                      |                                          |         |         |
|------|----------------------------|---------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------|---------|
| ADSC | Adipose-derived stem cells | PT-5006 | ADSC™ Bulletkit®                                                                                                     | PT-4505                                  | PT-3273 | PT-4503 |
| DPSC | Dental pulp stem cells     | PT-5025 | DPSC™ Bulletkit®                                                                                                     | PT-3005                                  | PT-3927 | PT-4516 |
| MSC  | Mesenchymal stem cells     | PT-2501 | MSCGM™ Growth Bulletkit®,<br>MSC Osteogenic Bulletkit®,<br>MSC Chondrogenic Bulletkit®,<br>MSC Adipogenic Bulletkit® | PT-3001<br>PT-3002<br>PT-3003<br>PT-3004 | PT-3238 | PT-4105 |

## Cryopreserved animal primary cells

| Cell abbreviation | Description                    | Cell cat. no. | Recommended medium     | Bulletkit® cat. no. | Basal cat. no. | SingleQuot® cat. no. |
|-------------------|--------------------------------|---------------|------------------------|---------------------|----------------|----------------------|
| Cardiac cells     |                                |               |                        |                     |                |                      |
| R-CM              | Rat cardiac myocytes           | R-CM-561      | RCGM™ Bulletkit®       | CC-4515             | CC-3275        | CC-4516              |
| R-ASM             | Rat aortic smooth muscle cells | R-ASM-580     | DMEM:F12 + supplements | N/A                 | N/A            | N/A                  |

#### Neural cells

|        |                                            |            |                  |         |         |                     |
|--------|--------------------------------------------|------------|------------------|---------|---------|---------------------|
| R-Cx   | Rat Brain cortex neurons                   | R-Cx-500   | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| R-Hi   | Rat brain hippocampus neurons              | R-Hi-501   | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| R-Cp   | Rat brain striatum neurons                 | R-Cp-502   | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| R-Drg  | Rat dorsal root ganglion neurons           | R-Drg-505  | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| R-eDrg | Embryonic rat dorsal root ganglion neurons | R-eDrg-515 | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| R-Cb   | Rat cerebellar neurons                     | R-Cb-503   | N/A              | CC-4512 | CC-3256 | CC-4511,<br>CC-4462 |
| R-HTH  | Rat brain hypothalamic neurons             | R-HTH-507  | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| R-CxAs | Rat brain cortex astrocytes                | R-CxAs-520 | AGM™ Bulletkit®  | CC-3186 | CC-3187 | CC-4123             |
| R-HiAs | Rat brain hippocampus astrocytes           | R-HiAs-521 | AGM™ Bulletkit®  | CC-3186 | CC-3187 | CC-4123             |
| R-CpAs | Rat brain striatum astrocytes              | R-CpAs-522 | AGM™ Bulletkit®  | CC-3186 | CC-3187 | CC-4123             |
| R-AsM  | Rat brain Cx-Hi-Cp mix astrocytes          | R-AsM-530  | AGM™ Bulletkit®  | CC-3186 | CC-3187 | CC-4123             |
| R-G    | Rat Microglial cells                       | R-G-535    | N/A              | N/A     | N/A     | N/A                 |
| M-Cx   | Mouse CD1 brain cortex neurons             | M-Cx-400   | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| M-Cp   | Mouse CD1 brain striatum neurons           | M-Cp-402   | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| M-Cx   | Mouse C57 brain cortex neurons             | M-Cx-300   | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| M-Cp   | Mouse C57 brain striatum neurons           | M-Cp-302   | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |
| M-AsM  | Mouse CD1 brain mixed astrocytes           | M-AsM-430  | AGM™ Bulletkit®  | CC-3186 | CC-3187 | CC-4123             |
| M-AsM  | Mouse CD57 brain mixed astrocytes          | M-AsM-330  | AGM™ Bulletkit®  | CC-3186 | CC-3187 | CC-4123             |
| M-Hi   | Mouse brain hippocampus neurons            | M-Hi-401   | PNGM™ Bulletkit® | CC-4461 | CC-3256 | CC-4462             |

