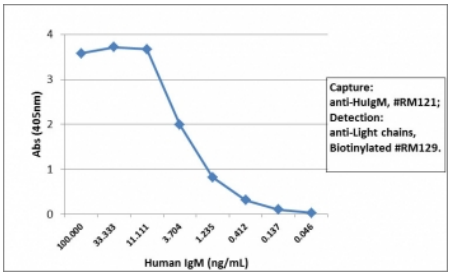
Human IgM Antibody for ELISA / Biotinylated Anti-IgM Detection Antibody [clone RM121] (R20181BTN)

Catalog No.	Formulation	Size
R20181BTN-50UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	50 ug

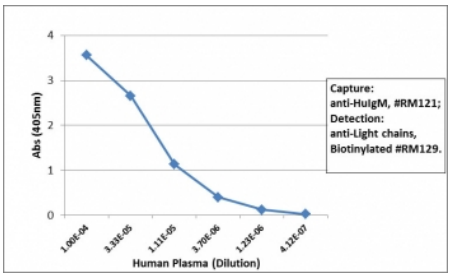
Recombinant RABBIT MONOCLONAL

Bulk quote request

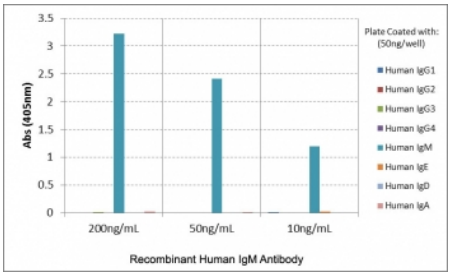
Availability	1-3 business days
Species Reactivity	Human
Format	Biotin Conjugate
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM121
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01871
Gene ID	3507
Applications	ELISA : 50ng/well-200ng/well (Capture); 0.05-0.2ug/ml (Detection) Immunocytochemistry : 0.5-2ug/ml Immunohistochemistry : 0.5-2ug/ml (1)
Limitations	This Human IgM Antibody for ELISA / Biotinylated Anti-IgM Detection Antibody is available for research use only.



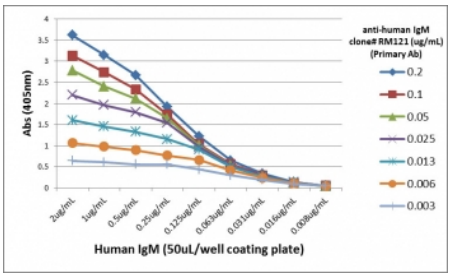
Human IgM Antibody Biotin Sandwich ELISA Human IgM. Sandwich ELISA analysis using purified human IgM demonstrates that the parent clone RM121 antibody functions effectively as a capture antibody for Human IgM / IGHM, with signal intensity decreasing proportionally with antigen concentration, indicating strong and concentration-dependent detection. Captured IgM 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 RM121 and are representative of the characteristics retained in the biotinylated format of the Human IgM Antibody for ELISA / Biotinylated Anti-IgM Detection Antibody.



Human IgM Antibody Biotin Sandwich ELISA Human Plasma. Sandwich ELISA analysis demonstrates that the parent clone RM121 antibody functions effectively as a capture antibody for Human IgM / IGHM, with signal intensity decreasing proportionally with plasma dilution, indicating sensitive and concentration-dependent detection. Captured IgM 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 RM121 and is representative of the characteristics retained in the biotinylated format of the Human IgM Antibody for ELISA / Biotinylated Anti-IgM Detection Antibody.



Human IgM Antibody Biotin ELISA Subclass Specificity Analysis. ELISA analysis of human immunoglobulins demonstrates that the parent clone RM121 antibody selectively recognizes Human IgM / IGHM, with strong signal observed across tested concentrations. No cross-reactivity is detected with other immunoglobulin classes including IgG, IgE, IgD, or IgA. This binding profile reflects selective recognition of IgM and is representative of the performance retained in the biotinylated format of the Human IgM Antibody for ELISA / Biotinylated Anti-IgM Detection Antibody.



Human IgM Antibody Biotin ELISA Titration Curve. ELISA titration using plates coated with serial dilutions of human IgM demonstrates strong, concentration-dependent binding of clone RM121 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 RM121 antibody and is representative of the characteristics retained in the biotinylated format of the Human IgM Antibody for ELISA / Biotinylated Anti-IgM Detection Antibody.

Description

Human immunoglobulin mu (IGHM) encodes the heavy chain constant region of IgM, an immunoglobulin isotype that serves as the primary antibody produced during early immune responses. IgM is predominantly secreted as a pentameric molecule, enabling high avidity antigen binding and efficient activation of the complement cascade. This structural configuration allows IgM to function as a first-line humoral defense, providing rapid immune protection prior to the development of class-switched antibody responses.

Human IgM Antibody for ELISA / Biotinylated Anti-IgM Detection Antibody is engineered for enhanced sensitivity and selective detection of IgM in ELISA workflows utilizing streptavidin-based signal amplification systems. Human IgM antibody, also referred to as anti-IGHM antibody or IgM immunoglobulin antibody, enables accurate detection of IgM in biological samples and supports analysis of early immune responses. This biotinylated recombinant rabbit monoclonal antibody clone RM121 provides selective recognition of human IgM while enabling amplified signal generation for improved assay performance in low-abundance detection scenarios.

In sandwich ELISA configurations, biotinylated detection antibodies provide increased assay sensitivity and expanded dynamic range through streptavidin-mediated amplification. The Human IgM Antibody for ELISA / Biotinylated Anti-IgM Detection Antibody binds selectively to IgM, allowing accurate detection even at low analyte concentrations while maintaining high specificity. This is particularly important in serological studies, infection monitoring, and immune profiling where IgM serves as an indicator of recent exposure and early immune activation.

Clone RM121 antibody recognizes human IgM, ensuring selective detection without cross-reactivity to other immunoglobulin classes such as IgG, IgA, IgD, or 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 IgM using biotinylated detection antibodies is widely applied in immunology research, infectious disease studies, and diagnostic assay development. Because IgM is produced early following antigen exposure and reflects acute-phase immune activity, accurate detection provides critical insight into immune status and disease progression. This antibody supports these applications by enabling sensitive and reliable detection of IGHM-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 IgM Antibody for ELISA / Biotinylated Anti-IgM 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 IgM was used as the immunogen for this biotinylated recombinant Human IgM antibody.

Storage

Store the recombinant Human IgM antibody at -20oC.

Alternate Names

Biotin anti-IgM antibody, Biotinylated IGHM antibody, Human IgM biotin ELISA antibody, IgM detection biotin antibody, IgM ELISA antibody