PRODUCT DATA SHEET

iPSC-Derived Human Photoreceptor Kit

(African-American, Male Line)

Catalog No. ASE-9715 RUO • Rev. 1 | August 2026

Product Overview

Applied StemCell has developed an efficient integration-free method to differentiate high-quality photoreceptor cells from human iPSCs. The differentiated cells recapitulate key phenotypic and functional characteristics of primary and in vivo photoreceptor cells. ASE-9715 contains cryopreserved photoreceptor progenitor cells differentiated from the integration-free control human iPSC line ASE-9211, reprogrammed from dermal fibroblasts of an African-American male donor. These high-purity (≥90%) cells express the photoreceptor biomarkers CRX and NR2E3 (Figure 1) and can be further differentiated in photoreceptor maturation media in 1–2 weeks to mature photoreceptors expressing Tuj1, rhodopsin, and PDE6a (Figure 2). Optimized Photoreceptor Maturation Basal Media (ASE-9715MM) and Photoreceptor Culture Maturation Media Supplement (100x) (ASE-9715-A) support robust maintenance and functionality in culture.

Key Features & Benefits

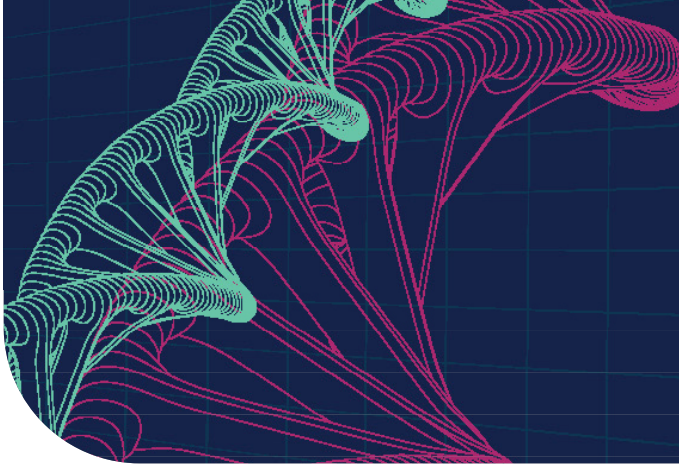
Feature	Benefit
Ready-to-use format	Reduces differentiation setup time and supports faster experimental starts.
High purity (≥90%)	Supports consistent, interpretable assay performance.
Defined donor background	Enables traceable use in disease modeling and comparative studies.
Marker-confirmed phenotype	Documents photoreceptor identity through CRX and NR2E3, and maturation through Tuj1, rhodopsin, and PDE6a.
Matched culture medium	Supports maintenance, maturation, and reproducible cell performance.

Applications

- Retinal and photoreceptor biology studies
- Photoreceptor maturation studies
- Control for patient-derived or genome-edited iPSC-derived photoreceptor cells
- Drug discovery and screening

Product Specifications

Product Type	RUO
Cell Type	Human iPSC-derived photoreceptor cells
Parental Line / Background	Control human iPSC line ASE-9211 (Normal, Male, African American, Neonate); dermal fibroblasts; episomal reprogramming; feeder-free culture.
Format	Cryopreserved cell kit
Quantity	≥1 × 10^6 cells/vial
Storage	Ships on dry ice. Cells: liquid nitrogen; maturation media and supplement: −20°C.
Shelf Life	Cells: 12 months; media and supplement: 6 months, when stored as directed. See lot-specific CoA / component labeling.



Quality Control Summary

Each lot is released against the following quality criteria. Lot-specific results are provided on the accompanying Certificate of Analysis (CoA).

- **Post-thaw viability, recovery, and growth**
- **Cell purity: ≥90%**
- **Phenotype / identity markers: CRX and NR2E3**
- **Mycoplasma and pathogen testing**

Supporting Data

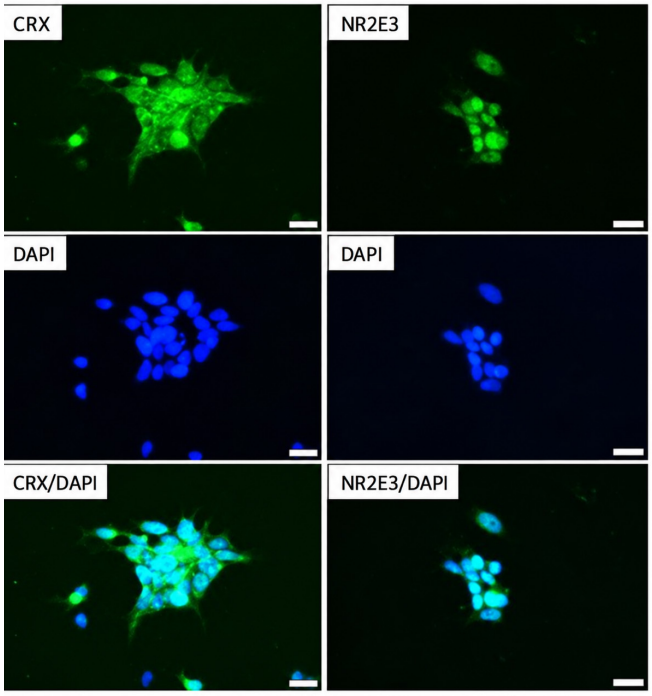


Figure 1. Immunostaining of iPSC-derived photoreceptor precursors for photoreceptor biomarkers. Photoreceptor precursors (ASE-9715) derived from the Applied StemCell control iPSC line ASE-9211 were verified by antibody staining for the photoreceptor precursor markers CRX and NR2E3.