#### Other cell types

|       |                                        |           |                                                 |     |     |     |
|-------|----------------------------------------|-----------|-------------------------------------------------|-----|-----|-----|
| R-OST | Rat calvariae osteoblasts              | R-Ost-583 | N/A                                             | N/A | N/A | N/A |
| MEF   | Mouse embryonic fibroblasts            | M-Fb-481  | DMEM high glucose containing 10% FBS            | N/A | N/A | N/A |
| iMEF  | Irradiated mouse embryonic fibroblasts | M-iFb-482 | DMEM high glucose with L-Gln containing 10% FBS | N/A | N/A | N/A |

## Cryopreserved hepatocytes

| Cell type                                               | Format                                       | Cell cat. no. | Recommended medium | Bulletkit® cat. no. | Basal cat. no. | SingleQuot® cat. no. |
|---------------------------------------------------------|----------------------------------------------|---------------|--------------------|---------------------|----------------|----------------------|
| Human hepatocytes and non-parenchymal cells – Plateable |                                              |               |                    |                     |                |                      |
| Human Stellate cells                                    | Cryopreserved, plateable (1 Million cells)   | HUCLS-1M      | StGM™ BulletKit®   | MST-500BK           | MST-500        | MST-500SQ            |
| Human Stellate cells                                    | Cryopreserved, plateable (0.2 Million cells) | HUCLS-200K    | StGM™ BulletKit®   | MST-500BK           | MST-500        | MST-500SQ            |
| Human Cryo Kupffer cells                                | Cryopreserved, plateable (0.2 Million cells) | HLKC-200K     | KuGM™ BulletKit®   | MKC-500BK           | MKC-500        | MKC-500SQ            |
| Human Cryo Kupffer cells                                | Cryopreserved, plateable (0.5 Million cells) | HLKC-500K     | KuGM™ BulletKit®   | MKC-500BK           | MKC-500        | MKC-500SQ            |
| Human Liver-Derived Endothelial cells P1                | Cryopreserved, plateable                     | HLECP1        | EGM® 2 BulletKit®  | CC-3162             | CC-3156        | CC-4176              |
| Liver Mixed Non-parenchymal cells                       | Cryopreserved, plateable                     | HUCNP         | StGM™ BulletKit®   | MST-500BK           | MST-500        | MST-500SQ            |

| Cell type             | Format                   | Cell cat. no. | Basal medium | Supplements                |
|-----------------------|--------------------------|---------------|--------------|----------------------------|
| NoSpin™ HepaRG™ cells | Cryopreserved, plateable | NSHPRG        | MH100        | MHTAP, MHMET, MHPIT, MHIND |

| Cell type                                | Format                   | Cell cat. no. | Thawing media | Plating media | Maintenance media |
|------------------------------------------|--------------------------|---------------|---------------|---------------|-------------------|
| Human hepatocytes – Plateable            |                          |               |               |               |                   |
| Human Hepatocytes, General Purpose       | Cryopreserved, plateable | HUCPG         | MCHT50        | MP100         | CC-3198           |
| Human Hepatocytes, Interaction Qualified | Cryopreserved, plateable | HUCPI         | MCHT50        | MP100         | CC-3198           |

|                                                 |                                        |          |         |     |         |
|-------------------------------------------------|----------------------------------------|----------|---------|-----|---------|
| Human hepatocytes – Suspension                  |                                        |          |         |     |         |
| DonorPlex™ Human Hepatocytes, 10 donor pool     | Cryopreserved, pooled suspension       | HUCS10P  | MCHT50P | N/A | CC-3198 |
| DonorPlex™ Human Hepatocytes, 20 donor pool     | Cryopreserved, pooled suspension       | HUCS20P  | MCHT50P | N/A | CC-3198 |
| DonorPlex™ Human Hepatocytes 50 donor pool      | Cryopreserved, pooled suspension       | HUCS50P  | MCHT50P | N/A | CC-3198 |
| DonorPlex™ Human Hepatocytes, Female, 10 Donors | Cryopreserved, pooled suspension       | HUCS10PF | MCHT50P | N/A | CC-3198 |
| DonorPlex™ Human Hepatocytes, Male, 10 Donors   | Cryopreserved, pooled suspension       | HUCS10PM | MCHT50P | N/A | CC-3198 |
| DonorPlex™ Human Hepatocytes, Female, 20 Donors | Cryopreserved, pooled suspension       | HUCS20PF | MCHT50P | N/A | CC-3198 |
| DonorPlex™ Human Hepatocytes, Male, 20 Donors   | Cryopreserved, pooled suspension       | HUCS20PM | MCHT50P | N/A | MM250   |
| Human Hepatocytes                               | Cryopreserved, single donor suspension | HUCSD    | MCHT50  | N/A | CC-3198 |

