

## Human iPSC-derived Sebocytes (Caucasian)

### Description

Product Ref.: PCi-SEB\_CAU

Phenocell provides Sebocytes (PCi-SEB) developed from human induced pluripotent stem cells (iPSC), at low passage (P2). PCi-SEB are cryopreserved in the vapor phase of liquid nitrogen. A post-thaw regrowth test is performed on each batch. Viability after thawing is > 60%. A protocol for thawing and culture is available on our website: [PCi-SEB\\_Culture Protocol](#). Shipping is on dry ice.

PCi-SEB are available in 2x10<sup>6</sup> cell/vial (10<sup>6</sup> live cells) format and 3 phototypes (Caucasian, Asian, African). Shipping is in dry ice.

### Product Information

Product	Catalog No.	Quantity	Donor
Human iPSC-derived Sebocytes	PCi-SEB_CAU	2.10 <sup>6</sup> live cell/vial	Caucasian

- Each lot is tested for expression of sebocyte markers and for absence of mycoplasma.
- Storage conditions: Product stable at -135°C or colder. Storage in the vapor phase of a liquid nitrogen storage tank is recommended.
- Expiration: Guaranteed for up to 12 months from date of receipt if properly stored. Use cells immediately after thawing.

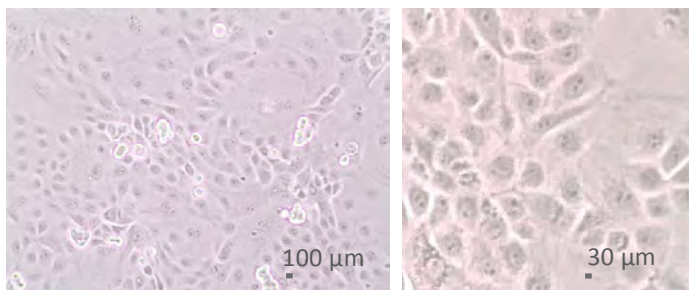
### Product Use

PCi-SEB are intended for in **vitro research use only** and are not to be used for any other purpose, which includes, but is not limited to, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses or any type of consumption or application to humans or animals.

### Quality testing and results

Refer to lot-specific Certificate of Analysis. PCi-SEB\_CAU are derived from qualified human iPSC and have been validated for high expression levels of specific markers and function. PCi-SEB\_CAU display normal karyotype and tested negative for mycoplasma before freezing.

#### ▪ Morphology



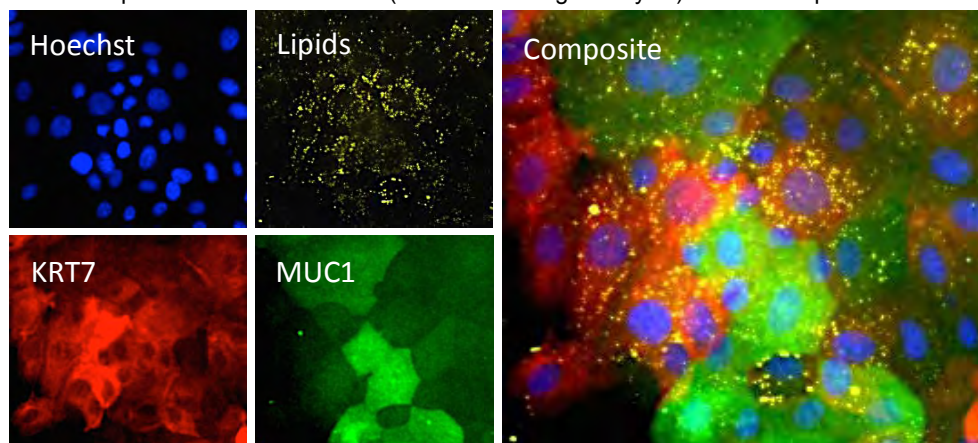
PCi-SEB\_CAU display the typical epithelial morphology of primary sebocytes with heterogeneity in cell size due to lipid accumulation.

