

InVivoMAb anti-human 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:	BE0188
Clone:	J116
Isotype:	Mouse IgG1, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG1 isotype control, unknown specificity
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Not available or unknown
Reported Applications:	<i>in vitro</i> PD-1 neutralization <i>in vivo</i> PD-1 blockade in humanized mice
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_10950318
Molecular Weight:	150 kDa

Description

The J116 monoclonal antibody reacts with human 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. Binding of the J116 antibody is reported to inhibit PD-1 signal transduction, however, it is not reported to block PD-L1 binding.

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](https://www.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

Bio X Cell, Inc.

For a complete list of references, visit <https://bxccl.com/product/h-cd279-pd-1/#references> or scan the QR code below.



**Bio X Cell, Inc.**

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