Technical Data Sheet

PerCP-Cy™5.5 Mouse Anti-Human CD271

Product Information

Material Number: 560834
Alternate Name: NGFR; NGF Receptor; TNFRSF16
Size: 50 Tests
Vol. per Test: 5 µl
Clone: C40-1457
Immunogen: Human NGFR Recombinant Protein
Isotype: Mouse IgG1, κ
Reactivity: QC Testing: Human
Workshop: VIII 80150
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The C40-1457 monoclonal antibody specifically recognizes CD271 that is also known as the nerve growth factor receptor (NGFR). CD271 is a 75 kDa type I transmembrane glycoprotein likewise known as TNFRSF16 that belongs to the tumor necrosis factor receptor (TNFR) superfamily. CD271 has been found localized to neuronal axons, Schwann cells, and perineural cells of peripheral nerves. It is also expressed by some epithelial, mesenchymal and lymphoid tissues. NGFR is the receptor for nerve growth factor (NGF), a polypeptide that is essential for normal development of the nervous system. NGF promotes survival and differentiation of sympathetic and sensory neurons during embryological development of the peripheral nervous system. NGF binds to two distinct surface receptors, the p140[prootrk] and p75[NGFR]. High affinity binding of NGF requires that both receptor molecules be expressed. NGFR is expressed on human and rat lymphocytes. A subset of lymphoid cells in the spleen, lymph nodes, and follicular dendritic cells in germinal centers of reactive lymph nodes were found to express CD271. It has been reported that NGFR interaction with its ligand, NGF, may play a role in immunoregulation. NGF may also function as a B-cell growth factor.

Flow cytometric analysis of CD271 expression on REH cells.

Human REH cells were stained with either PerCP-Cy™5.5 Mouse Anti-Human CD271 antibody (Cat. No. 560834; solid line histogram) or with a PerCP-Cy™5.5 Mouse IgG1, κ Isotype Control (Cat. No. 550795 used at a matching concentration; dashed line histogram). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.

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 PerCP-Cy5.5 under optimum conditions, and unconjugated antibody and free PerCP-Cy5.5 were removed. Storage of PerCP-Cy5.5 conjugates in unoptimized diluent is not recommended and may result in loss of signal intensity.

Application Notes

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<tr>
<th>Application</th>
<th>Routinely Tested</th>
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<td>Flow cytometry</td>
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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>550795</td>
<td>PerCP-Cy5.5 Mouse IgG1 κ Isotype Control</td>
<td>0.1 mg</td>
<td>MOPC-21</td>
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<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
<td>500 mL</td>
<td>(none)</td>
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### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
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. 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. PerCP-Cy5.5–labelled antibodies can be used with FITC- and R-PE–labelled reagents in single-laser flow cytometers with no significant spectral overlap of PerCP-Cy5.5, FITC, and R-PE fluorescence.
7. PerCP-Cy5.5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using dual-laser cytometers, which may directly excite both PerCP and Cy5.5™. We recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Cy is a trademark of GE Healthcare.

### References


