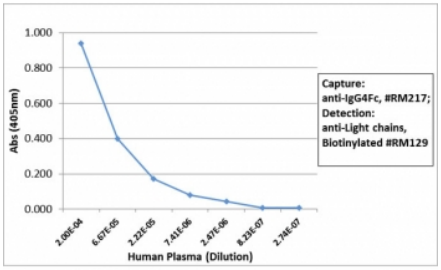
Human IgG4 Fc Antibody for ELISA / Anti-IgG4 Fc Detection Antibody [clone RM217] (R20191)

Catalog No.	Formulation	Size
R20191-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

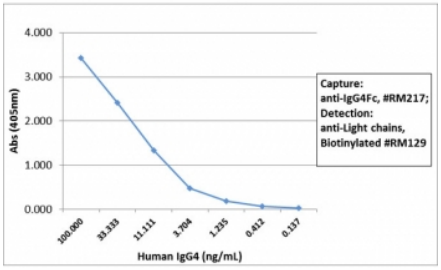
Recombinant RABBIT MONOCLONAL

Bulk quote request

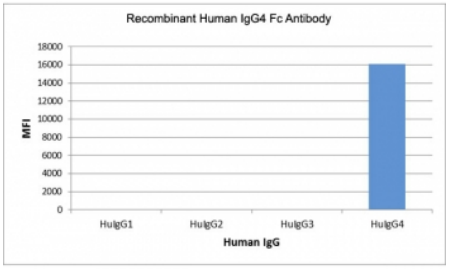
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM217
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01861
Gene ID	3503
Applications	ELISA : 50ng/well-200ng/well (Capture); 0.05-0.2ug/ml (Detection)
Limitations	This Human IgG4 Fc Antibody for ELISA / Anti-IgG4 Fc Detection Antibody is available for research use only.



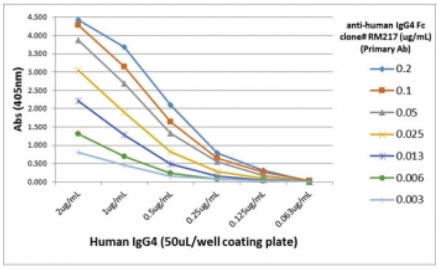
Human IgG4 Fc Antibody for ELISA Sandwich ELISA Human Plasma. Sandwich ELISA analysis demonstrates that clone RM217 functions effectively as a capture antibody for IgG4 / IGHG4 in human plasma, with signal intensity decreasing proportionally with dilution, indicating concentration-dependent detection. Captured IgG4 was detected using a biotinylated anti-human light chains (kappa + lambda) antibody (clone RM129), followed by alkaline phosphatase-conjugated streptavidin for signal development. This assay supports selective Fc-region detection of IgG4 and highlights the utility of this Human IgG4 Fc Antibody for ELISA / Anti-IgG4 Fc Detection Antibody in subclass-specific ELISA workflows.



Human IgG4 Fc Antibody for ELISA Sandwich ELISA Human IgG4. Sandwich ELISA analysis using purified human IgG4 demonstrates that clone RM217 functions effectively as a capture antibody for IgG4 / IGHG4, with signal intensity decreasing proportionally with antigen concentration, indicating strong and concentration-dependent detection. Captured IgG4 was detected using a biotinylated anti-human light chains (kappa + lambda) antibody (clone RM129), followed by alkaline phosphatase-conjugated streptavidin for signal development. This assay supports selective Fc-region detection of IgG4 and highlights the utility of this Human IgG4 Fc Antibody for ELISA / Anti-IgG4 Fc Detection Antibody in subclass-specific ELISA applications.



