

2D Airway Differentiation

CnT-Prime Airway medium (CnT-PR-A) is designed to provide strong proliferation and extended longevity of large airway cells in a fully defined environment.

It is a Progenitor Cell Targeted (PCT) medium, which contains additional factors to improve retention of large airway epithelial cells in a proliferative progenitor phenotype, thereby improve proliferation and longevity.

PCT factors may retard the differentiation process. For this reason, it is recommended to switch to CnT-PR-AD differentiation medium when cells are induced to differentiate.

In addition, two other factors are important to obtain strong differentiation: confluency, and calcium.

In view of the above, the following protocol is recommended to induce terminal differentiation of large airway epithelial cells in 2D culture:

1. Seed cells as usual in CnT-PR-A
2. Allow cells to proliferate until they approach confluency
3. One day before confluency, change the medium to CnT-PR-AD
4. At confluency add 1 mM Ca²⁺, to drive differentiation

Due to the similarity of the CnT-PR-A and CnT-PR-AD formulations, cells can be easily switched between these media.

Following the achievement of confluency, cells will already begin to differentiation within 24 hours. The differentiation process will continue to progress for a further 7-10 days.

For induction of differentiation in 3D (airlift) cultures, please see the corresponding protocols in the resources section of www.cellntec.com

For more information, please email out scientists directly: scientist@cellntec.com