|                                |                          |        |        |       |         |
|--------------------------------|--------------------------|--------|--------|-------|---------|
| Animal hepatocytes – Plateable |                          |        |        |       |         |
| Dog (Beagle) Hepatocytes       | Cryopreserved, plateable | DBCPO1 | MCAT50 | MP100 | CC-3198 |
| Mouse C57Bl/6) Hepatocytes     | Cryopreserved, plateable | MBCPO1 | MCRT50 | MP100 | MM250   |
| Mouse (CD-1) Hepatocytes       | Cryopreserved, plateable | MCCPO1 | MCRT50 | MP100 | MM250   |
| Mouse (B6C3F1) Hepatocytes     | Cryopreserved, plateable | MXCP01 | MCRT50 | MP100 | MM250   |

| Cell type                        | Format                   | Cell cat. no. | Thawing media | Plating media | Maintenance media |
|----------------------------------|--------------------------|---------------|---------------|---------------|-------------------|
| Mouse (BALB/c) Hepatocytes       | Cryopreserved, plateable | MACP01        | MCRT50        | MP100         | MM250             |
| Rat (Sprague Dawley) Hepatocytes | Cryopreserved, plateable | RSCP01        | MCRT50        | MP100         | CC-3198           |
| Rat (Wistar Han) Hepatocytes     | Cryopreserved, plateable | RWCP01        | MCRT50        | MP100         | CC-3198           |
| Rat (Wistar) Hepatocytes         | Cryopreserved, plateable | RICP01        | MCRT50        | MP100         | CC-3198           |

| Animal hepatocytes – Suspension  |                           |        |        |     |         |
|----------------------------------|---------------------------|--------|--------|-----|---------|
| Dog (Beagle) Hepatocytes         | Cryopreserved, suspension | DBCS01 | MCAT50 | N/A | CC-3198 |
| Mouse (C57Bl/6) Hepatocytes      | Cryopreserved, suspension | MBCS01 | MCRT50 | N/A | MM250   |
| Mouse (CD-1) Hepatocytes         | Cryopreserved, suspension | MCCS01 | MCRT50 | N/A | MM250   |
| Mouse (B6C3F1) Hepatocytes       | Cryopreserved, suspension | MXCS01 | MCRT50 | N/A | MM250   |
| Mouse (BALB/c) Hepatocytes       | Cryopreserved, suspension | MACS01 | MCRT50 | N/A | MM250   |
| Rat (Sprague Dawley) Hepatocytes | Cryopreserved, suspension | RSCS01 | MCRT50 | N/A | CC-3198 |
| Rat (Wistar Han) Hepatocytes     | Cryopreserved, suspension | RWCS01 | MCRT50 | N/A | CC-3198 |
| Rat (Wistar) Hepatocytes         | Cryopreserved, suspension | RICS01 | MCRT50 | N/A | CC-3198 |

