

# Technical Data Sheet



## RecombiMAb anti-mouse PD-1 (CD279) (D265A)

**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:** CP002  
**Clone:** RMP1-14-CP002  
**Isotype:** Mouse IgG1,  $\kappa$   
**Recommended Isotype Control(s):** RecombiMAb mouse IgG1 (D265A) isotype control, anti-hen egg lysozyme  
**Recommended Dilution Buffer:** InVivoPure pH 7.0 Dilution Buffer  
**Mutations:** D265A  
**Immunogen:** Syrian Hamster BKH cells transfected with mouse PD-1 cDNA  
**Reported Applications:** *in vivo* blocking of PD-1/PD-L signaling\*  
\*Reported for the original rat IgG2a RMP1-14 antibody  
**Formulation:** PBS, pH 7.0  
Contains no stabilizers or preservatives  
**Endotoxin:** <1EU/mg (<0.001EU/ $\mu$ g)  
Determined by LAL gel clotting assay  
**Purity:** >95%  
Determined by SDS-PAGE  
**Sterility:** 0.2  $\mu$ m filtration  
**Production:** Purified from HEK293 cell supernatant in an animal-free facility  
**Purification:** Protein G  
**Aggregation:** <5%  
Determined by SEC  
**RRID:**  
**Molecular Weight:** 150 kDa

### Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

### Description

The RMP1-14-CP002 monoclonal antibody is a chimeric version of the original RMP1-14 antibody. The variable domain sequences are identical to the original RMP1-14 but the constant region sequences have been switched from rat IgG2a to mouse IgG1. The RMP1-14-CP002 antibody also contains a D265A mutation in the Fc fragment rendering it unable to bind to endogenous Fc $\gamma$  receptors. RMP1-14-CP002 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.

## Storage

Store at the stock concentration at 4°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.

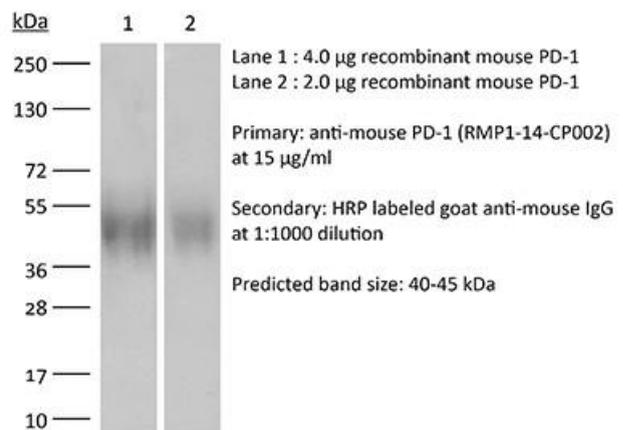
## Application References

For a complete list of references, visit [https://bioxcell.com/cp002?bxcs=9k1b3a#tab\\_references](https://bioxcell.com/cp002?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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