Rat Primary Peripheral Blood Mononuclear Cells (RA-PBMC)
Cat. No. RA-PBMC

Suggested Medium Complete PBMC Medium w/ Kit (500 ml)
Cat. No. M7716

Description
Rat Primary Peripheral Blood Mononuclear Cells (PBMCs) are isolated from fresh peripheral blood of Sprague-Dawley Rats and consist primarily of lymphocytes and monocytes. Cells at passage 0 are cryo-preserved and each vial contains $5x10^6$ cells per ml. These cells are widely used in immunology, cell therapy, infectious disease, and drug discovery research for studying immune responses, cytokine production, and cellular interactions. PBMCs provide a reliable in vitro model for translational and preclinical research applications. Certificate of Analysis will be provided for each cell lot purchased.

Organism	Sprague-Dawley Rats
Tissue	Blood
Donor History	Normal tissue
Growth Properties	Suspension, round
Product Format	Frozen

Growth Conditions
M7716 are recommended for optimal cell culture. The M7716 medium contains 1% Penicillin/Streptomycin Solution (CB6917), and the culture conditions are 37.0°C and 5% CO_2.

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Storage
Cryopreserved Cells are shipped with dry ice overnight. Upon arrival, transfer frozen cells to liquid nitrogen (-180°C) immediately until ready for use. Live cell shipment is also available on request. Primary cells can never be kept at -20 °C or -80 °C freezer.

Authorized Uses of Cell Biologics' Products
Primary Peripheral Blood Mononuclear Cells from Cell Biologics are distributed for research purposes only. Our products are not authorized for human use, for in vitro diagnostic or therapeutic procedures. Transfer or resale of any Cell Biologics' cells or products from the purchaser to other markets, organizations or individuals is prohibited by Cell Biologics without the company's written consent. Cell Biologics' Terms and Conditions must be accepted before submitting an order.

Disclaimer
Investigators should handle the cells with caution and treat all animal cells as potential pathogens, since no test procedure can completely guarantee the absence of infectious agents.

Warranty and Liability
Cell Biologics' guarantee applies only to your purchase of Cell Biologics' Cells with Cell Biologics' Media and Coating Solution for appropriate cell culture and cell testing following Cell Biologics' online protocols within 35 days from the date of product delivery.

Primary Peripheral Blood Mononuclear Cell Culture Protocol

Unpacking and Storage Instructions

1. Visually examine the packaging containers for signs of leakage or breakage.
2. Immediately transfer frozen cells from dry ice packaging to a temperature below -180°C, preferably in liquid nitrogen vapor phase storage, until ready for use.

To ensure the highest level of viability, thaw the vial and initiate culture as soon as possible upon receipt. If continued storage is desired, the vial should only be stored below -130°C or in liquid nitrogen vapor phase. Do not store at -20°C or 80°C, as it will result in loss of viability.

Thawing Protocol

1. Thaw cells quickly in a 37°C water bath while agitating gently (maximum 2 minutes). The vial cap should be kept above the water level to minimize the risk of contamination.
2. Decontaminate the vial by spraying and wiping the exterior of the vial with 70% ethanol. From this point onwards, all operations should be strictly carried out inside a biological safety cabinet using aseptic conditions.
3. Transfer the cell suspension into a 15ml sterile conical tube containing 5ml of pre-warmed, complete growth media. Centrifuge cells at 120xg for 5 minutes.
4. Aspirate the supernatant without disturbing the cell pellet. Re-suspend the cell pellet in the recommended pre-warmed, complete growth media and dispense into a T25 culture flask or a plate.
5. Incubate the cells at the recommended conditions.

Subculture Protocol

1. Simply add fresh complete media directly to the culture. Do not allow cell density to exceed $1x10^6$ cells/ml.
2. Alternatively, replace complete growth media by centrifugation and re-suspend the cell pellet in fresh complete media, and add appropriate aliquots of the cell suspension to new culture vessels, as desired.
3. Incubate the cells at the recommended conditions.

Cryopreservation

We recommend using Cell Biologics Freezing Media (CB6916).

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