

Technical Data Sheet

RecombiMAb 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: CP004
Clone: 29F.1A12™-CP004
Isotype: Mouse IgG1, κ
Recommended Isotype Control(s): InVivoPlus mouse IgG1 isotype control, unknown specificity
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
Immunogen: Recombinant PD-1-Ig fusion protein
Reported Applications: *in vivo* blocking of PD-1/PD-L signaling*
in vitro PD-1 neutralization*
Immunohistochemistry (frozen)*
Immunofluorescence*
Western blot*
Flow cytometry*
*Reported for the original rat IgG2a 29F.1A12 antibody

Formulation: PBS, pH 7.0
Contains no stabilizers or preservatives

Endotoxin: <1EU/mg (<0.001EU/μg)
Determined by LAL gel clotting assay

Purity: >95%
Determined by SDS-PAGE

Sterility: 0.2 μm 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 29F.1A12™-CP004 monoclonal antibody is a recombinant chimeric version of the original 29F.1A12™ antibody. The

variable domain sequences are identical to the original 29F.1A12™ but the constant region sequences have been switched from rat IgG2a to mouse IgG1. The 29F.1A12™-CP004 antibody contains no Fc mutations just as the original rat IgG2a antibody does not. 29F.1A12™-CP004 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 Pcd1 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, Pcd1 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.

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