Technical Data Sheet

PE Human Mesenchymal Stem Cell Lineage Antibody Cocktail, with Isotype Control

Product Information

Material Number: 562530
Size: 50 tests
Reactivity: Confirmed: Human

Component: 51-9007661
Description: PE hMSC Negative Cocktail
Size: 50 test (1 ea)
Vol. per Test: 20 µl
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Component: 51-9007662
Description: PE hMSC Isotype Control Negative Cocktail
Size: 50 test (1 ea)
Vol. per Test: 20 µl
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Human multipotent mesenchymal stromal cells (MSCs), also referred to as mesenchymal stem cells, are a rare population of adult stem cells that can be isolated from a variety of tissues. MSCs that have been isolated from bone marrow and subsequently cultured can differentiate to a variety of cell types, most notably adipocytes, osteocytes and chondrocytes. MSCs also have immunomodulatory effects in vivo and in vitro. In 2006, the International Society for Cellular Therapy (ISCT) proposed a cell surface marker panel for the minimal identification of human MSCs derived from bone marrow. Under this recommendation MSCs should be positive for CD73, CD90, and CD105, but be negative for CD34, CD45, CD11b or CD14, CD19 or CD79α, and HLA-DR. MSCs are also known to express numerous cell surface markers such as CD44, CD29, CD200, CD166, CD146 and CD271. This lineage set includes the set of ISCT negative markers as a cocktail and also a corresponding isotype control cocktail.

Description of Set Components

<table>
<thead>
<tr>
<th>Vial</th>
<th>Contents</th>
<th>Purpose</th>
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</thead>
<tbody>
<tr>
<td>PE hMSC Negative Cocktail</td>
<td>CD34 PE (Clone:581)</td>
<td>Cocktail to identify potential contaminants</td>
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<tr>
<td></td>
<td>CD11b PE (Clone: ICRF44)</td>
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<td></td>
<td>CD19 PE (Clone: HIB19)</td>
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<td></td>
<td>CD45 PE (Clone: HI30)</td>
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<td>HLA-DR PE (Clone: G46-6)</td>
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<tr>
<td>PE hMSC Isotype Control Negative Cocktail</td>
<td>mlgG1, κ PE (Clone: X40)</td>
<td>Corresponding isotype control for PE hMSC Negative Cocktail</td>
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<td></td>
<td>mlgG2a, κ PE (Clone: G155-178)</td>
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Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.
Cells grown in BD Mosaic™ hMSC SF Cell Culture Environment (Cat. No. 355700) were detached using BD™ Accutase™ Cell Detachment Solution (Cat. No. 561527) and then stained with the PE hMSC Negative Cocktail and a cocktail of antibodies containing FITC CD90, PerCP-Cy5.5 CD105 and APC CD73 (See cat. No.562245) (solid lines) or the corresponding isotype control cocktails (dashed lines). The plots were derived from gated events based on light scattering characteristics of the MSCs. Cells were analyzed using a BD™ LSRII flow cytometry system.

Application Notes

Application

Flow cytometry Tested During Development

Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 ml</td>
<td>(none)</td>
</tr>
<tr>
<td>561527</td>
<td>Accutase™ Cell Detachment Solution</td>
<td>100 ml</td>
<td>(none)</td>
</tr>
<tr>
<td>562245</td>
<td>Human MSC Analysis Kit</td>
<td>50 tests</td>
<td>(none)</td>
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</table>

Product Notices

1. Accutase is a registered trademark of Innovative Cell Technologies, Inc.
2. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References