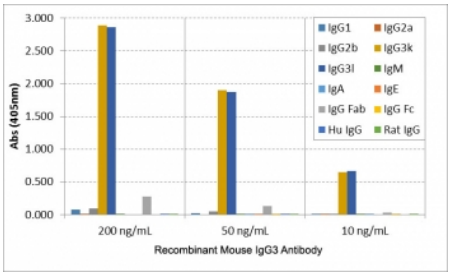
Recombinant Mouse IgG3 Antibody [clone RM218] (R20168)

Catalog No.	Formulation	Size
R20168-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

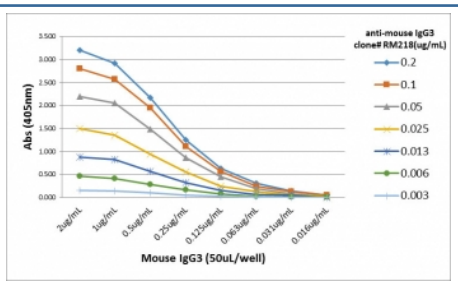
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM218
Purity	Protein A purified from animal origin-free supernatant
UniProt	P03987
Gene ID	380795
Applications	ELISA : 0.005-0.2ug/ml
Limitations	This recombinant Mouse IgG3 antibody is available for research use only.



ELISA of mouse immunoglobulins shows the recombinant Mouse IgG3 antibody reacts to both IgG3Îº and IgG3Î»; No cross reactivity with IgG1, IgG2a, IgG2b, IgM, IgA, IgE, human IgG, or rat IgG.



ELISA titration: he plate was coated with different amounts of mouse IgG3. A serial dilution of recombinant Mouse IgG3 antibody was used as the primary and an alkaline phosphatase conjugated anti-rabbit IgG as the secondary.

Description

The Recombinant Mouse IgG3 antibody is engineered as a recombinant isotype control reagent, offering a precise benchmark for nonspecific background detection in immunoassays. IgG3 is a subclass of mouse immunoglobulin G characterized by an elongated hinge region that confers unique structural flexibility. This feature allows IgG3 to form higher order complexes and strongly activate complement, giving it distinct biological properties compared with IgG1, IgG2a, and IgG2b. The Recombinant Mouse IgG3 antibody preserves these structural features but lacks antigen specificity, ensuring that observed signals in experiments represent background rather than true antigen binding.

Structurally, IgG3 contains two heavy and two light chains forming the Y shaped immunoglobulin, with the extended hinge region providing greater segmental flexibility. The Fc portion engages complement proteins with high efficiency, mediating strong complement dependent cytotoxicity. These properties make IgG3 antibodies highly effective in immune defense. In a laboratory setting, recombinant forms provide reliable controls to detect nonspecific interactions while avoiding variability associated with hybridoma derived preparations.

In flow cytometry, the Recombinant Mouse IgG3 antibody is used to establish baseline fluorescence and compensate for nonspecific Fc receptor binding. In immunohistochemistry, it highlights background staining in tissues with immune cell infiltration or complex extracellular matrices. In ELISA, the antibody serves as a negative control to confirm that binding signals arise from specific antigen antibody interactions. Recombinant production ensures lot to lot consistency, supporting reproducible experimental design.

The Recombinant Mouse IgG3 antibody is also a valuable reagent in assay optimization, helping determine appropriate antibody concentrations and blocking conditions. Synonym phrases such as recombinant mouse immunoglobulin G3 antibody and recombinant IgG3 isotype control antibody expand product accessibility for users under alternate terminology.

By providing validated and reproducible detection, the Recombinant Mouse IgG3 antibody strengthens the accuracy of immunoassays across research fields. NSJ Bioreagents delivers the Recombinant Mouse IgG3 antibody with rigorous quality testing, ensuring scientists can rely on consistent negative control performance in flow cytometry, tissue staining, and biochemical assays.

This recombinant Mouse IgG3 antibody reacts to the Fab region of mIgG3. No cross reactivity with IgG1, IgG2a, IgG2b, IgM, IgA, IgE, human IgG, or rat IgG.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Mouse IgG3 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Mouse IgG3 was used as the immunogen for this recombinant Mouse IgG3 antibody.

Storage

Store the recombinant Mouse IgG3 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).