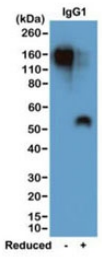
Recombinant Mouse IgG1 Antibody [clone RM106] (R20164)

Catalog No.	Formulation	Size
R20164-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

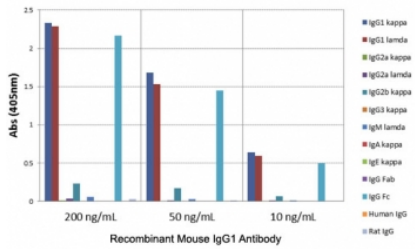
Recombinant RABBIT MONOCLONAL

Bulk quote request

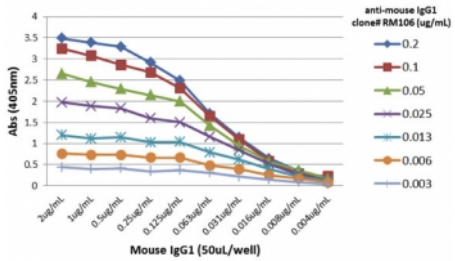
Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM106
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01868
Gene ID	16017
Applications	ELISA : 0.005-0.2ug/ml Western Blot : 0.1-0.5ug/ml
Limitations	This recombinant Mouse IgG1 antibody is available for research use only.



Western blot of nonreduced(-) and reduced(+) mouse IgG1 (20ng/lane), using 0.2ug/mL of recombinant Mouse IgG1 antibody. This mAb reacts to nonreduced IgG1 (~150 kDa) stronger than the reduced Î³1 form (~50 kDa).



ELISA of mouse immunoglobulins shows recombinant Mouse IgG1 antibody reacts to the Fc region of mIgG1; slightly cross reacts to IgG2b; no cross reactivity with IgG2a, IgG3, IgM, IgA, IgE, human/rat IgG.



ELISA titer: the plate was coated with different amount of mouse IgG1. A serial dilution of recombinant Mouse IgG1 antibody was used as the primary and an alkaline phosphatase conjugated anti-rabbit IgG as the secondary.

Description

The Recombinant Mouse IgG1 antibody is produced as a well defined immunoglobulin reagent designed for use as a control or reference in immunoassays. IgG1 is the most abundant subclass of immunoglobulin G in mice, representing a major component of the adaptive immune system. Its heavy chain constant region confers unique structural and functional features that distinguish it from other mouse IgG subclasses. Because of its wide prevalence in immune responses, recombinant forms of IgG1 are commonly employed to standardize assays, calibrate detection systems, and provide reliable negative controls.

Structurally, mouse IgG1 consists of two heavy chains and two light chains joined by disulfide bonds to form the classic Y shaped immunoglobulin architecture. The Fc portion of the IgG1 molecule interacts with Fc gamma receptors and complement proteins, directing effector functions such as phagocytosis and complement activation. Recombinant Mouse IgG1 antibodies are engineered to preserve this constant region while lacking antigen specific variable domains, making them valuable as isotype controls that reveal nonspecific binding of test antibodies.

The Recombinant Mouse IgG1 antibody is used widely in flow cytometry, immunohistochemistry, immunoprecipitation, and ELISA. In flow cytometry, it establishes baseline fluorescence and compensates for nonspecific interactions with Fc receptors on immune cells. In tissue staining, the reagent highlights background levels of binding that may arise from the Fc region, enabling more accurate interpretation of specific antibody signals. In ELISA, the Recombinant Mouse IgG1 antibody serves as a calibrator or background control to ensure assay specificity. Its recombinant origin guarantees lot to lot consistency, reducing variability that can occur with hybridoma derived controls.

Because IgG1 antibodies are commonly used as therapeutic and research reagents, recombinant isotype controls provide a crucial reference point. They allow researchers to confirm that observed signals are due to antigen recognition rather than structural features of the antibody itself. Synonym phrases such as recombinant mouse immunoglobulin G1 antibody and recombinant IgG1 isotype control antibody increase accessibility for users seeking equivalent products under different names.

By offering validated and reproducible detection, the Recombinant Mouse IgG1 antibody supports experimental accuracy across a range of immunological applications. NSJ Bioreagents provides the Recombinant Mouse IgG1 antibody with strict quality control, ensuring that scientists can rely on consistent performance in flow cytometry, histology, and biochemical assays. This reagent is an essential component for reliable interpretation of antibody based experiments.

This recombinant Mouse IgG1 antibody reacts to the Fc region of mouse IgG1. No cross reactivity with IgG2a, IgG3, IgM, IgA, IgE, human IgG, or rat IgG. It may slightly cross react to mIgG2b, and may also react to goat IgG.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Mouse IgG1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Mouse IgG was used as the immunogen for this recombinant Mouse IgG1 antibody.

Storage

Store the recombinant Mouse IgG1 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).