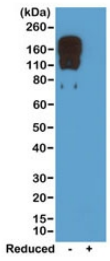
Recombinant Mouse IgG2c Antibody [clone RM223] (R20171)

Catalog No.	Formulation	Size
R20171-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

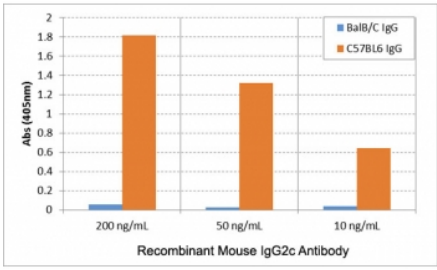
Recombinant RABBIT MONOCLONAL

Bulk quote request

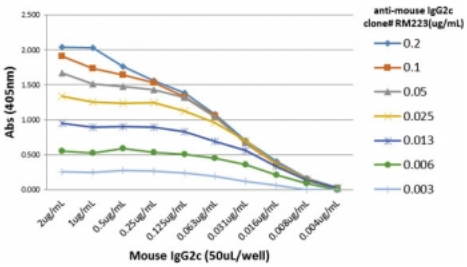
Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM223
Purity	Protein A purified from animal origin-free supernatant
UniProt	N/A
Gene ID	404711
Applications	ELISA : 0.01ug/ml-0.2ug/ml Western Blot (non-reduced Only) : 0.5-2ug/ml
Limitations	This recombinant Mouse IgG2c antibody is available for research use only.



Western blot of nonreduced(-) and reduced(+) mouse IgG2c, using 0.5ug/mL of the recombinant Mouse IgG2c antibody. This mAb reacts to nonreduced IgG2c.



ELISA of IgG from BalB/C and C57BL6 shows the recombinant Mouse IgG2c antibody reacts to C57BL6 IgG containing IgG2c, and does not react to BalB/C IgG containing IgG2a.



ELISA Titration: the plate was coated with different amounts of mouse IgG2c. A serial dilution of the recombinant Mouse IgG2c antibody was used as the primary and an alkaline phosphatase conjugated anti-rabbit IgG as the secondary.

Description

The Recombinant Mouse IgG2c antibody is produced as a defined immunoglobulin reagent for use as an isotype control and assay standard. IgG2c is a subclass of mouse IgG that replaces IgG2a in certain mouse strains, such as C57BL/6, where it serves as a dominant effector antibody in immune responses. Functionally, IgG2c resembles IgG2a in its strong ability to bind Fc gamma receptors and activate complement, enabling robust cell mediated cytotoxicity and complement dependent lysis. The Recombinant Mouse IgG2c antibody captures these subclass specific structural properties while lacking antigen specificity, making it an essential tool for identifying nonspecific interactions in immunoassays.

Structurally, IgG2c shares the basic Y shaped immunoglobulin organization, with two heavy and two light chains linked by disulfide bonds. Its Fc domain interacts with activating Fc gamma receptors on natural killer cells, macrophages, and neutrophils, providing potent effector capabilities. Because IgG2c expression is strain dependent, accurate detection and use of subclass matched controls is particularly important in immunology research. The Recombinant Mouse IgG2c antibody provides this precision, offering a reliable negative control that mirrors the constant region structure of experimental IgG2c antibodies.

Applications of the Recombinant Mouse IgG2c antibody include flow cytometry, where it serves as a control for Fc receptor mediated binding and helps establish gating parameters. In immunohistochemistry, it identifies background staining in tissues infiltrated with Fc receptor bearing cells. In ELISA, the Recombinant Mouse IgG2c antibody provides a baseline for specificity, ensuring that signals originate from antigen recognition rather than nonspecific adherence. Recombinant expression guarantees lot to lot consistency, which is critical for reproducible experimental results.

This reagent is especially important for researchers working with mouse models such as C57BL/6, where IgG2c predominates and where inappropriate use of IgG2a controls could misrepresent background binding. Synonym terms such as recombinant mouse immunoglobulin G2c antibody and recombinant IgG2c isotype control antibody expand product accessibility for investigators referencing alternate nomenclature.

By delivering validated and reproducible performance, the Recombinant Mouse IgG2c antibody ensures accurate interpretation of data in immunology, oncology, and infectious disease research. NSJ Bioreagents provides the Recombinant Mouse IgG2c antibody under strict quality controls, enabling scientists to rely on its consistent behavior across platforms. With this reagent, researchers can confidently separate antigen specific activity from background noise, improving the accuracy of their immunoassays.

This recombinant Mouse IgG2c antibody reacts to the Fc region of mIgG2c. No cross reactivity with IgG1, IgG2a, IgG2b, IgG3, IgM, IgA, IgE, human IgG, or rat IgG.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Mouse IgG2c antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Mouse IgG2c was used as the immunogen for this recombinant Mouse IgG2c antibody.

Storage

Store the recombinant Mouse IgG2c antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).