## Hematopoietic and immune cells

| Cell type                                      | Cat. No. | Description                                                                                                | Size              | Recommended Media          |
|------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|
| <b>B cells</b>                                 |          |                                                                                                            |                   |                            |
| <b>Peripheral blood- Cryopreserved</b>         |          |                                                                                                            |                   |                            |
| CD19+ B cells (positively selected)            | 2W-600   | Human CD19+ B cells isolated from peripheral blood using positive immunomagnetic selection, cryopreserved  | ≥10 million cells | 04-380Q, 04-418Q, 02-053Q  |
| CD19+ B cells (Negatively selected)            | 2W-601   | Human CD19+ B cells isolated from peripheral blood using negative immunomagnetic selection, cryopreserved, | ≥10 million cells | 04-380Q, 04-418Q, 02-053Q  |
| <b>CD14+ monocytes</b>                         |          |                                                                                                            |                   |                            |
| <b>Peripheral blood – Cryopreserved</b>        |          |                                                                                                            |                   |                            |
| CD14+ cells (positively selected)              | 2W-400A  | Peripheral Blood CD14+ Monocytes, positively selected                                                      | ≥40 million cells | 04-380Q, 04-418Q, 02-053Q  |
| CD14+ cells (positively selected)              | 2W-400B  | Peripheral Blood CD14+ Monocytes, positively selected                                                      | ≥20 million cells | 04-380Q, 04-418Q, 02-053Q  |
| CD14+ cells (positively selected)              | 2W-400C  | Peripheral Blood CD14+ Monocytes, positively selected                                                      | ≥10 million cells | 04-380Q, 04-418Q, 02-053Q  |
| CD14+ Monocytes, (negatively selected)         | 2W-401   | Human CD14+ monocytes, isolated from peripheral blood using negative immunomagnetic selection              | ≥10 million cells | 04-418Q, 02-053Q, 04-448Q, |
| CD14+ Monocytes, (negatively selected)         | 2W-401A  | Human CD14+ monocytes, isolated from peripheral blood using negative immunomagnetic selection              | ≥50 million cells | 04-418Q, 02-053Q, 04-448Q, |
| <b>CD34+ stem/progenitor cells</b>             |          |                                                                                                            |                   |                            |
| <b>Bone marrow - Cryopreserved</b>             |          |                                                                                                            |                   |                            |
| Bone marrow CD34+ cells, (positively selected) | 2M-101   | Human CD34+ cells, isolated from mononuclear cells using positive immunomagnetic selection                 | ≥ 100,000 cells   | 04-448Q                    |
| Bone marrow CD34+ cells, (positively selected) | 2M-101A  | Human CD34+ cells, isolated from mononuclear cells using positive immunomagnetic selection                 | ≥ 300,000 cells   | 04-448Q                    |
| Bone marrow CD34+ cells, (positively selected) | 2M-101B  | Human CD34+ cells, isolated from mononuclear cells using positive immunomagnetic selection                 | ≥ 500,000 cells   | 04-448Q                    |
| Bone marrow CD34+ cells, (positively selected) | 2M-101C  | Human CD34+ cells, isolated from mononuclear cells using positive immunomagnetic selection                 | ≥1 million cells  | 04-448Q                    |
| Bone marrow CD34+ cells, (positively selected) | 2M-101D  | Human CD34+ cells, isolated from mononuclear cells using positive immunomagnetic selection                 | ≥2 million cells  | 04-448Q                    |
| <b>Cord blood –Cryopreserved</b>               |          |                                                                                                            |                   |                            |
| Cord Blood                                     | 2C-101   | Cord Blood CD34+ Progenitor cells, 1 amp per donor                                                         | ≥1 million cells  | 04-380Q, 04-418Q, 02-053Q  |
| Cord Blood                                     | 2C-101A  | Cord Blood CD34+ Progenitor cells                                                                          | ≥500 000 cells    | 04-380Q, 04-418Q, 02-053Q  |

