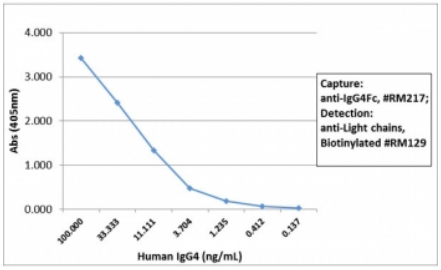
Human IgG4 Fc Antibody for ELISA Biotin Conjugate / Biotinylated Anti-IgG4 Fc Detection Antibody [clone RM217] (R20191BTN)

Catalog No.	Formulation	Size
R20191BTN-50UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	50 ug

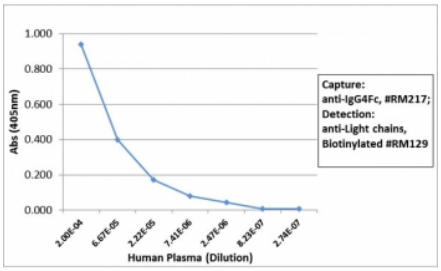
Recombinant RABBIT MONOCLONAL

Bulk quote request

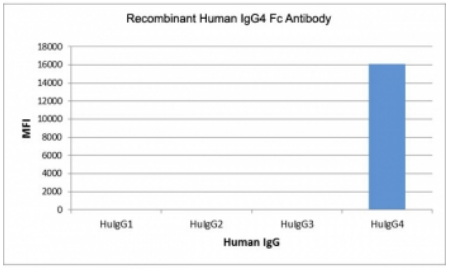
Availability	1-3 business days
Species Reactivity	Human
Format	Biotin Conjugate
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM217
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01861
Gene ID	3503
Applications	ELISA: 50ng/well-200ng/well (Capture);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



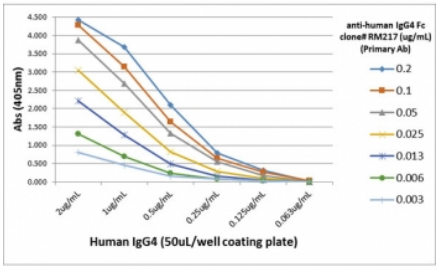
Human IgG4 Fc Antibody Biotin Sandwich ELISA Human IgG4. Sandwich ELISA analysis using purified human IgG4 demonstrates that the parent clone RM217 antibody functions effectively as a capture antibody for IgG4 / IGHG4, with signal intensity decreasing proportionally with antigen concentration, indicating 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 binding profile reflects Fc-specific recognition of IgG4 and is representative of the performance retained in the biotinylated format of the Human IgG4 Fc Antibody for ELISA / Biotinylated Anti-IgG4 Fc Detection Antibody.



Human IgG4 Fc Antibody Biotin Sandwich ELISA Human Plasma. Sandwich ELISA analysis demonstrates that the parent clone RM217 antibody 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 binding profile reflects Fc-specific recognition of IgG4 and is representative of the performance retained in the biotinylated format of the Human IgG4 Fc Antibody for ELISA / Biotinylated Anti-IgG4 Fc Detection Antibody.



Human IgG4 Fc Antibody Biotin ELISA Subclass Specificity Analysis. ELISA analysis of human IgG subclasses demonstrates that the parent clone RM217 antibody selectively recognizes IgG4 / IGHG4, with strong signal observed for IgG4 and no detectable binding to IgG1, IgG2, or IgG3. This binding profile reflects Fc-region-specific recognition and strict subclass selectivity and is representative of the performance retained in the biotinylated format of the Human IgG4 Fc Antibody for ELISA / Biotinylated Anti-IgG4 Fc Detection Antibody.



Human IgG4 Fc Antibody Biotin 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 consistent Fc-region-specific recognition of IgG4 / IGHG4. 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 RM217 antibody and is representative of the characteristics retained in the biotinylated format of the Human IgG4 Fc Antibody for ELISA / Biotinylated Anti-IgG4 Fc Detection Antibody.

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, and can undergo Fab-arm exchange, resulting in functionally monovalent antibodies. These properties make IgG4 closely associated with chronic antigen exposure, immune modulation, allergy, and therapeutic antibody responses. As a result, accurate detection of IgG4 is critical in studies of immune tolerance, biologic drug monitoring, and long-term immune dynamics.

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 / Biotinylated Anti-IgG4 Fc Detection Antibody is specifically optimized for selective recognition of the Fc region of IgG4 while enabling enhanced signal amplification through biotin-streptavidin detection systems. Fc-directed detection ensures consistent recognition across IgG4 molecules regardless of antigen-binding variability, making it particularly advantageous for quantitative ELISA workflows 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, biotinylated Fc-specific IgG4 detection antibodies are commonly used in sandwich ELISA and high-sensitivity detection formats where signal amplification is required. Biotin conjugation enables strong interaction with

streptavidin-linked enzymes, increasing assay sensitivity and expanding dynamic range, particularly in low-abundance or complex samples such as serum or plasma. Because the Fc region is conserved within IgG4 molecules, detection remains uniform across antibody populations, supporting reproducible and reliable signal generation.

Detection of IgG4 is widely applied in immunology research, allergy studies, and therapeutic antibody development. IgG4 is frequently 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 enhanced signal amplification, low background, and consistent performance.

For subclass-specific detection of human IgG4, see our Human IgG4 Antibody for ELISA / Hinge Region IgG4 Detection Antibody page.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Human IgG4 Fc Antibody for ELISA Biotin Conjugate / Biotinylated 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 human IgG4 was used as the immunogen for this Human IgG4 Fc Antibody for ELISA Biotin Conjugate.

Storage

Store the Human IgG4 Fc Antibody for ELISA Biotin Conjugate at -20oC.

Alternate Names

Biotin anti-IgG4 Fc antibody, IgG4 Fc detection antibody, Human IgG4 Fc antibody, IgG4 constant region antibody, Fc-specific IgG4 antibody

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