#### ▪ Expression of specific markers

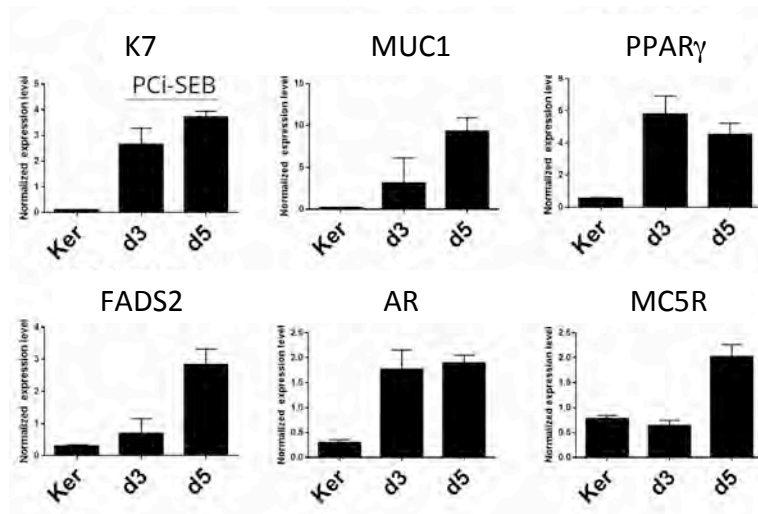
##### 1. Immunohistochemistry

PCi-SEB\_CAU express the key sebocyte markers MUC1 and KRT7.

MUC1 is expressed in >80% of cells (automated image analysis). KRT7 is expressed in 80% of cells.



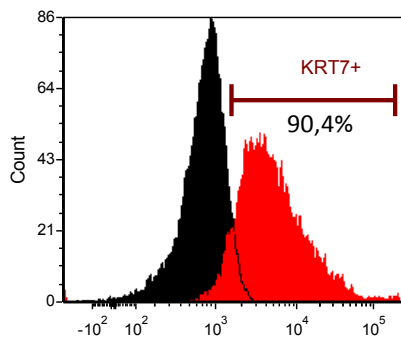
**2. RT-qPCR**



Evolution of specific markers in PCi-SEB\_CAU after 3 (d3) and 5 (d5) days in culture with the PCi-SEB\_Kit (see PCi-SEB\_Culture Protocol), compared to primary keratinocytes (Ker). Functional markers such as lipid activated transcription factor PPAR $\gamma$ , FADS2 (enzyme of the fatty acid biosynthesis pathway), androgen receptors (AR) and melanocortin 5 receptor are strongly expressed after 5 days.

*Note: FADS2 and MC5R are also expressed in keratinocytes (O'Shaughnessy et al., Hum. Mol. Gen., 2010; Seo et al., Genomics, 2005; Hatta et al., J. Invest. Dermatol., 2001).*

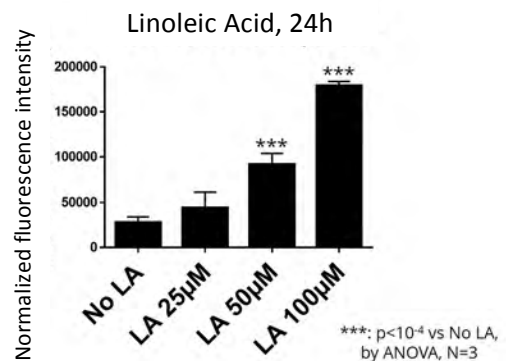
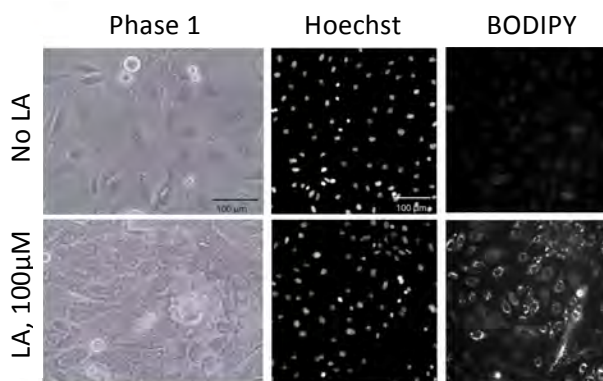
▪ **Purity : Flow cytometry analysis**



KRT7 expression shows PCi-SEB\_CAU purity above 90%.

