

**Human iPSC derived Melanocytes - Caucasian**

**PCi-MEL\_CAU**

**Description**

Product Ref. PCi-MEL\_CAU\_1M

Associated product: PhenoCULT®-MEL culture medium.

*Phenocell provides Melanocytes (PCi-MEL) developed from human induced pluripotent stem cells (iPSC) at low passage (p3-P4) to allow amplification. PCi-MEL are cryopreserved in the vapor phase of liquid nitrogen. A post-thaw regrowth test is performed on each batch. Viability after thawing is > 90%. A protocol for thawing and culture is available at [PCi-MEL\\_Culture Protocol](#). Shipping is on dry ice.*

PCi-MEL are available in 10<sup>6</sup> cell/vial format.

**Product Information**

Product	Catalog No.	Quantity	Donor
Human iPSC-derived Melanocytes	PCi-MEL_CAU_1M	10 <sup>6</sup> cell/vial	Caucasian (Phototype III-IV)
Human iPSC-derived Melanocytes	PCi-MEL_ASI_1M	10 <sup>6</sup> cell/vial	Asian (Phototype IV-V)
Human iPSC-derived Melanocytes	PCi-MEL_AFR_1M	10 <sup>6</sup> cell/vial	African (Phototype VI)

- Each lot is tested for expression of melanocytes 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.

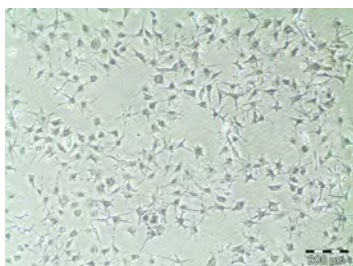
**Product Use**

PCi-MEL 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-MEL\_CAU are derived from qualified human iPSC and have been validated for high expression levels of specific markers. PCi-MEL\_CAU display normal karyotype and tested negative for mycoplasma before freezing.

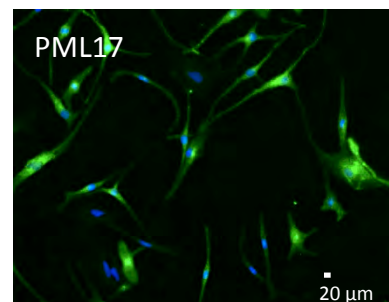
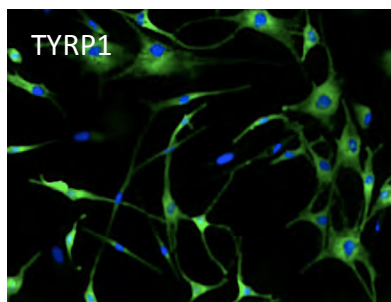
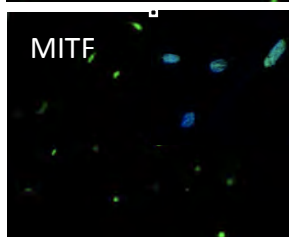
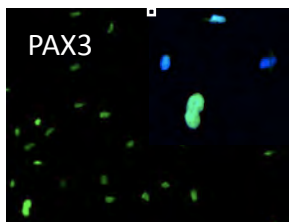
▪ **Morphology**



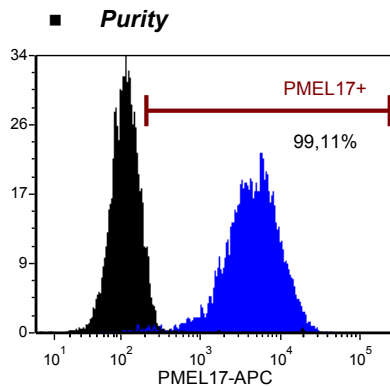
Left: PCi-MEL\_CAU display visible pigmentation and the typical morphology of proliferative melanocytes.  
*Culture with PhenoCULT®-MEL on fibronectin substrate.* PhenoCULT®-MEL optimizes PCi-MEL expansion. A more elongated morphology is acquired after final maturation when proliferation ceases.

