Anti-PD-1 (RMP1-14)

Product Code: ICH1132

Anti-PD-1 (RMP1-14)

Product Specific Citations:

Uncoupling immune trajectories of response and adverse events from anti-PD-1 immunotherapy in hepatocellular carcinoma

Rational design of synthetically tractable HDAC6/HSP90 dual inhibitors to destroy immune-suppressive tumor microenvironment

PD-1 Blockade Restores the Proliferation of Peripheral Blood Lymphocyte and Inhibits Lymphocyte Apoptosis in a BALB/c Mouse Model of CP BVDV Acute Infection

Kauffman et al. PSGL-1 Blockade Induces Classical Activation of Human Tumor-Associated Macrophages. Cancer Research Communications 2023

Liang et al. SIX4 Controls STING Expression Enhancing anti-PD-1 Efficacy. bioRxiv

Xu et al. One-carbon unit supplementation fuels tumor-infiltrating T cells and augments checkpoint blockade. bioRxiv

Benguigui et al. Interferon-stimulated neutrophils as a predictor of immunotherapy response. 2024, Cancer Cell 42, 253–265

Shyr, C.-R. et al. Evaluating Therapeutic Efficacy of Intravesical Xenogeneic Urothelial Cell Treatment Alone and in Combination with Chemotherapy or Immune Checkpoint Inhibition in a Mouse Non-Muscle-Invasive Bladder Cancer Model. Cancers 2025, 17, 2448.

Roichman et al. Dietary Fiber Lacks a Consistent Effect on Immune Checkpoint Blockade Efficacy Across Diverse Murine Tumor Models. Cancer Res 2025

Braun, Lukas M. et al. Adiponectin reduces immune checkpoint inhibitor-induced inflammation without blocking anti-tumor immunity. Cancer Cell, Volume 43, Issue 2, 269 - 291.e19

Braun LM, Zeiser, R. Protocol to study in vivo organ-specific migration of apoptotic splenocytes in mice with tumor and immune checkpoint inhibitor-induced colitis, STAR Protocols, Volume 6, Issue 2, 2025, 103878.

Levin, Sapir et al. Immature monocytic cells within tumors differentiate into immunosuppressive cells in resistant tumors to immunotherapy. iScience, Volume 28, Issue 8, 113141

Patel, A. et al. Targeting Neuronal Nitric Oxide Synthase (nNOS) as a Novel Approach to Enhancing the Anti-Melanoma Activity of Immune Checkpoint Inhibitors. Pharmaceutics 2025, 17, 691.

Benguigui et al. Interferon-stimulated neutrophils as a predictor of immunotherapy response. Cancer Cell. 4:S1535-6108(23)00433-6.

Wu et al. Rational design of synthetically tractable HDAC6/HSP90 dual inhibitors to destroy immune-suppressive tumor microenvironment. Journal of Advanced Research (2023)

Chen et al. A magneto-activated nanoscale cytometry platform for molecular profiling of small extracellular vesicles. Nature Communications (2023)

Chuah et al. Uncoupling immune trajectories of response and adverse events from anti-PD-1 immunotherapy in hepatocellular carcinoma. Journal of Hepatology (2022)

Liu et al. PD-1 Blockade Restores the Proliferation of Peripheral Blood Lymphocyte and Inhibits Lymphocyte Apoptosis in a BALB/c Mouse Model of CP BVDV Acute Infection. Frontiers in Immunology (2021)

Bio X Cell:

ichorbio's anti-PD-1 (RMP1-14) antibody is up to 50% cheaper for academia & non-profits and up to 68% cheaper for industry than the equivalent low endotoxin version from Bio X Cell (BE0146). ICH1132UL is up to 7% cheaper for academia and up to 40% cheaper for industry compared to Bio X Cell's ultra-low endotoxin version (BP0146).

ichorbio Benefits:

ichorbio's anti-PD-1 In Vivo Antibody - Low Endotoxin (RMP1-14) is manufactured in a cGMP compliant facility. ichorbio has the folowing options:

- Low Endotoxin: <1EU/mg
- Ultra low endotoxin:<0.5EU/mg
- Extremely low endotoxin: 0.05EU/mg
- 5mg/ml concentration
- Mouse anti-mouse PD-1 (RMP1-14)
- Mouse anti-mouse PD-1 (RMP1-14) Fc Silenced.
- Click here for ichorbio's RMP1-14 antibodies and here to view ichorbio's complete list of anti-PD-1 antibodies and biosimilars.

ichorbio: the best antibodies for *in vivo* research.

