Technical Data Sheet

PE-CF594 Mouse Anti-Human CD126

Product Information

Material Number: 564162
Alternate Name: Interleukin 6 Receptor alpha chain; IL-6R alpha; IL-6Rα
Size: 100 Tests
Vol. per Test: 5 µl
Clone: M5
Immunogen: CD126 Recombinant Protein
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Human
Workshop: VI C63; IX 36
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The M5 monoclonal antibody specifically binds to human CD126 which is also known as the alpha subunit of the human IL-6 Receptor (IL-6Rα). CD126 is an 80 kDa type I transmembrane glycoprotein, also known as gp80 and B cell stimulatory factor-2 (BSF-2) Receptor. The IL-6Rα subunit associates with the 130-160 kDa gp130 subunit (IL-6 Receptor β chain, CD130), that is shared with the receptor complexes for Leukemia Inhibitory Factor (LIF), Ciliary Neurotropic Factor (CNTF), Oncostatin M (OSM), IL-11, Cardiotropin 1 (CT-1) and possibly Neurotrophin-1/B Cell-Stimulating Factor 3 (NNT-1/BSF-3). The IL-6Rα chain binds IL-6 with low affinity; however the association with CD130 stabilizes the IL-6/IL-6Rα complex resulting in the formation of a high affinity ligand-receptor complex. The IL-6Rβ chain mediates signal transduction. CD126 is expressed at high levels by activated and EBV-transformed B cells, plasma cells and myeloma cells and at lower levels by most leucocytes, epithelial cells, fibroblasts, hepatocytes and neural cells. IL-6Rα exists in soluble form in human serum. The serum levels of soluble IL-6Rα appear to elevate in pathological situations such as multiple myeloma, Grave's disease, juvenile chronic arthritis and HIV. The M5 antibody is directed against an epitope not involved in interactions of CD126 with IL-6 or CD130.

This antibody is conjugated to BD Horizon™ PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red®. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red® yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red® (eg 610/20-nm filter).

Flow cytometric analysis of CD126 expressed by human peripheral blood lymphocytes. Whole blood was stained with either PE-CF594 Mouse IgG1, κ Isotype Control (Cat. No 562292; dashed line histogram) or PE-CF594 Mouse Anti-Human CD126 (Cat. No. 564162; solid line histogram). Erythrocytes were lysed with Lysing Buffer (Cat. No. 555899). Fluorescence histograms showing the expression of CD126 (or Ig isotype control staining) were derived from gated events with the forward and side light-scattering characteristics of viable lymphocytes. Flow cytometric analysis was performed on a BD LSRFortessa™.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with BD Horizon™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.

Application Notes

Application

| Flow cytometry | Routinely Tested |

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Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>562292</td>
<td>PE-CF594 Mouse IgG1, κ Isotype Control</td>
<td>0.1 mg</td>
<td>X40</td>
</tr>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<tr>
<td>349202</td>
<td>BD FACST™ Lysing Solution</td>
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<tr>
<td>555899</td>
<td>Lysing Buffer</td>
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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).

2. An isotype control should be used at the same concentration as the antibody of interest.

3. 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.

4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

5. 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.

6. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.

7. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.

8. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.

9. CF™ is a trademark of Biotium, Inc.

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11. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.


References


