Technical Data Sheet

**InVivoMAb anti-mouse PD-1 (CD279)**

**Lot Specific Information**
- Lot Number: Lot Specific*
- Volume: Lot Specific*
- Concentration: Lot Specific* (generally 4 to 11 mg/ml)*
- Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

**Product Information**
- Catalog Number: BE0146
- Clone: RMP1-14
- Isotype: Rat IgG2a, κ
- Recommended Isotype Control(s): InVivoMAb rat IgG2a isotype control, anti-trinitrophenol
- Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
- Immunogen: Syrian Hamster BKH cells transfected with mouse PD-1 cDNA
- Reported Applications: in vivo blocking of PD-1/PD-L signaling
- Formulation: PBS, pH 7.0
- Contains no stabilizers or preservatives
- Endotoxin: <2EU/mg (<0.002EU/μg)
- Determined by LAL gel clotting assay
- Purity: >95%
- Determined by SDS-PAGE
- Sterility: 0.2 μm filtered
- Production: Purified from tissue culture supernatant in an animal free facility
- Purification: Protein G
- RRID: AB_10949053
- Molecular Weight: 150 kDa

**Description**
The RMP1-14 monoclonal antibody reacts with mouse PD-1 (programmed death-1) also known as CD279. PD-1 is a 50-55 kDa cell surface receptor encoded by the Pdcd1 gene that belongs to the CD28 family of the Ig superfamily. PD-1 is transiently expressed on CD4 and CD8 thymocytes as well as activated T and B lymphocytes and myeloid cells. PD-1 expression declines after successful elimination of antigen. Additionally, Pdcd1 mRNA is expressed in developing B lymphocytes during the pro-B-cell stage. PD-1’s structure includes a ITIM (immunoreceptor tyrosine-based inhibitory motif) suggesting that PD-1 negatively regulates TCR signals. PD-1 signals via binding its two ligands, PD-L1 and PD-L2 both members of the B7 family. Upon ligand binding, PD-1 signaling inhibits T-cell activation, leading to reduced proliferation, cytokine production, and T-cell death. Additionally, PD-1 is known to play key roles in peripheral tolerance and prevention of autoimmune disease in mice as PD-1 knockout animals show dilated cardiomyopathy, splenomegaly, and loss of peripheral tolerance. Induced PD-L1 expression is common in many tumors including squamous cell carcinoma, colon adenocarcinoma, and breast adenocarcinoma. PD-L1 overexpression results in increased resistance of tumor cells to CD8 T cell mediated lysis. In mouse models of melanoma, tumor growth can be transiently arrested via treatment with antibodies which block the interaction between PD-L1 and its receptor PD-1. For these reasons anti-PD-1 mediated immunotherapies are currently being explored as cancer treatments. Like the J43 antibody the RMP1-14 antibody has been shown to block the binding of both mouse PD-L1-Ig and mouse PD-L2-Ig to PD-1.

**Shelf-life and Storage**
Store at the stock concentration at 4°C. Do not freeze.
All Bio X Cell antibodies have a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended. It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ’s at bxcell.com/faqs.

**Protocol Information**
Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

**Application References**
For a complete list of references, visit https://bxcell.com/product/inivomab-anti-m-pd-1/#references or scan the QR code below.

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Bio X Cell, Inc.
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Binding Validation

Western blot data shown below confirms that this clone binds to its target antigen. For lot specific binding validation data, email technicalservice@bxcell.com.

kDa

<table>
<thead>
<tr>
<th>Lane 1</th>
<th>Lane 2</th>
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<tbody>
<tr>
<td>148</td>
<td>4 µg reduced purified mouse PD-1 with histidine tag at C-terminus</td>
</tr>
<tr>
<td>98</td>
<td>2 µg reduced purified mouse PD-1 with histidine tag at C-terminus</td>
</tr>
<tr>
<td>64</td>
<td>Primary: anti-mouse PD-1 antibody (RMP1-14) at 15 µg/ml</td>
</tr>
<tr>
<td>50</td>
<td>Secondary: HRP labeled goat anti-rat at 1:1000 dilution</td>
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<tr>
<td>36</td>
<td>Predicted band size: 40-45 kDa</td>
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<tr>
<td>16</td>
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<td>6</td>
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