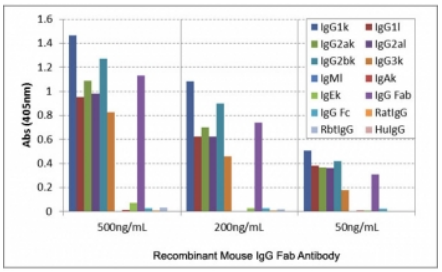
Recombinant Mouse IgG Fab Antibody [clone RMG05] (R20174)

Catalog No.	Formulation	Size
R20174-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

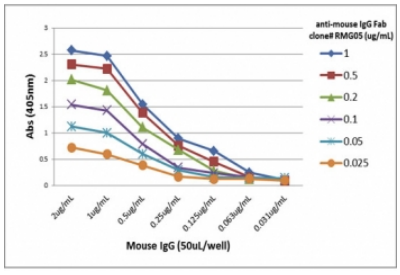
Recombinant GOAT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Host	Goat
Clonality	Recombinant Goat Monoclonal
Isotype	Goat IgG
Clone Name	RMG05
Purity	Protein G purified from animal origin-free supernatant
Gene ID	N/A
Applications	ELISA : 0.05ug/ml-1ug/ml
Limitations	This recombinant Mouse IgG Fab antibody is available for research use only.



ELISA of mouse immunoglobulins shows the recombinant Mouse IgG Fab antibody reacts to the Fab region of 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 recombinant Mouse IgG Fab antibody was used as the primary and an alkaline phosphatase conjugated anti-goat IgG as the secondary.

Description

The Recombinant Mouse IgG Fab antibody is produced as a fragment reagent that represents the antigen binding portion of mouse immunoglobulin G. Fab fragments are generated by cleaving the full length IgG molecule to separate the antigen binding arms from the Fc region. Each Fab fragment consists of one constant and one variable domain from both the heavy and light chains, preserving the antigen recognition site while eliminating Fc mediated effector functions. The Recombinant Mouse IgG Fab antibody replicates this structural configuration without antigen specificity, making it a valuable isotype control and reference reagent.

The structural hallmark of the Fab region is its retention of the antibody binding site in the absence of the Fc portion. This allows Fab fragments to interact with antigens while preventing Fc receptor binding or complement activation. In the case of the Recombinant Mouse IgG Fab antibody, the recombinant design ensures consistent production and removes variability associated with enzymatic digestion of whole IgG. By focusing on the Fab portion, this reagent highlights nonspecific background signals in assays while avoiding interactions that would be mediated by Fc domains.

Applications of the Recombinant Mouse IgG Fab antibody span ELISA, western blotting, and immunofluorescence. In ELISA, it is useful for validating assay specificity and distinguishing true antigen antibody interactions from background. In western blotting, the Recombinant Mouse IgG Fab antibody detects Fab reactive secondary antibodies or serves as a control in hybridoma screening. In immunofluorescence, it establishes baseline staining by identifying nonspecific Fab associated signals without complicating Fc receptor engagement. The absence of an Fc region makes Fab fragments particularly useful in systems where Fc mediated binding could otherwise dominate background noise.

This reagent is also beneficial in assay development, where it provides a streamlined tool for testing secondary antibody reactivity and optimizing detection conditions. Researchers studying antibody structure function relationships or developing therapeutic antibodies can use the Recombinant Mouse IgG Fab antibody as a control for Fab mediated recognition. Synonym terms such as recombinant mouse immunoglobulin G Fab fragment antibody and recombinant Fab isotype control antibody broaden product discoverability.

By providing validated and reproducible performance, the Recombinant Mouse IgG Fab antibody supports accurate analysis of antigen binding and assay specificity. NSJ Bioreagents supplies this recombinant fragment under stringent quality standards, ensuring that scientists have a reliable reagent for flow cytometry, ELISA, immunofluorescence, and biochemical assays. With the Recombinant Mouse IgG Fab antibody, researchers can confidently interpret data where Fab mediated binding must be distinguished from background or nonspecific effects.

This recombinant Mouse IgG Fab antibody reacts to the Fab region of mIgG, 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 Fab 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 Fab antibody.

Storage

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