

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

Product Code: ICH2244

Rat IgG2a In Vivo Isotype Control

Product Specific Citations

[Chuah, S. et al. Uncoupling immune trajectories of response and adverse events from anti-PD-1 immunotherapy in hepatocellular carcinoma. Journal of Hepatology. Volume 77, Issue 3, 2022, Pages 683-694,](#)

[Benguigui et al. Interferon-stimulated neutrophils as a predictor of immunotherapy response. 2024, Cancer Cell 42, 253-265](#)

[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](#)

[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.](#)

[Liang B. et al. Antagonistic roles of cGAS/STING signaling in colorectal cancer chemotherapy. Front Oncol. 2024 Oct 14;14:1441935.](#)

[Liang B. et al. SIX4 Controls Anti-PD-1 Efficacy by Regulating STING Expression. Cancer Research Communications \(2023\) 3 \(11\): 2412-2419.](#)

[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](#)



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

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 rat IgG2a isotype control is [up to 37% cheaper](#) for industry than the equivalent low endotoxin version from Bio X Cell (BE0089). ICH2244UL is up to 36% cheaper for industry compared to Bio X Cell's ultra-low endotoxin version (BP0089).

Product Benefits:

ichorbio's anti-Rat IgG2a isotype control is manufactured in a cGMP compliant facility.

If ichorbio's low endotoxin antibodies are not low enough we also offer ultra low endotoxin antibodies which have even less endotoxin (<0.5EU/mg) at an even higher purity (98% versus 95%).

ichorbio: the best antibodies for in vivo research.

Product Information

Target:

Trinitrophenol + KLH

Clone:

1-1

Size:

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2026



ichorbio's Rat IgG2a In Vivo Isotype Control – Low Endotoxin (1-1) is available in the following sizes: 5mg, 10mg, 20mg, 50mg

Isotype:

IgG2a

Host:

Rat

Specificity:

This Rat IgG2a isotype control (anti-Trinitrophenol + KLH) antibody has been tested against selected species' cells and tissues to assure minimal cross reactivity.

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.

Concentration:

5mg/ml

Formulation:

This Low Endotoxin Functional Formulation antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (PBS) pH 7.2, 150 mM NaCl with no carrier protein, potassium or preservatives added.

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

Aggregation:



Aggregation level \leq 5% Aggregation level \leq 1%

IMPACT Pathogen Test:

We use the IMPACT test generated by IDEXX Laboratories to guarantee our Ultra 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

Applications:

This Rat IgG2a isotype control antibody should be used at the same concentration as the primary antibody.

Use:

Products are for research use only.