Human IgG4 Fc Antibody for ELISA Subclass Specificity Analysis. ELISA analysis of human IgG subclasses demonstrates that clone RM217 selectively recognizes IgG4 / IGHG4, with strong signal observed for IgG4 and no detectable binding to IgG1, IgG2, or IgG3. This result confirms Fc-region-specific recognition and strict subclass selectivity. The Human IgG4 Fc Antibody for ELISA / Anti-IgG4 Fc Detection Antibody enables accurate IgG4 detection in mixed immunoglobulin samples and supports high-specificity ELISA workflows requiring precise subclass discrimination.



Human IgG4 Fc Antibody for ELISA Titration Curve. ELISA titration analysis using plates coated with serial dilutions of human IgG4 demonstrates strong, concentration-dependent binding of clone RM217 across a broad dynamic range. Signal intensity decreases proportionally with antibody dilution and antigen concentration, confirming high sensitivity and consistent Fc-region-specific recognition of IgG4 / IGHG4. Detection was performed using an alkaline phosphatase-conjugated anti-rabbit IgG secondary antibody, supporting reliable quantification in ELISA-based assays.

Description

Immunoglobulin G4 (IgG4) is a distinct subclass of IgG characterized by reduced effector function and a specialized role in immune regulation and tolerance. Unlike other IgG subclasses, IgG4 exhibits minimal complement activation and limited interaction with Fc receptors, making it functionally associated with chronic antigen exposure, immune modulation, and antibody responses observed in allergy and therapeutic antibody settings. IgG4 is therefore frequently studied in the context of immune tolerance, long-term antigen exposure, and biologic drug monitoring.

IGG4 antibody, also referred to as Immunoglobulin G4 antibody and IgG4 immunoglobulin antibody in the literature, is widely used for subclass-specific detection of IgG4 in immunoassays. Human IgG4 Fc Antibody for ELISA / Anti-IgG4 Fc Detection Antibody is specifically optimized for selective recognition of the Fc region of IgG4, providing consistent and reliable detection independent of antigen-binding variability. Fc-directed detection is particularly advantageous in ELISA workflows, as it enables uniform recognition of IgG4 molecules regardless of Fab specificity, making it well suited for antibody quantification and assay standardization.

This recombinant rabbit monoclonal antibody, clone RM217 antibody, recognizes the Fc region of human IgG4 with high specificity and does not cross react with other human IgG subclasses including IgG1, IgG2, or IgG3. In addition, no cross reactivity is observed with other immunoglobulin classes such as IgM, IgA, IgD, or IgE, nor with IgG from other species including mouse, rat, or goat. This strict specificity profile supports accurate IgG4 detection in complex biological samples and multi-species experimental systems, minimizing background signal and improving assay precision.

In ELISA workflows, Fc-specific IgG4 detection antibodies are commonly used for quantification of total IgG4, detection of therapeutic antibodies, and measurement of subclass-specific immune responses. Because the Fc region is conserved within IgG4 molecules, detection is consistent across different antibody populations, enabling reliable signal generation and reproducibility across experiments. The Human IgG4 Fc Antibody for ELISA / Anti-IgG4 Fc Detection Antibody is well

suited for use in direct, indirect, and sandwich ELISA formats requiring high specificity and sensitivity.

Detection of IgG4 is widely applied in immunology research, allergy studies, and therapeutic antibody development. IgG4 is often associated with regulatory immune responses and long-term antigen exposure, and its accurate measurement provides important insight into antibody subclass distribution, immune tolerance, and biologic drug responses. This antibody supports these applications by enabling sensitive and specific detection of the IgG4 Fc region in ELISA-based systems requiring precise subclass discrimination, low background, and consistent 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 Human IgG4 Fc Antibody for ELISA / Anti-IgG4 Fc Detection Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Peptide corresponding to the Fc region of hIgG4 was used as the immunogen for this recombinant Human IgG4 Fc antibody.

Storage

Store the recombinant Human IgG4 Fc antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Anti-IgG4 Fc antibody, IgG4 Fc detection antibody, Human IgG4 Fc antibody, IgG4 constant region antibody, Fc-specific IgG4 antibody