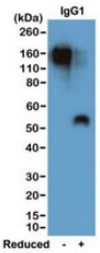
Mouse IgG1 Antibody for ELISA / Anti-Mouse IgG1 ELISA Detection Antibody [clone RM106] (R20164)

Catalog No.	Formulation	Size
R20164-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

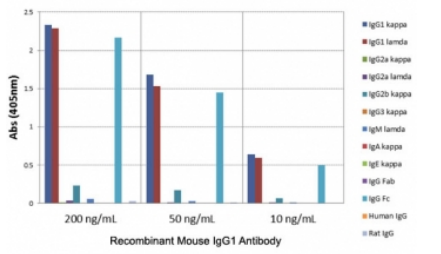
Recombinant RABBIT MONOCLONAL

Bulk quote request

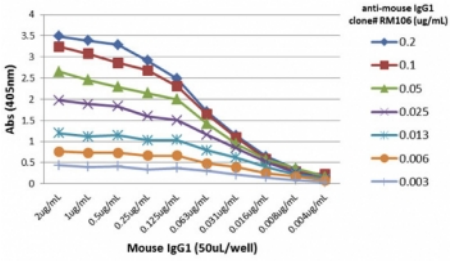
Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM106
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01868
Gene ID	16017
Applications	ELISA : 0.005-0.2ug/ml Western Blot :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



Mouse IgG1 Antibody WB. 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 the native immunoglobulin structure, while detection of the reduced heavy chain confirms specificity for mouse IgG1. These results support the ability of this Mouse IgG1 Antibody to recognize IgG1 in both native and denatured forms.



Mouse IgG1 Antibody for ELISA Subclass Specificity Analysis. ELISA analysis of mouse immunoglobulins demonstrates that clone RM106 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. The binding profile is consistent with Fc region-directed recognition of mouse IgG1 and supports the use of this Mouse IgG1 Antibody for ELISA / Anti-Mouse IgG1 ELISA Detection Antibody for subclass-specific detection in ELISA-based immunoassays.



Mouse IgG1 Antibody for ELISA Titration Curve. ELISA titration analysis 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 performance. Detection was performed using an alkaline phosphatase-conjugated anti-rabbit IgG secondary antibody, supporting reliable quantification of Mouse IgG1 / Ighg1 in ELISA-based immunoassays.

Description

Mouse immunoglobulin gamma 1 (Ighg1) encodes the heavy chain constant region of IgG1, a major IgG subclass in mouse and a defining marker of Th2-skewed humoral immune responses. Mouse IgG1 is commonly produced following exposure to protein antigens and is associated with cytokine environments dominated by IL-4 and IL-13, making it a key indicator of immune polarization in preclinical and immunological studies. Its abundance and functional relevance in murine systems make it a primary target for immunoassay-based detection and subclass-specific analysis.

Mouse IgG1 Antibody for ELISA / Anti-Mouse IgG1 ELISA Detection Antibody is specifically optimized for high-sensitivity and subclass-specific detection of IgG1 in ELISA workflows. Mouse IgG1 antibody, also known as anti-Ighg1 antibody or anti-mouse IgG1 subclass antibody, is widely used to quantify IgG1 responses and to distinguish IgG1 from other mouse IgG subclasses such as IgG2a, IgG2b, and IgG3, which are often associated with Th1-type immune responses. This recombinant rabbit monoclonal antibody clone RM106 provides strong and selective recognition of the mouse IgG1 constant region, enabling accurate subclass discrimination across diverse assay conditions.

In ELISA applications, subclass-specific detection antibodies are essential for evaluating immune response polarization, antibody class switching, and antigen-specific humoral responses in mouse models. The Mouse IgG1 Antibody for ELISA / Anti-Mouse IgG1 ELISA Detection Antibody functions effectively as a detection reagent in sandwich ELISA formats, binding specifically to IgG1 captured on assay plates while minimizing background from other immunoglobulin subclasses. This level of specificity is critical for studies requiring clear separation of Th1- versus Th2-driven antibody responses and for interpreting functional immune outcomes.

Clone RM106 antibody recognizes the constant region of mouse IgG1 heavy chains, allowing selective detection without cross-reactivity to other subclasses. The recombinant rabbit monoclonal format ensures high affinity binding, excellent reproducibility, and minimal lot-to-lot variability, supporting consistent ELISA performance. The Mouse IgG1 Antibody for ELISA / Anti-Mouse IgG1 ELISA Detection Antibody is uniquely suited for quantitative immunoassays where precise subclass resolution and reliable signal generation are required.

Detection of mouse IgG1 is widely applied in vaccine studies, allergy models, and antibody response profiling, where IgG1 levels serve as a key readout of Th2-biased immunity. This antibody supports these applications by enabling robust measurement of Ighg1-containing immunoglobulins in ELISA-based systems requiring high specificity, sensitivity, and reproducibility.

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 / 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 (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Anti-Mouse IgG1 ELISA antibody, Mouse IgG1 detection antibody, IgG1 ELISA detection antibody, Immunoglobulin G1 ELISA antibody, Mouse IgG subclass 1 antibody