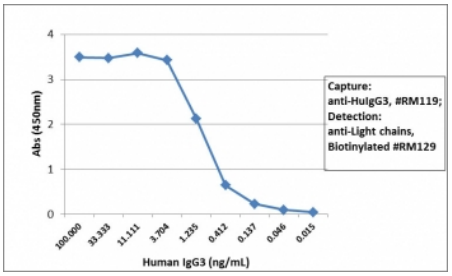
Human IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody [clone RM119] (R20189BTN)

Catalog No.	Formulation	Size
R20189BTN-50UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	50 ug

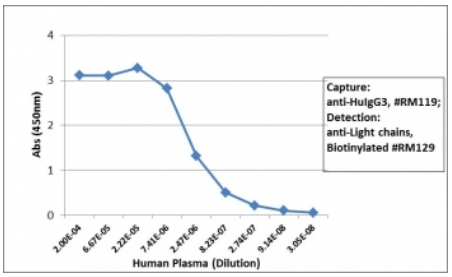
Recombinant RABBIT MONOCLONAL

Bulk quote request

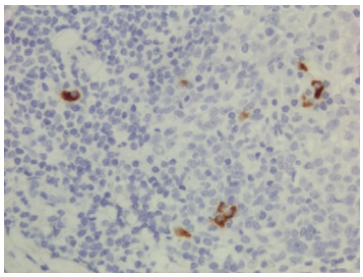
Availability	1-3 business days
Species Reactivity	Human
Format	Biotin Conjugate
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM119
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01860
Gene ID	3502
Applications	ELISA : 50ng/well-200ng/well (Capture); 0.05-0.2ug/ml (Detection) Immunocytochemistry : 0.5-2ug/ml Immunohistochemistry : 0.5-2ug/ml
Limitations	This Human IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody is available for research use only.



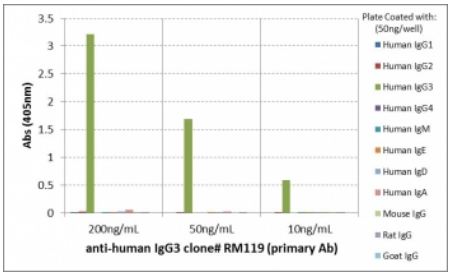
Human IgG3 Antibody Biotin Sandwich ELISA using Human IgG3. Sandwich ELISA using purified human IgG3 demonstrates that the parent clone RM119 antibody functions effectively as a capture antibody for Human IgG3 / IGHG3, with signal intensity decreasing proportionally with antigen concentration, indicating strong and concentration-dependent detection. Captured IgG3 was detected using a biotinylated anti-human light chains (kappa + lambda) antibody (clone RM129), followed by alkaline phosphatase-conjugated streptavidin for signal development. These results reflect the intrinsic binding performance of clone RM119 and are representative of the characteristics retained in the biotinylated format of the Human IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody.



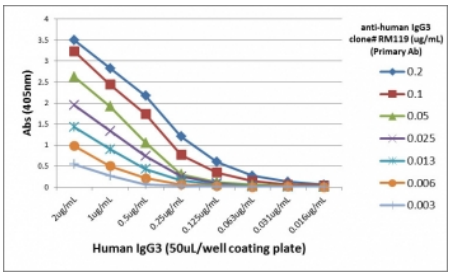
Human IgG3 Antibody Biotin Sandwich ELISA with Human Plasma. Sandwich ELISA using human plasma demonstrates that the parent clone RM119 antibody functions effectively as a capture antibody for Human IgG3 / IGHG3, with signal intensity decreasing proportionally with sample dilution, indicating robust and concentration-dependent detection. Captured IgG3 was detected using a biotinylated anti-human light chains (kappa + lambda) antibody (clone RM129), followed by alkaline phosphatase-conjugated streptavidin for signal development. These results reflect the intrinsic binding performance of clone RM119 and are representative of the characteristics retained in the biotinylated format of the Human IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody.



