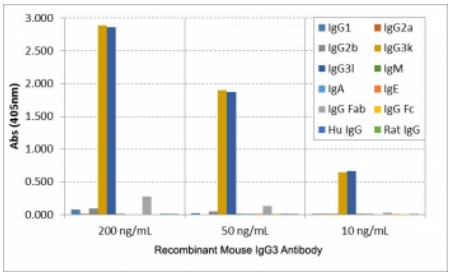
Mouse IgG3 Antibody for ELISA / Biotinylated Anti-Mouse IgG3 ELISA Detection Antibody [clone RM218] (R20168BTN)

Catalog No.	Formulation	Size
R20168BTN-50UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	50 ug

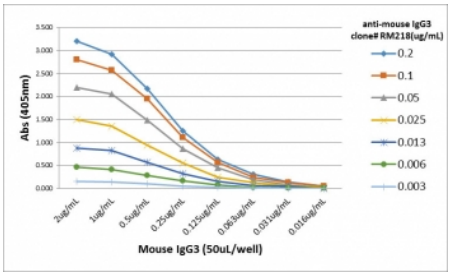
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse
Format	Biotin Conjugate
Host	Rabbit
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 Mouse IgG3 Antibody for ELISA / Biotinylated Anti-Mouse IgG3 ELISA Detection Antibody is available for research use only.



Mouse IgG3 Antibody Biotin ELISA Subclass Specificity Analysis. ELISA analysis of mouse immunoglobulins demonstrates that the parent clone RM218 antibody selectively recognizes Mouse IgG3, with strong signal observed for both IgG3 kappa and IgG3 lambda across tested concentrations. No cross-reactivity is detected with IgG1, IgG2a, IgG2b, IgM, IgA, or IgE, or with human or rat IgG. This binding profile reflects Fab region-directed specificity for mouse IgG3 and is retained in the biotinylated format of the Mouse IgG3 Antibody for ELISA / Biotinylated Anti-Mouse IgG3 ELISA Detection Antibody.



Mouse IgG3 Antibody Biotin ELISA Titration Curve. ELISA titration using plates coated with serial dilutions of mouse IgG3 demonstrates strong, concentration-dependent binding of clone RM218 across a broad dynamic range. Signal intensity decreases proportionally with antibody dilution, confirming high sensitivity and consistent binding kinetics. Detection was performed using an alkaline phosphatase-conjugated anti-rabbit IgG secondary antibody. This titration profile reflects the intrinsic binding performance of the parent clone RM218 antibody and is representative of the characteristics retained in the biotinylated format of the Mouse IgG3 Antibody for ELISA / Biotinylated Anti-Mouse IgG3 ELISA Detection Antibody.

Description

Mouse immunoglobulin gamma 3 (IgG3) is a unique IgG subclass in murine systems defined by its extended hinge region and strong propensity for immune complex formation. IgG3 is predominantly produced in response to T-independent antigens, particularly polysaccharides, and serves as an early indicator of humoral immune activation. Its structural characteristics promote multimerization and antigen cross-linking, distinguishing it functionally from other IgG subclasses such as IgG1, IgG2a, and IgG2b.

Mouse IgG3 Antibody for ELISA / Biotinylated Anti-Mouse IgG3 ELISA Detection Antibody is engineered for enhanced sensitivity and subclass-specific detection in ELISA workflows utilizing streptavidin-based signal amplification systems. Mouse IgG3 antibody, also referred to as anti-IgG3 antibody or anti-mouse IgG3 subclass antibody, is widely used for detecting and quantifying IgG3 with high specificity. This biotinylated recombinant rabbit monoclonal antibody clone RM218 selectively recognizes the Fab region of mouse IgG3, enabling precise detection of the antigen-binding domain and providing a complementary approach to Fc-directed assays.

In sandwich ELISA configurations, biotinylated detection antibodies provide increased assay sensitivity and expanded dynamic range through streptavidin-mediated amplification. The Mouse IgG3 Antibody for ELISA / Biotinylated Anti-Mouse IgG3 ELISA Detection Antibody binds selectively to captured IgG3, allowing accurate detection even at low analyte concentrations. Fab-directed recognition further enhances assay specificity by reducing Fc-associated background interactions, making this antibody particularly useful in complex biological samples.

Clone RM218 antibody targets the Fab region of mouse IgG3, ensuring selective detection without cross-reactivity to other mouse IgG subclasses or immunoglobulin classes. The recombinant rabbit monoclonal format provides strong affinity, consistent performance, and reproducibility across ELISA platforms. Biotin conjugation enhances assay flexibility by enabling compatibility with streptavidin-based detection systems commonly used in ELISA assays.

Measurement of IgG3 using biotinylated detection antibodies is widely applied in immunology research, antibody development, and studies of T-independent immune responses. Because IgG3 plays a distinct role in immune complex formation and early immune activation, accurate detection provides insight into antibody response mechanisms and functional immune dynamics. This antibody supports these applications by enabling sensitive and selective detection of IgG3 immunoglobulins in ELISA-based systems requiring enhanced signal amplification, high specificity, and consistent assay performance.

This antibody is part of a broader immunoglobulin detection antibody collection, including reagents for Ig classes and light chains across multiple species and immunoassay formats.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Mouse IgG3 Antibody for ELISA / Biotinylated Anti-Mouse IgG3 ELISA Detection Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

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

Storage

Store the recombinant Mouse IgG3 antibody at -20oC.

Alternate Names

Biotin anti-mouse IgG3 antibody, Biotinylated IgG3 detection antibody, Mouse IgG3 biotin ELISA antibody, Immunoglobulin G3 biotin antibody, IgG3 Fab biotin antibody