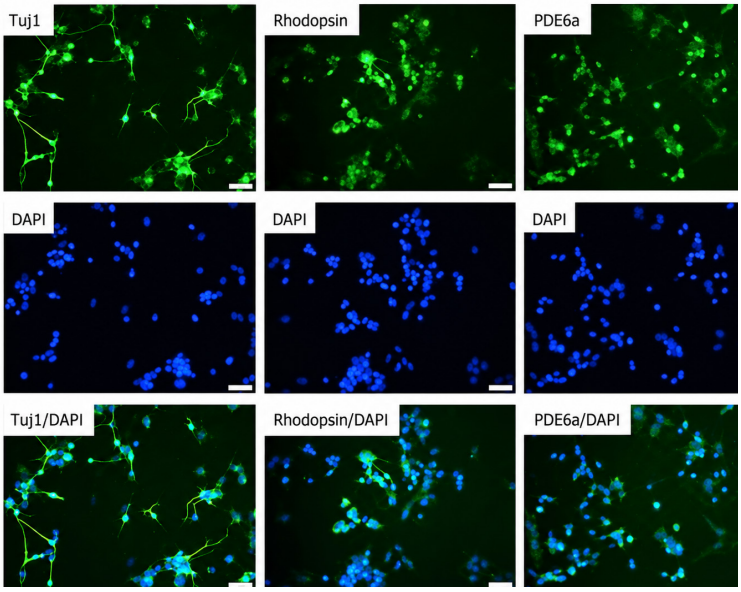
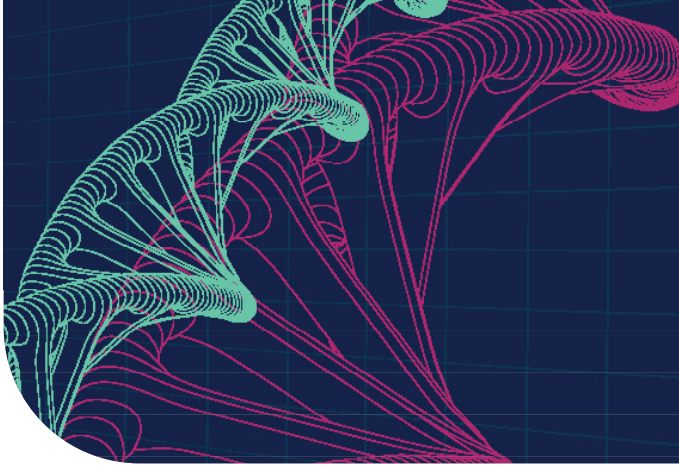


Figure 2. Immunostaining of mature photoreceptors derived from human iPSCs. Photoreceptor precursors (ASE-9715) derived from ASE-9211 can be further differentiated in photoreceptor maturation media in 1–2 weeks. The mature photoreceptors were verified by antibody staining for Tuj1, rhodopsin, and PDE6a.



Ordering Information

Catalog No.	ASE-9715
Description	iPSC-Derived Human Photoreceptor Kit; African-American Male Line
Format	Kit
Pack Size	1 each

Kit Components

Catalog No.	ASE-9715-C
Description	iPSC-Derived Photoreceptor Progenitors; African-American Male Line
Format	Cells
Pack Size	≥1 × 10^6 cells/vial

Catalog No.	ASE-9715MM
Description	Photoreceptor Maturation Basal Media
Format	Media
Quantity	100 mL

Catalog No.	ASE-9715-A
Description	Photoreceptor Culture Maturation Media Supplement (100x)
Format	Supplement
Quantity	1 mL

Product Use & Storage

For research use only. Store each component immediately upon receipt under the conditions shown above. Shelf life is contingent on proper storage; refer to component labeling and the lot-specific CoA.

Related Products

- ASE-9211 – Control human iPSC line (African-American male)
- ASE-9710-1 – iPSC-Derived Human Retinal Pigment Epithelium Kit
- Contact Applied StemCell for compatible media and related cell models.



Applied StemCell

Let's advance your research.

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Contact & Ordering

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Ready to accelerate your genome engineering project?

Scan the QR code or visit our website to explore product details, access technical resources, discover related TARGATT™ solutions, and request a consultation with our scientific team.

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© 2026 Applied StemCell, Inc. Inserted constructs must be shown to be expressed in iPSCs or the differentiated cell type.