| Cell type                                          | Cat. No. | Description                                                                                              | Size                  | Recommended Media          |
|----------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|
| Cord Blood CD34+, with HLA info                    | 2C-101H  | Cord Blood CD34+ Progenitor cells, with HLA info, 1 amp per donor                                        | ≥1 million cells      | 04-380Q, 04-418Q, 02-053Q  |
| Cord Blood CD34+                                   | 2C-101X  | Cord Blood CD34+ Progenitor cells, > 1 amp per donor                                                     | ≥1 million cells      | 04-380Q, 04-418Q, 02-053Q  |
| Cord Blood CD34+, with HLA info                    | 2C-101HX | Cord Blood CD34+ Progenitor cells, with HLA info, > 1 amp per donor                                      | ≥1 million cells      | 04-380Q, 04-418Q, 02-053Q  |
| <b>Mobilized - Fresh</b>                           |          |                                                                                                          |                       |                            |
| CD34+ Stem/Progenitor cells, (positively selected) | 3Y-101C  | Human CD34+ cells, isolated from mobilized peripheral blood using positive immunomagnetic selection      | ≥1 million cells      | 04-418Q, 02-053Q           |
| <b>Mobilized - Cryopreserved</b>                   |          |                                                                                                          |                       |                            |
| CD34+ Stem/Progenitor cells, (positively selected) | 2Y-101C  | Human CD34+ cells, isolated from mobilized peripheral blood using positive immunomagnetic selection      | ≥1 million cells      | 04-418Q, 02-053Q           |
| CD34+ Stem/Progenitor cells, (positively selected) | 2Y-101D  | Human CD34+ cells, isolated from mobilized peripheral blood using positive immunomagnetic selection      | ≥5 million cells      | 04-418Q, 02-053Q           |
| CD34+ Stem/Progenitor cells, (positively selected) | 2Y-101E  | Human CD34+ cells, isolated from mobilized peripheral blood using positive immunomagnetic selection      | ≥10 million cells     | 04-418Q, 02-053Q           |
| CD34+ Stem/Progenitor cells, (positively selected) | 2Y-101F  | Human CD34+ cells, isolated from mobilized peripheral blood using positive immunomagnetic selection      | ≥25 million cells     | 04-418Q, 02-053Q           |
| <b>Dendritic cells</b>                             |          |                                                                                                          |                       |                            |
| <b>Peripheral blood- Cryopreserved</b>             |          |                                                                                                          |                       |                            |
| NHDC Dendritic cells                               | CC-2701  | Normal Human Dendritic cells, cryopreserved                                                              | ≥2.5 million cells    | 04-448Q                    |
| <b>Mononuclear cells</b>                           |          |                                                                                                          |                       |                            |
| <b>Bone marrow - Cryopreserved</b>                 |          |                                                                                                          |                       |                            |
| Bone Marrow MNCs                                   | 2M-125B  | Bone Marrow Mononuclear cells, 5 amps                                                                    | 5 x ≥25 million cells | 04-380Q, 04-418Q, 02-053Q  |
| Bone Marrow MNCs                                   | 2M-125C  | Bone Marrow Mononuclear cells                                                                            | ≥25 million cells     | 04-380Q, 04-418Q, 02-053Q  |
| Human Bone Marrow                                  | 2S-101D  | Bone Marrow Mononuclear cells                                                                            | ≥5 million cells      | 04-380Q, 04-418Q, 02-053Q  |
| Bone Marrow, CD34-Depleted, MNC                    | 4M-105   | Bone Marrow, CD34-Depleted mononuclear cells                                                             | ≥100 million cells    | 04-418Q, 02-053Q           |
| Bone Marrow, MNCs                                  | 4M-125A  | Mononuclear cells from human bone marrow                                                                 | ≥10 million cells     | 04-418Q, 02-053Q, 04-448Q, |
| <b>Peripheral blood - Cryopreserved</b>            |          |                                                                                                          |                       |                            |
| Human PBMCs                                        | CC-2704  | Mononuclear cells from human peripheral blood                                                            | ≥10 million cells     | 04-448Q                    |
| Human PBMCs                                        | CC-2705  | Mononuclear cells from human peripheral blood                                                            | ≥25 million cells     | 04-448Q                    |
| Human PBMCs                                        | CC-2702  | Mononuclear cells from human peripheral blood                                                            | ≥50 million cells     | 04-448Q                    |
| Human PBMCs                                        | CC-2702P | Mononuclear cells from human peripheral blood with cell population frequency information                 | ≥50 million cells     | 04-448Q                    |
| Human PBMCs                                        | CC-2703  | Mononuclear cells from human peripheral blood                                                            | ≥100 million cells    | 04-448Q                    |
| Human PBMCs                                        | CC-2703P | Mononuclear cells from human peripheral blood with cell population frequency information                 | ≥100 million cells    | 04-448Q                    |
| Human Serum, SLE                                   | CC-2710  | Serum from human peripheral blood, SLE donor                                                             | 1 ml                  |                            |
| Human PBMCs, SLE                                   | CC-2711  | Mononuclear cells from human peripheral blood, SLE donor                                                 | ≥25 million cells     |                            |
| Human PBMCs, SLE                                   | CC-2712  | Mononuclear cells from human peripheral blood, SLE donor                                                 | ≥100 million cells    |                            |
| <b>NK cells</b>                                    |          |                                                                                                          |                       |                            |
| <b>Peripheral blood - Cryopreserved</b>            |          |                                                                                                          |                       |                            |
| Peripheral Blood NK cells Negative                 | 2W-501   | Peripheral Blood Natural Killer cells, negatively selected                                               | ≥5 million cells      | 04-448Q                    |
| Peripheral Blood NK cells Positive                 | 2W-502   | Peripheral Blood Natural Killer cells, positively selected                                               | ≥5 million cells      | 04-448Q                    |
| <b>Osteoclast Precursors</b>                       |          |                                                                                                          |                       |                            |
| Osteoclast Precursors                              | 2T-110   | Osteoclast Precursors, cryopreserved                                                                     | ≥1 million cells      | N/A                        |
| <b>T cells</b>                                     |          |                                                                                                          |                       |                            |
| <b>Peripheral blood - Cryopreserved</b>            |          |                                                                                                          |                       |                            |
| CD4+ T cells, (negatively selected)                | 2W-200   | Peripheral Blood CD4+ Helper T cells, negatively selected                                                | ≥10 million cells     | 04-448Q                    |
| CD8+ T cells, (negatively selected)                | 2W-300   | Peripheral Blood CD8+ Cytotoxic T cells, negatively selected                                             | ≥10 million cells     | 04-448Q                    |
| CD4+/CD45RA+ Naïve T cells, (negatively selected)  | 2W-202   | Human CD4+/CD45RA+ Naïve T cells, isolated from peripheral blood using negative immunomagnetic selection | ≥5 million cells      | 04-448Q                    |