Human IgG3 Antibody Biotin IHC Human Lymphoid Tissue. Immunohistochemistry analysis of FFPE human lymphoid tissue demonstrates that the parent clone RM119 antibody produces scattered cytoplasmic staining in lymphoid cells consistent with immunoglobulin-producing cell populations, while surrounding cells remain largely negative. This staining pattern reflects detection of IgG3 / IGHG3 within antibody-secreting cells and is representative of the performance retained in the biotinylated format of the Human IgG3 Antibody / Biotinylated Anti-Human IgG3 Detection Antibody. Heat-induced epitope retrieval was performed using either pH6 citrate buffer or pH9 Tris-EDTA buffer prior to antibody incubation.



Human IgG3 Antibody Biotin ELISA Subclass Specificity Analysis. ELISA analysis of human immunoglobulins demonstrates that the parent clone RM119 antibody selectively recognizes Human IgG3, with strong signal observed across tested concentrations. No cross-reactivity is detected with IgG1, IgG2, or IgG4, or with other immunoglobulin classes including IgM, IgA, IgD, and IgE, or with mouse, rat, or goat IgG. This binding profile reflects heavy chain-directed specificity for Human IgG3 and is retained in the biotinylated format of the Human IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody.



Human IgG3 Antibody Biotin ELISA Titration Curve. ELISA titration using plates coated with serial dilutions of human IgG3 demonstrates strong, concentration-dependent binding of clone RM119 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 RM119 antibody and is representative of the characteristics retained in the biotinylated format of the Human IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody.

Description

Human immunoglobulin gamma 3 (IGHG3) encodes the heavy chain constant region of IgG3, the most functionally potent IgG subclass in human serum. IgG3 is distinguished by its extended hinge region, which provides increased flexibility and accessibility for antigen binding and contributes to its exceptional ability to activate complement and engage Fc receptors. This subclass exhibits the strongest C1q binding and complement activation capacity among IgG subclasses, making it a central driver of inflammatory immune responses and pathogen clearance.

Human IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody is engineered for enhanced sensitivity and subclass-specific detection in ELISA workflows utilizing streptavidin-based signal amplification systems. Human IgG3 antibody, also referred to as anti-IGHG3 antibody or anti-human IgG3 subclass antibody, is widely used for detecting and quantifying IgG3 with high specificity. This biotinylated recombinant rabbit monoclonal antibody clone RM119 provides selective recognition of the human IgG3 heavy chain while enabling amplified signal generation for improved assay performance.

In sandwich ELISA configurations, biotinylated detection antibodies provide increased assay sensitivity and expanded dynamic range through streptavidin-mediated amplification. The Human IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody binds selectively to captured IgG3, allowing accurate detection even at low analyte concentrations. Heavy chain-directed recognition ensures consistent detection across antibody populations regardless of light chain composition, making this approach particularly useful in complex biological samples.

Clone RM119 antibody targets the constant region of human IgG3 heavy chains, ensuring selective detection without cross-reactivity to other IgG subclasses including IgG1, IgG2, and IgG4, or to other immunoglobulin classes such as IgM, IgA, IgD, and IgE. The recombinant rabbit monoclonal format provides strong affinity, consistent performance, and reproducibility across ELISA platforms. Biotin conjugation enhances assay flexibility by enabling compatibility with streptavidin-HRP and streptavidin-AP detection systems commonly used in ELISA assays.

Measurement of IgG3 using biotinylated detection antibodies is widely applied in immunology research, vaccine development, and infectious disease studies. Because IgG3 plays a central role in complement activation and antibody-mediated effector function, accurate and sensitive detection provides critical insight into immune response strength, early response kinetics, and functional antibody activity. This antibody supports these applications by enabling sensitive and reliable detection of IGHG3-containing immunoglobulins in ELISA-based systems requiring enhanced signal amplification, high specificity, and consistent assay 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 IgG3 Antibody for ELISA / Biotinylated Anti-Human IgG3 ELISA Detection Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human IgG3 was used as the immunogen for this biotinylated recombinant Human IgG3 antibody.

Storage

Store the recombinant Human IgG3 antibody at -20oC.

Alternate Names

Biotin anti-human IgG3 antibody, Biotinylated IgG3 detection antibody, Human IgG3 biotin ELISA antibody, Immunoglobulin G3 biotin antibody, IgG3 Fc biotin antibody