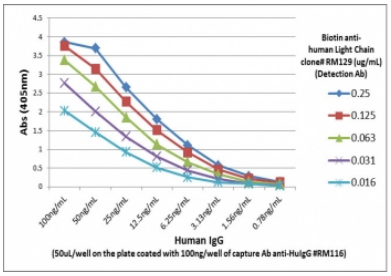
Human IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody [clone RM116] (R20177BTN)

Catalog No.	Formulation	Size
R20177BTN-50UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	50 ug

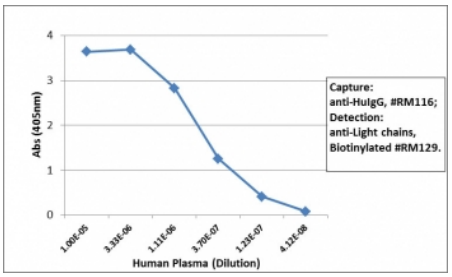
Recombinant RABBIT MONOCLONAL

Bulk quote request

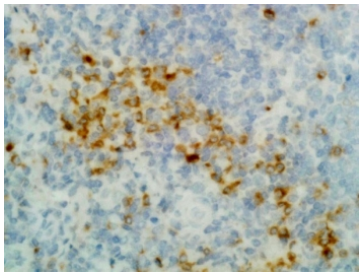
Availability	1-3 business days
Species Reactivity	Human
Format	Biotin Conjugate
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM116
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01857, P01859, P01860, P01861
Gene ID	3500, 3501, 3502, 3503
Applications	ELISA : 50ng/well-200ng/well (Capture); 0.05-0.2ug/ml (Detection) Immunocytochemistry : 0.5-2ug/ml Immunohistochemistry : 0.5-2ug/ml (1)
Limitations	This Human IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody is available for research use only.



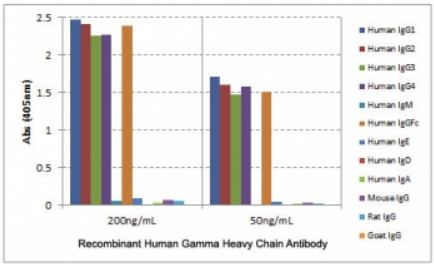
Human IgG Antibody Biotin Sandwich ELISA Human IgG. Sandwich ELISA analysis using purified human IgG demonstrates that the parent clone RM116 antibody functions effectively as a capture antibody for Human IgG / IGHG, with signal intensity decreasing proportionally with antigen concentration, indicating strong and concentration-dependent detection. Captured IgG 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 RM116 and are representative of the characteristics retained in the biotinylated format of the Human IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody.



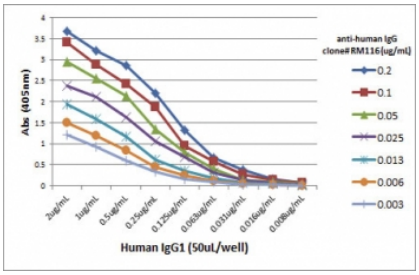
Human IgG Antibody Biotin Sandwich ELISA Human Plasma. Sandwich ELISA analysis demonstrates that the parent clone RM116 antibody functions effectively as a capture antibody for Human IgG / IGHG, with signal intensity decreasing proportionally with plasma dilution, indicating robust and concentration-dependent detection. Captured IgG 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 the intrinsic performance of clone RM116 and is representative of the characteristics retained in the biotinylated format of the Human IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody.



Human IgG Antibody Biotin Immunohistochemistry Human Tonsil Tissue. Immunohistochemistry analysis of FFPE human tonsil demonstrates that the parent clone RM116 antibody produces cytoplasmic staining in plasma cells and B cell-rich regions, with minimal background in surrounding stromal cells. This staining pattern supports detection of IgG / IGHG within antibody-producing cells and is representative of the performance retained in the biotinylated format of the Human IgG Antibody / Biotinylated Anti-Human IgG Detection Antibody. Heat-induced epitope retrieval was performed using a standard buffer prior to antibody incubation.



Human IgG Antibody Biotin ELISA Subclass Specificity Analysis. ELISA analysis of human immunoglobulins demonstrates that the parent clone RM116 antibody selectively recognizes Human IgG / IGHG, with strong signal observed for IgG1, IgG2, IgG3, and IgG4 heavy chains as well as the Fc region of IgG across tested concentrations. No cross-reactivity is detected with other immunoglobulin heavy chains or with mouse, rat, or goat IgG. This binding profile reflects broad subclass recognition and is representative of the performance retained in the biotinylated format of the Human IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody.



Human IgG Antibody Biotin ELISA Titration Curve. ELISA titration using plates coated with serial dilutions of human IgG1 demonstrates strong, concentration-dependent binding of clone RM116 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 RM116 antibody and is representative of the characteristics retained in the biotinylated format of the Human IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody.

Description

Human immunoglobulin gamma (IGHG) encodes the heavy chain constant regions of IgG, the predominant immunoglobulin class in human serum and a key component of adaptive immunity. IgG includes multiple subclasses such as IgG1, IgG2, IgG3, and IgG4, which share conserved structural elements including the Fc region that mediates effector functions and interactions with immune cells. Due to its high abundance and long half-life, IgG serves as a primary marker of sustained immune responses and antibody-mediated immunity.

Human IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody is engineered for enhanced sensitivity and broad detection of total IgG in ELISA workflows utilizing streptavidin-based signal amplification systems. Human IgG antibody, also referred to as anti-IGHG antibody or IgG immunoglobulin antibody, enables accurate detection of IgG across subclasses in biological samples including serum, plasma, and cell culture supernatants. This biotinylated recombinant rabbit monoclonal antibody clone RM116 provides selective recognition of human IgG 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 IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody binds selectively to IgG, allowing accurate detection across a wide concentration range while maintaining specificity against non-IgG immunoglobulin classes. This is particularly useful in assays involving antibody quantification, immune response monitoring, and therapeutic antibody measurement where reliable signal amplification is required.

Clone RM116 antibody recognizes human IgG, supporting detection across IgG subclasses while maintaining specificity against non-IgG 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-based detection systems commonly used in ELISA assays.

Measurement of total IgG using biotinylated detection antibodies is widely applied in immunology research, therapeutic antibody development, and diagnostic assay design. Because IgG reflects established immune responses and antibody production, accurate detection provides critical insight into antibody titer, immune status, and long-term immunity. This antibody supports these applications by enabling sensitive and reliable detection of IGHG-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 IgG Antibody for ELISA / Biotinylated Anti-Human IgG Detection Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

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

Storage

Store the recombinant Human IgG antibody at -20oC.

Alternate Names

Biotin anti-human IgG antibody, Biotinylated IGHG antibody, Human IgG biotin ELISA antibody, IgG detection biotin antibody, pan-IgG antibody