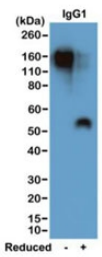
Mouse IgG1 Antibody for ELISA / Biotinylated Anti-Mouse IgG1 ELISA Detection Antibody [clone RM106] (R20164BTN)

Catalog No.	Formulation	Size
R20164BTN-50UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	50 ug

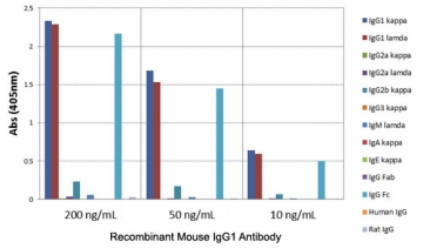
Recombinant RABBIT MONOCLONAL

Bulk quote request

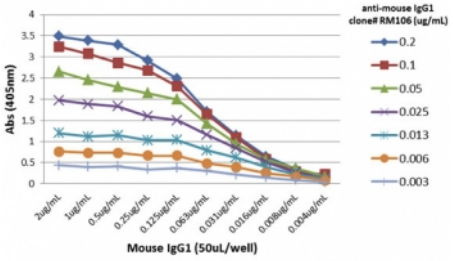
Availability	1-3 business days
Species Reactivity	Mouse
Format	Biotin Conjugate
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM106
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01868
Gene ID	16017
Applications	ELISA : 0.005-0.2ug/ml Western Blot : 0.1-0.5ug/ml
Limitations	Mouse IgG1 Antibody for ELISA / Biotinylated Anti-Mouse IgG1 ELISA Detection Antibody



Mouse IgG1 Antibody Biotin Western Blot Analysis. Western blot analysis of non-reduced (-) and reduced (+) mouse IgG1 (20 ng per lane) using clone RM106 at 0.2 ug/mL demonstrates strong detection of intact IgG1 at approximately 150 kDa under non-reducing conditions and a lower molecular weight band near 50 kDa corresponding to the gamma 1 heavy chain under reducing conditions. The stronger signal observed in the non-reduced sample is consistent with recognition of native immunoglobulin structure. These results reflect the binding characteristics of the parent clone RM106 antibody and are representative of the target recognition retained in the biotinylated format of the Mouse IgG1 Antibody for ELISA / Biotinylated Anti-Mouse IgG1 ELISA Detection Antibody.



Mouse IgG1 Antibody Biotin ELISA Subclass Specificity Analysis. ELISA analysis of mouse immunoglobulins demonstrates that the parent clone RM106 antibody selectively recognizes Mouse IgG1 / Ighg1, with strong signal observed for IgG1 across tested concentrations. The antibody shows slight cross-reactivity with IgG2b, while no reactivity is detected with IgG2a, IgG3, IgM, IgA, or IgE, or with human or rat IgG. This binding profile reflects Fc region-directed recognition of mouse IgG1 and is retained in the biotinylated format of the Mouse IgG1 Antibody for ELISA / Biotinylated Anti-Mouse IgG1 ELISA Detection Antibody.



Mouse IgG1 Antibody Biotin ELISA Titration Curve. ELISA titration using plates coated with serial dilutions of mouse IgG1 demonstrates strong, concentration-dependent binding of clone RM106 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 performance of the parent clone RM106 antibody and is representative of the binding characteristics retained in the biotinylated format of the Mouse IgG1 Antibody for ELISA / Biotinylated Anti-Mouse IgG1 ELISA Detection Antibody.

Description

Mouse immunoglobulin gamma 1 (Ighg1) encodes the heavy chain constant region of IgG1, a principal IgG subclass in mouse and a hallmark of Th2-type humoral immune responses. Mouse IgG1 is commonly induced in response to protein antigens and is associated with cytokine signaling pathways driven by IL-4 and IL-13. Its expression pattern provides important insight into immune polarization and antibody-mediated responses, making it a critical analyte in preclinical immunology and murine model systems.

Mouse IgG1 Antibody for ELISA / Biotinylated Anti-Mouse IgG1 ELISA Detection Antibody is engineered for enhanced sensitivity in ELISA workflows that utilize streptavidin-based signal amplification systems. Mouse IgG1 antibody, also referred to as anti-Ighg1 antibody or anti-mouse IgG1 subclass antibody, is widely used for detecting and quantifying IgG1 with high specificity. This biotinylated recombinant rabbit monoclonal antibody clone RM106 provides selective recognition of the mouse IgG1 constant region while enabling amplified signal generation for improved assay performance.

In sandwich ELISA configurations, biotinylated detection antibodies provide a significant advantage by increasing assay sensitivity and expanding dynamic range through streptavidin-mediated signal amplification. The Mouse IgG1 Antibody for ELISA / Biotinylated Anti-Mouse IgG1 ELISA Detection Antibody binds selectively to captured IgG1, allowing accurate detection even at low analyte concentrations. This is particularly important in applications such as low-abundance antibody detection, immune response quantification, and detailed profiling of subclass distribution in mouse models.

Clone RM106 antibody targets the constant region of mouse IgG1 heavy chains, ensuring selective detection without cross-reactivity to other IgG subclasses such as IgG2a, IgG2b, and IgG3. The recombinant rabbit monoclonal format supports strong affinity, consistent performance, and reproducibility across assays. Biotin conjugation enhances assay versatility by enabling compatibility with streptavidin-HRP and streptavidin-AP detection systems commonly used in ELISA platforms.

Measurement of mouse IgG1 using biotinylated detection antibodies is widely applied in immunology research, vaccine development, allergy studies, and therapeutic antibody evaluation in murine systems. Subclass-specific detection provides essential insight into immune response type and functional antibody characteristics. This antibody supports these applications by enabling sensitive and reliable measurement of Ighg1-containing immunoglobulins in ELISA-based systems requiring enhanced detection capability and flexible assay design.

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 IgG1 Antibody for ELISA / Biotinylated Anti-Mouse IgG1 ELISA Detection 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.

Alternate Names

Biotin anti-mouse IgG1 antibody, Biotinylated IgG1 detection antibody, Mouse IgG1 biotin ELISA antibody, Immunoglobulin G1 biotin antibody, IgG1 biotin detection antibody