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User Manual

OriCell™ MSC Characterization Kit (Mouse)

Catalog No. MUXMX-09011

We help you discover life

Introduction

Mesenchymal stem cells (MSCs) of different species and origins often exhibit fibroblast-like cell morphology. Using the preferential attachment of mesenchymal stem cells to tissue culture plastics, they can be isolated and enriched from cell to cell. MSCs have self-renewal properties and the ability to differentiate into multiple cell lineages such as osteoblasts, adipocytes, and chondrocytes, making them the focus of research in cell replacement therapy and tissue engineering.

Mice are a suitable experimental model system for studying cell biology and biochemical properties. Mouse MSCs can be isolated from a variety of tissues, including bone marrow (BM), compact bone, and adipose tissue. Phenotypic analysis showed that mouse MSCs derived from different tissues had the same markers.

OriCell™ MSC Characterization Kit (Mouse) (Cat. No.: MUXMX-09011) contains a panel of selectable markers for identifying mouse-derived mesenchymal stem cell populations. Among them, positive cell surface markers include CD44, CD90.2, CD29 and Sca-1. And negative markers include CD31 and CD117. Whether CD34 is expressed or not, the results of the study are controversial.

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	Armenian Hamster IgG Isotype Control Antibody (Isotype control)	20 μL	FITC/PE Goat Anti-hamster IgG
	Purified Anti-mouse/rat CD29	20 μL	
	Rat IgG2b, κ Isotype Control Antibody (Isotype control)	20 μL	FITC/PE Goat Anti-rat IgG
	Purified Anti-mouse/human CD44	20 μL	
	Purified Anti-mouse CD117	20 μL	
	Rat IgG2a, κ Isotype Control Antibody (Isotype control)	20 μL	
	Purified Anti-mouse Sca-1	20 μL	
	Purified Anti-mouse CD31	20 μL	
	Purified Anti-mouse CD34	20 μL	
	Purified Anti-mouse CD90.2	20 μL	
Secondary Antibody	FITC Goat Anti-hamster IgG Antibody	20 μL	
	FITC Goat Anti-rat IgG Antibody	80 μL	

	PE Goat Anti-hamster IgG Antibody	20 μL	
	PE Goat Anti-rat IgG Antibody	80 μL	

Instructions

Materials Required

- OriCell™ MSC Characterization Kit (Mouse) (Cat. No.: MUXMX-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.