iPSC-derived Monocytes; DYS0100

ACS-7030™

Description

iPSC-derived Monocytes; DYS0100 are induced pluripotent stem cells that have been differentiated into CD14+ monocytes. These cells can be used in cancer immunology research, drug development, and toxicity screening.

Organism: *Homo sapiens*, human
Age: Newborn
Gender: Male
Morphology: rounded
Growth properties: Suspension
Disease: Normal
Cells per vial: Approximately 2.5 x 10^6
Volume: 1.0 mL

Storage Conditions

Product format: Frozen
Storage conditions: Vapor phase of liquid nitrogen

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 2

ATCC determines the biosafety level of a material based on our risk assessment as

guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Temperature: 37°C
Atmosphere: 95% Air, 5% CO_2

Handling Procedures

Unpacking and storage instructions:

1. Check all containers for leakage or breakage.
2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use.

Complete medium: iPSC-derived Monocytes have a limited lifespan in culture and should only be thawed immediately prior to their intended use. ATCC does not recommend maintaining iPSC-derived Monocytes cells in culture in the absence of application-specific growth factors.

Handling Procedure: Refer to the batch specific information for the total number of viable cells.

1. Using the total number of viable cells, customers have to decide seeding for their experiments and applications (see Spiller, 2015).
2. Prepare the desired combinations of culture dishes with application specific media (see Spiller, 2015). Place dishes in a 37°C, 5% CO_2, humidified incubator and allow the media to pre-equilibrate to temperature and pH for 30 minutes prior to adding cells.
3. While the culture dishes equilibrate, remove one vial of iPSC-derived Monocytes (ATCC ACS-7030) from storage and thaw the cells in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 1 to 2 minutes).
4. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All operations from this point onward should be carried out under strict aseptic conditions.
5. Add 4ml of RPMI 1640 (ATCC 30-2001) with or without 10% FBS (ATCC 30-2020) or complete growth media for specific applications – into a sterile conical tube. Using a sterile pipette, transfer cells from the cryovial to the conical tube. Centrifuge at 200-300 x g for 5 min, remove supernatant and re suspend the pellet in required medium and take an aliquot for cell counting using Vi-cell
6. Transfer cell suspension to each of the pre-equilibrated culture dishes in the required seeding density depending the application and gently rock each dishes to evenly distribute the cells.
7. Place the seeded culture flasks in the incubator at 37°C with a 5% CO_2 atmosphere. Incubate for at least 24 hours before processing the cells further.

Cryopreservation: N/A: As this cell line is intended to be consumable no sub culturing and no cryopreservation is recommended.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: iPSC-derived Monocytes; DYS0100 (ATCC ACS-7030)

References

References and other information relating to this material are available at www.atcc.org.

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