| Cell type                                                   | Cat. No.  | Description                                                                                                                                      | Size               | Recommended Media         |
|-------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------|
| CD4+/CD45RO+ Memory T cells, (negatively selected)          | 4W-204    | Human CD4+/CD45RA+ memory T cells, isolated from peripheral blood using negative immunomagnetic selection                                        | ≥5 million cells   | 04-448Q                   |
| CD8+/CD45RA+ Naive Cytotoxic T cells, (negatively selected) | 2W-302    | Human CD8+/CD45RA+ naïve cytotoxic T cells, isolated from peripheral blood using negative immunomagnetic selection                               | ≥5 million cells   | 04-448Q                   |
| CD3+ Pan T cells, (negatively selected)                     | 2W-350    | Human CD3+ T cells, isolated from peripheral blood using negative immunomagnetic selection                                                       | ≥25 million cells  | 04-448Q                   |
| <b>Stromal cells</b>                                        |           |                                                                                                                                                  |                    |                           |
| <b>Bone Marrow- Cryopreserved</b>                           |           |                                                                                                                                                  |                    |                           |
| Bone Marrow Stromal cells - Cryopreserved                   | 2M-302    | Non-irradiated stromal cells from human bone marrow                                                                                              | ≥5 million cells   | N/A                       |
| <b>Whole tissue</b>                                         |           |                                                                                                                                                  |                    |                           |
| <b>Bone marrow – Fresh</b>                                  |           |                                                                                                                                                  |                    |                           |
| Human Bone Marrow                                           | 1M-105    | Whole Bone Marrow                                                                                                                                | 10 mL              | 04-418Q, 02-053Q, 04-448Q |
| Human Bone Marrow                                           | 1M-125    | Whole Bone Marrow                                                                                                                                | 25 mL              | 04-418Q, 02-053Q, 04-448Q |
| Human Bone Marrow                                           | 3M-103    | Whole Bone Marrow                                                                                                                                | 3 mL               | 04-380Q                   |
| Human Bone Marrow                                           | 3M-103C   | Whole Bone Marrow                                                                                                                                | 50 mL              | 04-380Q                   |
| Human Bone Marrow                                           | 1M-BAG    | Whole Bone Marrow                                                                                                                                | 100 mL             | 04-380Q                   |
| <b>Mobilized blood – Fresh</b>                              |           |                                                                                                                                                  |                    |                           |
| Mobilized Leuko Pak, RegF                                   | 3Y-300    | Human leukopheresis product collected from peripheral blood mobilized with Neupogen® 10 µg/kg x 5, Day 5 Collection                              | 1 Bag              | 04-448Q                   |
| Mobilized Leuko Pak, RegH                                   | 3Y-300A   | Human leukopheresis product collected from peripheral blood mobilized with Neupogen® 10 µg/kg x 5, Mozobil® 240 µg/kg x 2, Day 5 Collection      | 1 Bag              | 04-448Q                   |
| Mobilized Leuko Pak, RegF                                   | 3Y-300B   | Human leukopheresis product collected from peripheral blood mobilized with Neupogen® 10 mcg/kg/day x 5 days, Second Collection, Day 6 Collection | 1 Bag              | 04-448Q                   |
| Mobilized Leuko Pak, RegH                                   | 3Y-300D   | Human leukopheresis product collected from peripheral blood mobilized with Neupogen® 10 µg/kg x 5, Mozobil 240 µg/kg x 2, Day 6 Collection       | 1 Bag              | 04-448Q                   |
| Mobilized Leuko Pak, MozA                                   | 3Y-300E   | Human leukopheresis product collected from peripheral blood mobilized with Mozobil® 20 mg/mL, 1.2 mL Single Dose                                 | 1 Bag              | 04-448Q                   |
| <b>Peripheral blood – Fresh</b>                             |           |                                                                                                                                                  |                    |                           |
| Leuko Pak                                                   | 3P-100    | Human leukopheresis product collected from normal peripheral blood                                                                               | Full bag           | 04-448Q                   |
| Leuko Pak                                                   | 3P-100C   | Human leukopheresis product collected from normal peripheral blood                                                                               | Half bag           | 04-448Q                   |
| Leuko Pak                                                   | 3P-105    | Human leukopheresis product collected from normal peripheral blood                                                                               | ≥10 billion cells  | 04-448Q                   |
| Leuko Pak                                                   | 3P-105B   | Human leukopheresis product collected from normal peripheral blood                                                                               | ≥5 billion cells   | 04-448Q                   |
| <b>Peripheral blood – Frozen</b>                            |           |                                                                                                                                                  |                    |                           |
| Leukopak                                                    | 260240.01 | Human leukapheresis product collected from normal peripheral blood                                                                               | ≥9.5 billion cells | 04-448Q                   |
| Leukopak                                                    | 260260.01 | Human leukapheresis product collected from normal peripheral blood                                                                               | ≥5 billion cells   | 04-448Q                   |
| Leukopak                                                    | 260280.01 | Human leukapheresis product collected from normal peripheral blood                                                                               | ≥2.5 billion cells | 04-448Q                   |

