

# Technical Data Sheet

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



**Attention:** Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioxcell.com/terms-and-conditions>.

### 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,  $\kappa$   
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:  $\leq 1\text{EU/mg}$  ( $\leq 0.001\text{EU}/\mu\text{g}$ )  
Determined by LAL gel clotting assay  
Purity:  $\geq 95\%$   
Determined by SDS-PAGE  
Sterility:  $0.2\ \mu\text{m}$  filtration  
Production: Purified from cell culture supernatant in an animal-free facility  
Purification: Protein G  
RRID: [AB\\_10949053](https://rrid.info/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.

### Storage

Store at the stock concentration at  $4^{\circ}\text{C}$  . **Do not freeze.**

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 <https://bioxcell.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.

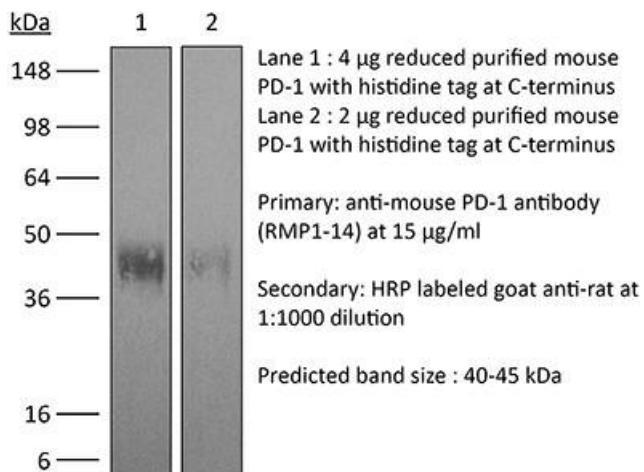
## Application References

For a complete list of references, visit [https://bioxcell.com/be0146?bxcs=9k1b3a#tab\\_references](https://bioxcell.com/be0146?bxcs=9k1b3a#tab_references) or scan the QR code below.



## Binding Validation

Validation data shown below confirms that this clone binds to its target antigen. For lot specific binding validation data, e-mail [technicalservice@bioxcell.com](mailto:technicalservice@bioxcell.com).



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