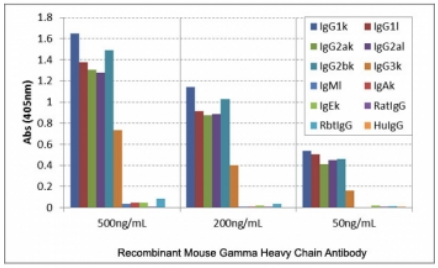
Recombinant Mouse IgG Antibody [clone RMG07] (R20176)

Catalog No.	Formulation	Size
R20176-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

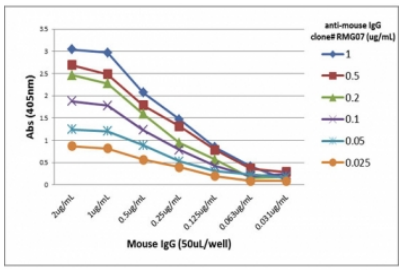
Recombinant GOAT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Clonality	Recombinant Goat Monoclonal
Isotype	Goat IgG
Clone Name	RMG07
Purity	Protein G purified from animal origin-free supernatant
UniProt	P01868
Gene ID	16017
Applications	ELISA : 0.05ug/ml-1ug/ml
Limitations	This recombinant Mouse IgG antibody is available for research use only.



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



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

Description

The Recombinant Mouse IgG antibody is designed as a broadly applicable isotype control and reference reagent for immunoassays. Immunoglobulin G represents the most abundant antibody class in mouse serum and plays a pivotal role in adaptive immunity by neutralizing pathogens, activating complement, and engaging Fc gamma receptors. Recombinant Mouse IgG antibodies replicate the overall structure of mouse IgG but are engineered to lack antigen specificity, ensuring they function as reliable negative controls for identifying background signals in experimental systems.

Structurally, mouse IgG is composed of two heavy and two light chains joined by disulfide bonds into a Y shaped molecule. The Fab arms contain the antigen binding sites, while the Fc domain engages Fc receptors and complement proteins, triggering effector functions. The Recombinant Mouse IgG antibody preserves these constant regions while eliminating specificity in the variable domains. As a result, it reflects the physical and biochemical properties of native mouse IgG while remaining non reactive, making it essential for distinguishing true antigen binding from nonspecific interactions.

In research applications, the Recombinant Mouse IgG antibody is widely employed in flow cytometry, where it establishes baseline fluorescence levels and detects binding caused by Fc receptor interactions. In immunohistochemistry, it highlights background staining in tissues containing Fc receptor positive cells, while in immunofluorescence it ensures that observed signals correspond to specific antigen localization rather than nonspecific adherence. In ELISA, it serves as a reference antibody to confirm that binding signals are due to antigen recognition rather than plate based interactions. Recombinant production provides consistency between lots, preventing variability associated with hybridoma derived controls.

The Recombinant Mouse IgG antibody is also valuable in assay development, where it can be used to optimize blocking strategies, secondary antibody performance, and detection systems without consuming test reagents. Because of its wide representation in mouse immunology, this control reagent is indispensable for studies of adaptive immune responses, therapeutic antibody development, and preclinical models. Synonym phrases such as recombinant mouse immunoglobulin G antibody and recombinant IgG isotype control antibody expand discoverability for researchers who search under alternate terminology.

By providing validated and reproducible detection, the Recombinant Mouse IgG antibody ensures accuracy and reliability across experimental platforms. NSJ Bioreagents supplies the Recombinant Mouse IgG antibody under strict quality guidelines, giving researchers confidence in its performance for negative control design in flow cytometry, ELISA, and tissue based assays.

This recombinant Mouse IgG antibody reacts to Mouse IgG, including IgG1, IgG2a, IgG2b, and IgG3. No cross reactivity with IgM, IgA, IgE or human/rat/rabbit IgG.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Mouse IgG 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 IgG antibody.

Storage

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