Rat Lymphatic Mononuclear Cells (RLMC)

Catalog #R2540

Cell Specification

Lymphatic Mononuclear Cells (LMC) are located in the lymph nodes and perform vital functions for the innate and adaptive immune system [1]. Primary LMC are a mixed population of single nucleus cells which include T-cells (helper T-cells, cytotoxic T-cells, gamma delta T-cells), B-cells, and natural killer (NK) cells. Primary rat LMC (MLMC) can be used to study the innate and adaptive immune system.

RLMC from ScienCell Research Laboratories are isolated from healthy adult rat lymph nodes. RLMC are depleted of erythrocytes, cryopreserved immediately after isolation, and delivered frozen. RLMC are a mixed population of cells that include T-cells, B-cells, and NK cells. Each vial contains at least 10 million cells in 1 ml volume. RLMC are quality control tested for viability. RLMC are negative for mycoplasma, bacteria, yeast, and fungi. RLMC can be maintained for a limited period of time in culture using the conditions provided by ScienCell Research Laboratories and *are not intended for long-term culture*.

Recommended Medium

It is recommended to use HematoGro Medium (HeGM, Cat. #5501) for short-term maintenance of RLMC *in vitro*.

Product Use

RLMC are for research use only. They are not approved for human or animal use, or for application in *in vitro* diagnostic procedures.

Storage

Upon receiving, directly and immediately transfer the cells from dry ice to liquid nitrogen and keep the cells in liquid nitrogen until they are needed for experiments.

Shipping

Dry ice.

References

[1] Willard-Mack C. (2006) "Normal structure, function, and histology of lymph nodes." *Toxicol Pathol* 34(5): 409-424.

Instructions for culturing cells

Caution: Cryopreserved cells are very delicate. Thaw the vial in a 37ºC water bath and return the cells to culture as quickly as possible with minimal handling!

Note: *Experiments should be well organized before thawing RLMC. It is recommended that RLMC are purified or used for experiments as quickly as possible after thawing the cells. Cells are not intended for long-term culture.*

Initiating the culture:

1. Prepare complete medium (HeGM, Cat. #5501). Thaw HeGS and P/S solution at 37ºC. Gently tilt the tubes several times to ensure the contents are completely mixed before adding to the medium. Spray the medium bottle and tubes with 70% ethanol, and wipe to remove excess liquid. In a sterile field, remove the caps without touching the interior threads with fingers. Add HeGS and P/S solution to the medium and mix well.
2. Add 15 ml of complete medium to a T-75 flask. Leave the vessel in the sterile field and proceed to thaw the cryopreserved cells.
3. Place the frozen vial in a 37ºC water bath. Hold and rotate the vial gently until the contents completely thaw. Remove the vial from the water bath promptly, wipe it down with 70% ethanol and transfer it to the sterile field.
4. Remove the cap carefully without touching the interior threads. Gently resuspend and dispense the contents of the vial into the equilibrated, culture vessel.

   Note: Dilution and centrifugation of cells after thawing are not recommended since these actions are more harmful to the cells than the effect of residual DMSO in the culture.
5. Replace the cap or lid, and gently rock the vessel to distribute the cells evenly. Loosen cap if necessary to allow gas exchange.
6. Return the culture vessel to the incubator.
7. Cells should be used promptly for experiments or purified to specifically isolate T-cells (helper T-cells, cytotoxic T-cells, gamma delta T-cells), B-cells, and NK cells.

Caution*: Handling animal derived products is potentially biohazardous. Always wear gloves and safety glasses when working with these materials. Never mouth pipette. We recommend following the universal procedures for handling products of human origin as the minimum precaution against contamination [1].*

[1] Grizzle WE, Polt S. (1988) "Guidelines to avoid personal contamination by infective agents in research laboratories that use human tissues." *J Tissue Culture Methods*. 11: 191-9.