

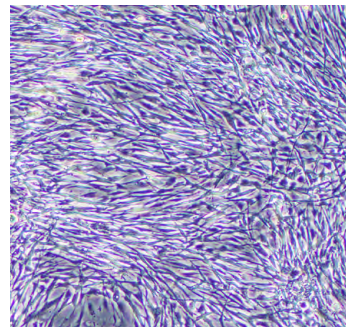
# Lonza's BulletKit™ Media for Primary Cell Growth



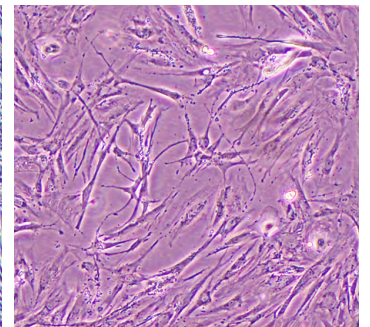
## Primary Cells are Different from Cell Lines. Why Use the Same Media?

Primary cells are cultured directly from the tissue. For majority of the primary cell types, classical medium isn't sufficient to support growth, or to retain the phenotypic markers.

Lonza's BulletKit™ Media is formulated with additional growth factors and hormones to optimally support controlled and consistent growth of primary cells while maintaining their tissue-specific characteristics. In addition, our BulletKit™ Media has batch-to-batch consistency, detailed protocols, and a dedicated scientific support team readily available to help you achieve success with primary cell culture.



FGM™-CD BulletKit™ Medium



DMEM+10% FBS

Mammary fibroblasts grew faster and to higher confluence in FGM™-CD BulletKit™ Medium

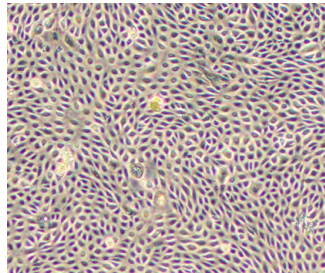
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## Getting More from Lonza's BulletKit™ Media

### Simplify the shift from cell lines to primary cells

For researchers utilizing cell lines as a stepping stone to primary cell culture, working with the same media from cell lines to primary cells can reduce variability within the experiments. Our BulletKit™ Media eases this transition for use with primary cells and commonly utilized breast, lung and endothelial cell lines as indicated in many publications. MEGM™ Mammary Growth BulletKit™, for instance, can support growth of Lonza's primary mammary epithelial cells and well-established breast cell lines, MCF-10A and MCF-12



Lonza's human mammary epithelial cells (HMEC) cultured in MEGM™ Medium

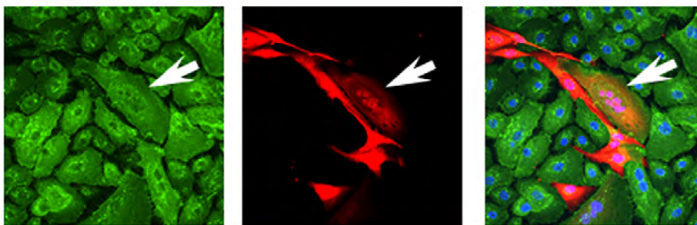
### Obtain more flexibility with a robust specialized medium

Primary cells are generally utilized as side-by-side controls with cell lines to validate the data. Since Lonza's BulletKit™ Media is robust in supporting primary cells and many cell lines, researchers attain added flexibility and reduced variability by using the same media across their experiments.

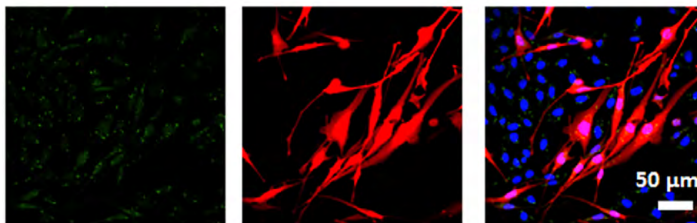
### Co-cultures made easier

Obtaining optimal growth of primary cells with classical medium is challenging enough. Co-culturing primary cell types with classical medium can further add to the complexity of media optimization initiatives. Depending on your co-culture needs, Lonza's scientific support team offers solutions based on long-standing history of published literature demonstrating use of Lonza's BulletKit™ Medium in co-culture experiments.

MDA-MB-231  
+NHBE



MDA-MB-231  
+BEAS-2B



Data Courtesy of Furukawa, et al. Lonza's NHBE cells, BEAS-2B cell line were co-cultured with breast cancer cell lines MCF-7 and MDA-MB-231 in Lonza's BEGM™ BulletKit Growth Media. Breast cancer cell lines showed differences in morphology and proliferation rates in the presence of lung epithelial cells. The paper highlights the suitability of Lonza's BEGM™ Media for co-culture models. It also illustrates the importance of using Lonza's primary NHBE cells as a side-by-side control when conducting experiments with normal lung cell lines such as BEAS-2B, because the non-transformed primary cells can validate or offset the data generated using cell lines.

Visit [www.lonza.com/primary](http://www.lonza.com/primary) for a complete list of our human primary cells and media or contact your local account representative.

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