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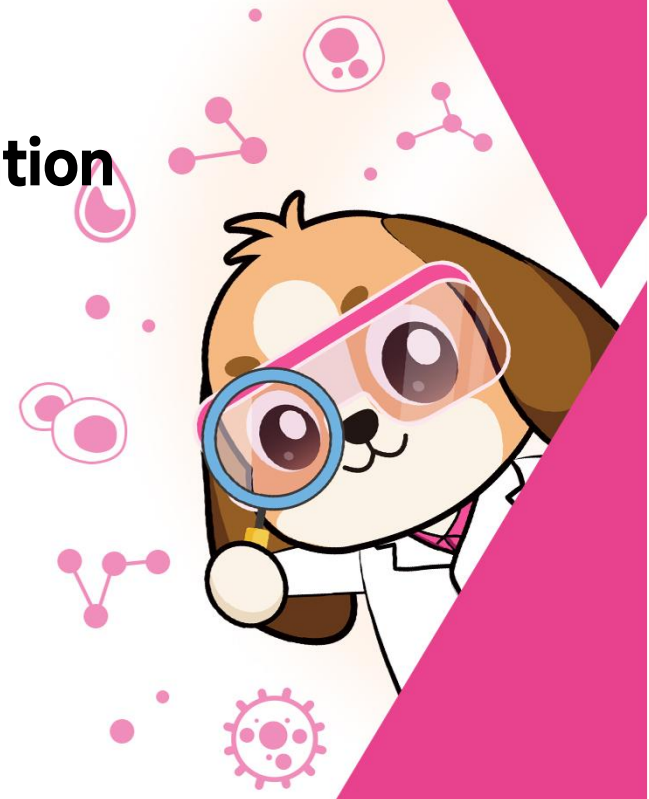
User Manual

OriCell™ MSC Characterization Kit (Rat)



Catalog No. RAXMX-09011

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Introduction

Bone marrow mesenchymal stem cells are pluripotent stem cells that can differentiate into osteoblasts, adipocytes and chondrocytes. Because of its strong proliferation ability and immune regulation function, it is widely used to make animal models of various diseases. Due to the simplicity and applicability of rat animal disease models, rat bone marrow mesenchymal stem cells are widely used in regenerative medicine and tissue engineering (especially in the fields of bone, cardiovascular and nervous system diseases) as a research hotspot. In the future, in the field of regenerative medicine for cell repair and regeneration, it will be possible to achieve autologous transplantation of mesenchymal stem cells.

Different strains of rats (eg, Fisher 344, Lewis, and Sprague-Dawley) have subtly different properties, while MSCs derived from different strains of rats have similar surface markers. The OriCell™ MSC Characterization Kit (Rat) (Cat. No.: RAXMX-09011) contains a panel of selectable markers for the identification of rat-derived mesenchymal stem cell populations. Among them, positive cell markers include CD44, CD90, CD29 and CD73. And negative cell surface markers include CD34, CD11b/c and CD45.

Note: **This product is only provided for further scientific research. It is not intended for diagnostic, therapeutic, clinical, household, or any other applications.**

When citing our products in academic journals, please indicate "OriCell™ + Catalog Number, from Cyagen Biosciences (Guangzhou) Inc."

Product Stability and Storage Conditions

1. All ingredients must be kept in dark place.

2. The product must be stored in a refrigerator at 4°C.
3. Please use all products within the expiration date. Expired ingredients may significantly affect the cell culture effect.

Product Information

Category	Components	Volume	Secondary Antibody
Primary Antibody	Mouse IgG1, κ Isotype Control Antibody (Isotype control)	20 μL	FITC/PE Goat Anti-mouse IgG
	Purified Anti-rat CD90	20 μL	
	Purified Anti-rat CD44	20 μL	
	Purified Anti-rat CD73	20 μL	
	Purified Anti-rat CD34	20 μL	
	Purified Anti-rat CD45	20 μL	
	Mouse IgG2a, κ Isotype Control Antibody (Isotype control)	20 μL	
	Purified Anti-rat CD11b/c	20 μL	
	Armenian Hamster IgG Isotype Control Antibody (Isotype control)	20 μL	FITC/PE Goat Anti-hamster IgG
	Purified Anti-mouse/rat CD29	20 μL	
Secondary Antibody	FITC Goat Anti-mouse IgG Antibody	80 μL	
	FITC Goat Anti-hamster IgG Antibody	20 μL	
	PE Goat Anti-mouse IgG Antibody	80 μL	
	PE Goat Anti-hamster IgG Antibody	20 μL	

Instructions

Materials Required

- OriCell™ MSC Characterization Kit (Rat) (Cat. No.: RAXMX-09011)
- Clean, sterile, stable quality disposable consumables (pipette tips, EP tubes, etc.)
- Flow cytometry buffer (1×PBS with 0.1% BSA)

Steps

1. Resuspend the cells in flow cytometry buffer to adjust the cell concentration to 3×10^6 cells/mL.
2. Take a 1.5 mL EP tube and mark the name of the primary antibody.
3. Take 100 μL of the cell suspension into an EP tube, add 2 μL of the primary antibody corresponding to the label name to each tube (about 3×10^5 cells), and mix well.

   Note: **The isotype control is used to eliminate background staining caused by non-specific binding of antibodies to cells and is a negative control.**
4. Incubate at 4°C for 30 min.
5. After incubation, wash the samples twice with 200 μL of flow cytometry buffer.
6. 250×g, centrifuged for 5 min. Discard the supernatant.
7. Add 100 μL of flow cytometry buffer to each group.
8. Add 2 μL of fluorescent secondary antibody against the primary antibody to each group, and resuspend the cells.

   Note: **This kit contains two secondary antibodies labeled with different fluorescein, please choose according to the actual situation of the cells, to avoid the spectral overlap between the secondary antibodies and the fluorescent proteins expressed by the cells.**
9. Incubate at 4°C for 30 min.
10. After incubation, wash the samples twice with 200 μL of flow cytometry buffer.

11. 250 × g, centrifuged for 5 min. Discard the supernatant.

12. After resuspending the cells in 300~500 μL of flow cytometry buffer, run the test immediately.