Related Products

Isotype Control:

Rat IgG2a In Vivo Isotype Control - Low Endotoxin [1-1] (ICH2244)

Mouse anti Mouse version:

Mouse Anti-Mouse PD-1 Antibody (RMP1-14) [ICH1182]

Mouse anti-mouse Fc Silenced version:

Mouse Anti-Mouse PD-1 Antibody (RMP1-14) D265A [ICH1182D265A]

Antibodies against the same target:

Anti-PD-1 In Vivo Antibody - Low Endotoxin [29F.1A12] (ICH1091)

Product Information

Size:

ichorbio's RMP1-14 *in vivo* antibody is available in the following sizes: 5mg, 25mg, 50mg and 100mg ichorbio regularly manufactures bulk multi-gram amounts of our anti-PD-1 RMP1-14 clone - please contact us for pricing.

Target:

PD-1

Clone:

RMP1-14

Isotype:

Rat IgG2a

Other Names:

Programmed cell death protein 1, Pdcd1, CD279

Uniprot:

Q02242

Host:

Rat

Species Reactivity:

Mouse, Rat

Specificity:

Anti-PD-1 In Vivo Antibody - Low Endotoxin (RMP1-14) recognizes an epitope on Mouse PD-1

Purification Method:

This monoclonal antibody was purified using multi-step affinity chromatography methods such as Protein A or G depending on the species and isotype.

Antigen Distribution:

Subset of double negative thymocytes, activated T and B cells

Background:

CD279, also known as programmed death-1 (PD-1) is a 50-55 kD immunoglobulin superfamily member. PD-1 is expressed on a subset of CD4-CD8- thymocytes, and on

activated T and B cells. The PD-1 ligands, PD-L1 (also known as B7-H1) and PD-L2 (B7-DC), are members of the B7 immunoglobulin superfamily. This RMP1-14 antibody has been reported to block the binding of PD-1 to its ligands (B7-H1 and B7-DC) and to inhibit T cell proliferation and cytokine production.

Immunogen:

Mouse PD-1 transfected BHK cells

Concentration:

1.0 - 5.0 mg/ml

Formulation:

0.01 M phosphate buffered saline (PBS) pH 7.2, 150 mM NaCl with no carrier protein, potassium or preservatives added. BSA and Azide free.

Purity:

>95% by SDS-PAGE and HPLC >98% by SDS-PAGE and HPLC

Endotoxin:

≤ 1.0 EU/mg as determined by the LAL method

≤ 0.75 EU/mg as determined by the LAL method

<0.05 EU/mg as determined by the LAL method

Aggregation:

Aggregation level ≤ 5%

Aggregation level ≤ 1%

IMPACT Pathogen Test:

We use the IMPACT test generated by IDEXX Laboratories to guarantee our Ultra Low & Extremely Low Endotoxin antibodies are pathogen free. Our rat antibodies are tested for:

- Mycoplasma spp

- Mycoplasma pulmonis
- Pneumonia virus of mice
- Kilham's rat virus
- Toolan's H1 virus
- Rat parvovirus
- Lymphocytic choriomeningitis virus
- Rat cytomegalovirus
- Sendai virus
- Rat coronavirus
- Sialodacryoadenitis virus
- Rat minute virus
- Seoul virus
- Mouse adenovirus
- Reovirus 3
- Rat theilovirus

Storage:

This antibody is stable for at least 4 weeks when stored at 2-8°C. For long term storage, aliquot in working volumes without diluting and store at – 20°C or -80°C. Avoid repeated freeze thaw cycles.

Applications:

Western Blot, Blocking, Flow Cytometry, Functional Assays

How much RMP1-14 to use *in vivo*:

Blocking: We recommend using between 2.50 or 7.50 mg/kg when performing *in vivo* research using ichorbio's PD-1 low endotoxin antibody clone RMP1-14. This range is based off the most recent publication data using the RMP1-14 clone *in vivo*. Each investigator should determine their own optimal working dilution for specific applications.

Use:

Products are for research use only.

Alternative Names:

- CD279 antibody

- CD279 antigen antibody
- hPD 1 antibody
- hPD l antibody
- hPD-1 antibody
- hSLE1 antibody
- PD 1 antibody
- PD-1 antibody
- PD1 antibody
- PDCD 1 antibody
- PDCD1 antibody
- Programmed cell death 1 antibody
- Programmed cell death 1 protein antibody
- Programmed cell death protein 1 antibody
- Protein PD 1 antibody
- Protein PD-1 antibody
- SLEB2 antibody
- Systemic lupus erythematosus susceptibility 2 antibody