Right: PCi-MEL\_CAU pigmentation is conspicuous in the cell pellet after centrifugation.

▪ **Immunohistochemistry for melanocyte markers**

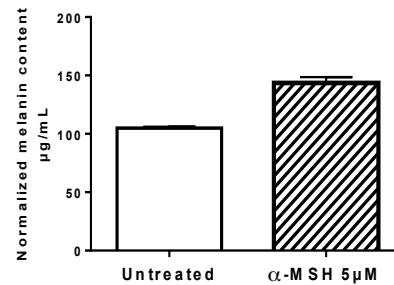


PCi-MEL\_CAU express the key markers of melanocyte, including the transcription factor Paired box 3 (PAX3) and Microphthalmia associated transcription factor (MITF), Tyrosinase related protein 1 (TYRP1) and Premelanosome 17 (PML17), two proteins required for melanin production.



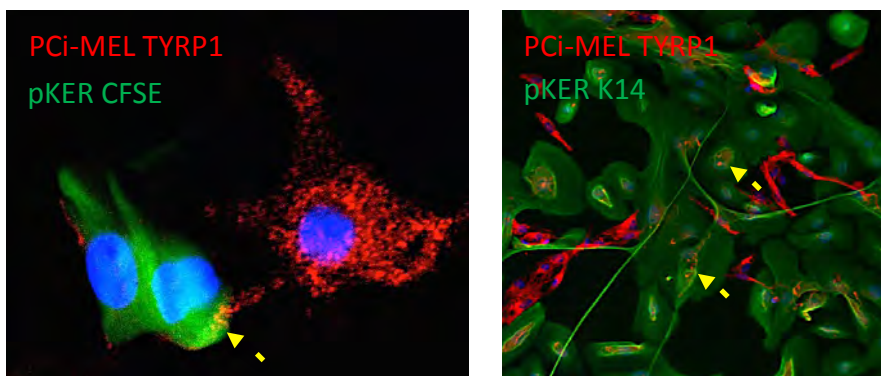
Flow cytometry analysis with anti-PMEL17 antibodies.  
PCi-MEL\_CAU purity is above 99%.  
Black : isotype control  
Blue : anti-PMEL17 antibody

■ **Functional analysis : Activation of melanin synthesis by  $\alpha$ -MSH pulse**



24h-treatment with 5  $\mu$ M  $\alpha$ -MSH.  
PCi-MEL\_CAU respond to  $\alpha$ -MSH stimulation by a 40% increase in melanin content (n=3, P<0.05).

■ **Functional analysis : Melanosomes transfer to keratinocytes**



PCi-MEL\_CAU transfer melanosomes to primary keratinocyte (pKER) as evidenced by the presence of TYRP1-labelled melanosomes within pKER (yellow arrows), with the characteristic perinuclear organization.

**Routine culture and amplification**

We recommend using PhenoCULT<sup>®</sup>-MEL for PCi-MEL\_CAU culture on fibronectin-coated tissue culture surfaces. PCi-MEL also grow on primary melanocyte culture medium.

[Contact us](#) for more information and ordering PhenoCULT<sup>®</sup>-MEL (Product reference: PhenoCULT<sup>®</sup>-MEL).

**Areas of interest**

Melanocytes are distributed in the epidermis, hair follicles, mucosa, cochlea (ear), iris (eye), and mesencephalon (brain). Melanocytes produce melanin, a pigment concentrated into specialized structures, the melanosomes. Pigmentation disorders include hypopigmentation, hyperpigmentation and mixed hyper-/hypopigmentation disorders.

Areas of interest include melanocyte research, pharmacology, toxicology and drug discovery for pigmentation disorders.

**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 can not be held liable for any damage or losses resulting from the handling or from contact with the product as described herein.

Phenocell can not 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 the [recommended Protocol](#).

**Limited use label license**

This Product is Patent Pending. 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.

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