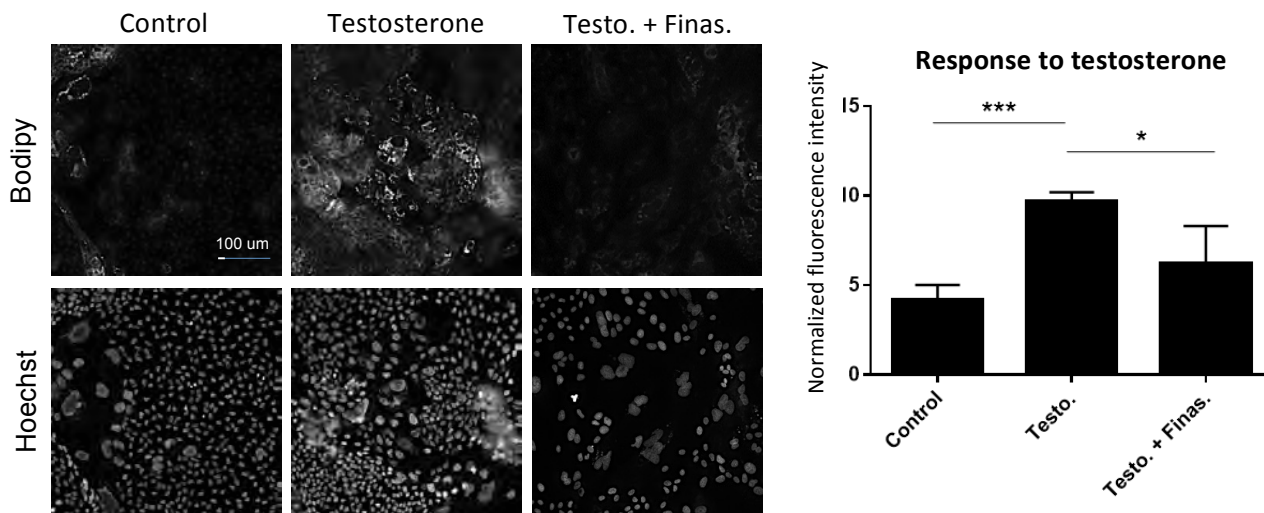
Black: isotype control  
Red: anti-KRT7 antibody

▪ **Function: response to linoleic acid**



PCi-SEB\_CAU respond to a 24h treatment with linoleic acid (LA) by a dose-dependent (up to 5-fold) lipid accumulation (Bodipy staining).

▪ **Function: response to testosterone**



PCI-SEB respond to a 96h treatment with testosterone (10  $\mu$ M) by a 2-fold increase in lipid content. This response is significantly inhibited by the 5 $\alpha$ -reductase inhibitor Finasteride (10  $\mu$ M).

**Disclaimer**

Phenocell cannot guarantee the biological function or any other properties associated with performance of the product in researchers' individual culture systems. Phenocell guarantees that the product will meet the specifications only when assessed immediately after thawing using recommended Protocols.

**Routine culture and amplification**

We recommend following the **PCI-SEB culture protocol** available on our website, according to final use (assay with basal lipid content or maturation for lipid accumulation before assay). Culture is performed on fibronectin-coated tissue culture surface with enzymatic passaging.

**Areas of interest**

Sebocytes form the sebaceous gland, a holocrine gland of the skin composed of acini attached to a common excretory duct. Areas of interest include sebocyte research, pharmacology, toxicology and drug discovery for acne, seborrhea and other diseases that involve the sebaceous gland.

**Safety precautions**

Handle the frozen vials with due caution. This product should be treated as potentially infectious and only used following appropriate handling precautions such as those described in biological safety level 2.

Do not use sharps such as needles and syringes when handling this product.

Do not ingest. In case of contact with eyes, rinse immediately with plenty of water for at least 15 min and seek medical advice.

Environmental measures: soak up with inert absorbent material. Clean with bleach and rinse thoroughly. Prevent further leakage or spillage if safe to do so.

Phenocell cannot be held liable for any damage or losses resulting from the handling or from contact with the product as described herein.

**Limited use label license**

See User's Notification below:

**User Notification**

**I. Definitions;**

1. PHENOCELL: Phenocell SAS
2. iPS-AJ: iPS Academia Japan, Inc.
3. User: The person or entity who purchased Product(s) from PHENOCELL or its authorized distributor.
4. Product: Cells that are differentiated from human iPS cells by PHENOCELL, and which PHENOCELL sells or transfers under the license agreement between iPS-AJ and PHENOCELL.

**II. User Restrictions;**

1. User may use the Product for internal research including but not limited to screening potential drug compounds for efficacy and safety, and for the provision of such services to third parties. No other right is granted to User whether expressly, by implication, by estoppel or otherwise. In particular, the purchase of the Product does not include nor carry any right or license to use, develop or otherwise exploit the Product commercially, and no rights are conveyed to User to use the Product for any other purpose.
2. User agrees to use the Product in compliance with all applicable statutes and regulations, but not to use the Product for application and use for human/animal therapeutic, diagnostic and/or prophylactic purposes including but not limited to clinical applications, cell therapy, transplantation, and/or regenerative medicine without appropriate license.
3. In case that User transfers Product to a third party, User shall convey the User Restrictions set forth herein to such a third party.

**FOR RESEARCH USE ONLY.** Not intended for human or animal diagnostic, therapeutic or clinical applications.