Contact Lonza CellBio Services to discuss custom format and formulation options.

Recommended media depends on experimental setup. Please visit our eShop or contact Scientific Support for more information.

## Contact us

### North America

Customer Service: +1 800 638 8174 (toll free)  
order.us@lonza.com  
Scientific Support: +1 800 521 0390 (toll free)  
scientific.support@lonza.com

### Europe

Customer Service: +32 87 321 611  
order.europe@lonza.com  
Scientific Support: +49 221 99199 400  
scientific.support.eu@lonza.com

### International

Contact your local Lonza distributor  
Customer Service: +1 301 898 7025  
scientific.support@lonza.com

### International Offices

|                 |                            |
|-----------------|----------------------------|
| Australia       | +61 1300 657 508           |
| Belgium         | +32 87 321 611             |
| Brazil          | +55 11 4028 8000           |
| China           | +86 21 6305 8866           |
| France          | 0800 91 19 81 (toll free)  |
| Germany         | 0800 182 52 87 (toll free) |
| India           | +91 124 6052941            |
| Japan           | +81 3 6264 0660            |
| Luxemburg       | +32 87 321 611             |
| Singapore       | +65 6521 4379              |
| The Netherlands | 0800 022 4525 (toll free)  |
| United Kingdom  | 0808 234 97 88 (toll free) |

Learn more.



Lonza Walkersville, Inc., Walkersville, MD 21793

For research use only. All trademarks belong to Lonza, registered in USA, EU or CH or to third party owners and used only for informational purposes. All third party copyrights have been reproduced with permission or belong to Lonza. The information contained herein is believed to be correct and corresponds to the latest state of scientific and technical knowledge. However, no warranty is made, either expressed or implied, regarding its accuracy or the results to be obtained from the use of such information and no warranty is expressed or implied concerning the use of these products. The buyer assumes all risks of use and/or handling. Any user must make his own determination and satisfy himself that the products supplied by Lonza Group Ltd or its affiliates and the information and recommendations given by Lonza Group Ltd or its affiliates are (i) suitable for intended process or purpose, (ii) in compliance with environmental, health and safety regulations, and (iii) will not infringe any third party's intellectual property rights. The user bears the sole responsibility for determining the existence of any such third party rights, as well as obtaining any necessary licenses. For more details: [www.lonza.com/legal](http://www.lonza.com/legal).

© 2026 Lonza. All right reserved.

CD-LI015 10/26

[bioscience.lonza.com](http://bioscience.lonza.com)  
[lonza.com/primary](http://lonza.com/primary)