

PneumaCult™ Alveolar Organoid Expansion Medium and PneumaCult™ Alveolar Organoid Differentiation Medium

Cell culture media for expansion and differentiation of human alveolar organoids



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Product Description

PneumaCult™ Alveolar Organoid media were developed for passaging and long-term expansion of human alveolar epithelial type II (ATII) cells as organoids, and further differentiation of these ATII cells to alveolar epithelial type I (ATI) cells for downstream applications.

PneumaCult™ Alveolar Organoid Expansion Medium (AvOEM) yields a 10,000X cumulative-fold expansion of ATII cells as organoids within 10 passages. The medium's three-component, serum-free format maximizes experimental reproducibility, and the alveolar organoids maintain the ability for self-renewal, the expected marker expression (e.g. HT2-280 and SP-C), and lineage potential for differentiation to ATI cells, all of which are indicative of the ATII cell phenotype.

PneumaCult™ Alveolar Organoid Differentiation Medium (AvODM) is used for differentiating ATII cells expanded as organoids in PneumaCult™ AvOEM. The two-component PneumaCult™ AvODM enables in-dome differentiation of ATII organoid cultures to ATI cells in as few as 10 days, with over 85% purity. Differentiated cells show decreased ATII marker expression and strong up-regulation of ATI cell markers (RAGE/AGER, HT1-56, and GPRC5a).

PneumaCult™ AvOEM and AvODM are compatible with primary isolated fresh or cryopreserved ATII cells, as well as high-quality commercially available alveolar epithelial cell sources.

Product Information

The following components are sold as a complete kit (Catalog #100-0847 or Catalog #100-0861) and are not available for individual sale.

COMPONENT NAME	COMPONENT #	SIZE	STORAGE	SHELF LIFE
PneumaCult™ Alveolar Organoid Expansion Medium (Catalog #100-0847)				
PneumaCult™ Alveolar Organoid Expansion Basal Medium	100-0848	450 mL	Store at 2 - 8°C.	Stable until expiry date (EXP) on label.
PneumaCult™ Alveolar Organoid Expansion 10X Supplement	100-0849	50 mL	Store at -20°C.	Stable until expiry date (EXP) on label.
PneumaCult™ Alveolar Organoid Expansion 100X Passage Supplement	100-0860	1.5 mL	Store at -20°C.	Stable until expiry date (EXP) on label.
PneumaCult™ Alveolar Organoid Differentiation Medium (Catalog #100-0861)				
PneumaCult™ Alveolar Organoid Differentiation Basal Medium	100-0862	90 mL	Store at 2 - 8°C.	Stable until expiry date (EXP) on label.
PneumaCult™ Alveolar Organoid Differentiation 10X Supplement*	100-0863	10 mL	Store at -20°C.	Stable until expiry date (EXP) on label.

*This product contains material derived from human plasma. Donors have been tested and found negative for HIV-1 and -2, hepatitis B, and hepatitis C prior to donation. However, this product should be considered potentially infectious and treated in accordance with universal handling precautions.

Directions for Use

For complete instructions, refer to the Technical Manual: Generation of Human Alveolar Organoids Using PneumaCult™ Alveolar Organoid Media (Document #10000012979), available at www.stemcell.com or contact us to request a copy.

Related Products

For related products, including specialized culture and storage media, supplements, antibodies, cytokines, and small molecules, visit www.stemcell.com or contact us at techsupport@stemcell.com.

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