CD279 (PD-1) Monoclonal Antibody (RMP1-30), FITC, eBioscience™

Catalog Number 11-9981-81

Details

<table>
<thead>
<tr>
<th>Size</th>
<th>50 µg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host/Isotope</td>
<td>Rat / IgG2b, kappa</td>
</tr>
<tr>
<td>Class</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Type</td>
<td>Antibody</td>
</tr>
<tr>
<td>Clone</td>
<td>RMP1-30</td>
</tr>
<tr>
<td>Conjugate</td>
<td>FITC</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Concentration</td>
<td>0.5 mg/mL</td>
</tr>
<tr>
<td>Purification</td>
<td>Affinity chromatography</td>
</tr>
<tr>
<td>Storage buffer</td>
<td>PBS, pH 7.2, with 0.1% gelatin</td>
</tr>
<tr>
<td>Contains</td>
<td>0.09% sodium azide</td>
</tr>
<tr>
<td>Storage Conditions</td>
<td>4°C, store in dark, DO NOT FREEZE!</td>
</tr>
</tbody>
</table>

Species Reactivity

<table>
<thead>
<tr>
<th>Tested species reactivity</th>
<th>Mouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Published species reactivity</td>
<td>Mouse</td>
</tr>
</tbody>
</table>

Tested Applications

| Dilution * | Flow Cytometry (Flow) 0.5 µg/test |

Published Applications

| Flow Cytometry (Flow) | See 2 publications below |

Product specific information

Description: The RMP1-30 antibody reacts with mouse PD-1 (programmed death-1), a 55 kDa member of the Ig superfamily. PD-1 contains the immunoreceptor tyrosine-based inhibitory motif (ITIM) and plays a key role in peripheral tolerance and autoimmune disease in mice. PD-1 is expressed mainly on activated T and B lymphocytes. Two novel B7 Family members have been identified as PD-1 ligands, PD-L1 (B7-H1) and PD-L2 (B7-DC). Evidence reported to date suggests overlapping functions for these ligands and their constitutive expression on some normal tissues and upregulation on activated antigen-presenting cells. RMP1-30 does not block the binding of either B7-H1-Ig or B7-DC-Ig to PD-1 transfectants.

Applications Reported: The RMP1-30 antibody has been reported for use in flow cytometric analysis.

Applications Tested: The RMP1-30 antibody has been tested by flow cytometric analysis of Con A-stimulated mouse splenocytes. This can be used at less than or equal to 0.5 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Excitation: 488 nm; Emission: 520 nm; Laser: Blue Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Background/Target Information

Cell-mediated immune responses are initiated by T lymphocytes that are themselves stimulated by cognate peptides bound to MHC molecules on antigen-presenting cells (APC). T-cell activation is generally self-limited as activated T cells express receptors such as PD-1 (also known as PDCD-1) that mediate inhibitory signals from the APC. PD-1 can bind two different but related ligands, PD-L1 and PD-L2. Upon binding to either of these ligands, signals generated by PD-1 inhibit the activation of the immune response in the absence of "danger signals" such as LPS or other molecules associated with bacteria or other pathogens. Evidence for this is seen in PD1-null mice who exhibit hyperactivated immune systems and autoimmune diseases. Despite its predicted molecular weight, PD-1 often migrates at higher molecular weight in SDS-PAGE.

Staining of 3-day Anti-Mouse CD3 and Anti-Mouse CD28 Functional Grade Purified (Product # 16-0031-82 and Product # 16-0281-82)-stimulated C57BL/6 splenocytes with 0.25 µg of Rat IgG2b K Isotype Control FITC (Product # 11-4031-82) (blue histogram) or 0.25 µg of Anti-Mouse CD279 (PD-1) FITC (purple histogram). Total viable cells, as determined by Fixable Viability Dye eFluor® 450 (Product # 65-0863-14), were used for analysis.
PubMed References For CD279 (PD-1) Monoclonal Antibody (RMP1-30), FITC, eBioscience™

2 Flow Cytometry References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouse / 1:400</td>
<td>11-9981 was used in Flow cytometry/Cell sorting to evaluate how autophagy inhibition impacts the antitumor immune response in immune-competent mouse models of melanoma and mammary cancer.</td>
</tr>
<tr>
<td>Mouse / Not Cited</td>
<td>11-9981 was used in Flow cytometry/Cell sorting to explore TIM-3-Gal-9 function in a clinically relevant murine model of hepatic cold storage and orthotopic liver transplantation.</td>
</tr>
</tbody>
</table>

The Journal of clinical investigation (Dec 2016; 126: 4417)
"Antitumor adaptive immunity remains intact following inhibition of autophagy and antimalarial treatment."
Author(s): Starobinets H, Ye J, Broz M, Barry K, Goldsmith J, Marsh T, Rostker F, Krummel M, Debnath J
PubMed Article URL: http://dx.doi.org/10.1172/JCI85705

"Negative CD4+TIM-3 signaling confers resistance against cold preservation damage in mouse liver transplantation."
Author(s): Liu Y, Ji H, Zhang Y, Shen XD, Gao F, Nguyen TT, Shang X, Lee N, Busuttil RW, Kupiec-Weglinski JW
PubMed Article URL: http://dx.doi.org/10.1111/ajt.13067