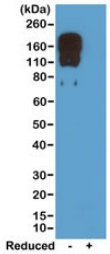
Mouse IgG2c Antibody for ELISA / Anti-Mouse IgG2c ELISA Detection Antibody [clone RM223] (R20171)

Catalog No.	Formulation	Size
R20171-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

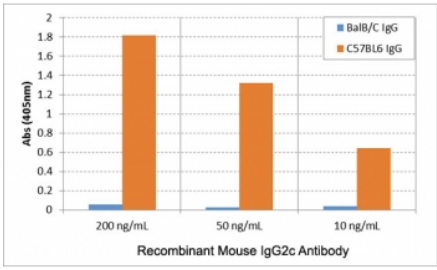
Recombinant RABBIT MONOCLONAL

Bulk quote request

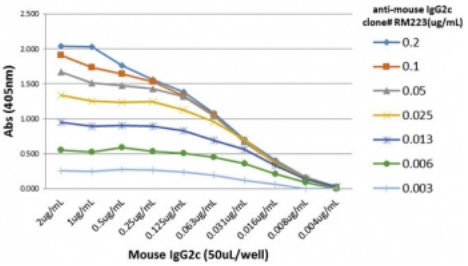
Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM223
Purity	Protein A purified from animal origin-free supernatant
UniProt	N/A
Gene ID	404711
Applications	ELISA : 0.01ug/ml-0.2ug/ml Western Blot (non-reduced Only) : 0.5-2ug/ml
Limitations	This Mouse IgG2c Antibody for ELISA / Anti-Mouse IgG2c ELISA Detection Antibody is available for research use only.



Mouse IgG2c Antibody for WB. Western blot analysis of non-reduced (-) and reduced (+) mouse IgG2c using clone RM223 at 0.5 ug/mL demonstrates strong detection of intact IgG2c at approximately 150 kDa under non-reducing conditions, with minimal to no signal observed in the reduced sample. This pattern is consistent with Fc region-directed recognition of native immunoglobulin structure and supports selective detection of mouse IgG2c. These results support the use of this Mouse IgG2c Antibody / Anti-Mouse IgG2c Detection Antibody for reliable detection in immunoassay applications.



Mouse IgG2c Antibody for ELISA Strain Specificity Analysis. ELISA analysis of mouse IgG from C57BL/6 and BALB/c strains demonstrates that clone RM223 selectively recognizes IgG2c present in C57BL/6 IgG, with strong signal observed across tested concentrations, while no reactivity is detected with BALB/c IgG containing IgG2a. This strain-specific binding profile confirms selective detection of IgG2c and highlights the importance of distinguishing IgG2c from IgG2a in murine immunology studies. These results support the use of this Mouse IgG2c Antibody for ELISA / Anti-Mouse IgG2c ELISA Detection Antibody for accurate, strain-aware subclass detection in ELISA-based immunoassays.



Mouse IgG2c Antibody Biotin ELISA Titration Curve. ELISA titration using plates coated with serial dilutions of mouse IgG2c demonstrates strong, concentration-dependent binding of clone RM223 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 RM223 antibody and is representative of the characteristics retained in the biotinylated format of the Mouse IgG2c Antibody for ELISA / Biotinylated Anti-Mouse IgG2c ELISA Detection Antibody.

Description

Mouse immunoglobulin gamma 2c (IgG2c) is a murine IgG subclass that serves as the functional equivalent of IgG2a in certain mouse strains, most notably C57BL/6. Due to genetic variation at the immunoglobulin heavy chain locus, C57BL/6 mice express IgG2c instead of IgG2a, while other strains such as BALB/c express IgG2a. Despite this nomenclature difference, IgG2c shares similar structural and functional properties with IgG2a, including strong Fc receptor binding and complement activation, and is widely used as a marker of Th1-driven immune responses. This strain-dependent expression makes accurate discrimination between IgG2a and IgG2c critical for proper interpretation of immunological data.

Mouse IgG2c Antibody for ELISA / Anti-Mouse IgG2c ELISA Detection Antibody is specifically optimized for high-sensitivity and subclass-specific detection of IgG2c in ELISA-based immunoassays. Mouse IgG2c antibody, also known as anti-IgG2c antibody or anti-mouse IgG2c subclass antibody, is widely used to quantify IgG2c responses and to distinguish IgG2c from other mouse IgG subclasses such as IgG1, IgG2a, IgG2b, and IgG3. This recombinant rabbit monoclonal antibody clone RM223 provides strong and selective recognition of the mouse IgG2c constant region, enabling accurate subclass discrimination in strain-specific experimental systems.

In ELISA workflows, IgG2c detection is particularly important for studies using C57BL/6 and related mouse strains, where IgG2c serves as the primary Th1-associated IgG subclass. The Mouse IgG2c Antibody for ELISA / Anti-Mouse IgG2c ELISA Detection Antibody functions effectively as a detection reagent in sandwich ELISA formats, binding specifically to IgG2c captured on assay plates while minimizing background from other immunoglobulin subclasses. This specificity prevents misinterpretation of IgG2a versus IgG2c responses, a common source of confusion in murine immunology studies.

Clone RM223 antibody targets the constant region of mouse IgG2c heavy chains, ensuring selective detection without cross-reactivity to other IgG subclasses including IgG1, IgG2a, IgG2b, and IgG3. The recombinant rabbit monoclonal format provides high affinity binding, excellent reproducibility, and minimal lot-to-lot variability, supporting consistent ELISA performance across experiments. The Mouse IgG2c Antibody for ELISA / Anti-Mouse IgG2c ELISA Detection Antibody is particularly well suited for quantitative immunoassays requiring precise subclass identification in strain-dependent models.

Detection of IgG2c is widely applied in immunology research, vaccine studies, and infection models using C57BL/6 mice, where Th1-type immune responses are being evaluated. Because IgG2c replaces IgG2a in these models, accurate

measurement is essential for interpreting immune activation, antibody-mediated effector function, and subclass switching dynamics. This antibody supports these applications by enabling robust and reproducible detection of IgG2c immunoglobulins in ELISA-based systems requiring high specificity, strain-aware interpretation, and reliable signal generation.

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 recombinant Mouse IgG2c antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Mouse IgG2c was used as the immunogen for this recombinant Mouse IgG2c antibody.

Storage

Store the recombinant Mouse IgG2c antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Anti-Mouse IgG2c ELISA antibody, Mouse IgG2c detection antibody, IgG2c ELISA detection antibody, Immunoglobulin G2c ELISA antibody, Mouse IgG2c subclass antibody