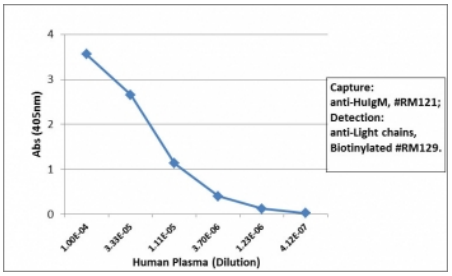
Human IgM Antibody for ELISA / Anti-IgM Detection Antibody [clone RM121] (R20181)

Catalog No.	Formulation	Size
R20181-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

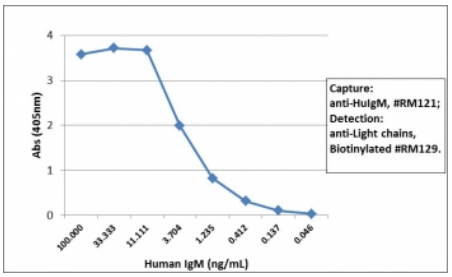
Recombinant RABBIT MONOCLONAL

Bulk quote request

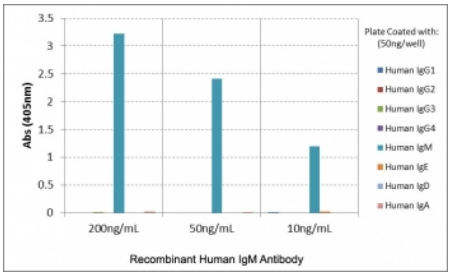
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM121
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01871
Gene ID	3507
Applications	ELISA: 50ng/well-200ng/well (Capture);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



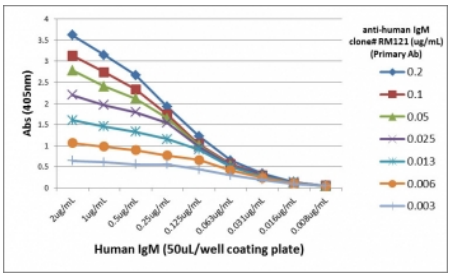
Human IgM Antibody for ELISA Sandwich ELISA Human Plasma. Sandwich ELISA analysis demonstrates that clone RM121 functions effectively as a capture antibody for Human IgM / IGHM, with signal intensity decreasing proportionally with plasma dilution, indicating sensitive and concentration-dependent detection. 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. The assay supports reliable detection of pentameric IgM in plasma and highlights the utility of this Human IgM Antibody for ELISA / Anti-IgM Detection Antibody in ELISA-based immunoassays.



Human IgM Antibody for ELISA Sandwich ELISA Human IgM. Sandwich ELISA analysis using purified human IgM demonstrates that clone RM121 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. This assay configuration supports accurate quantification of IgM and highlights the utility of this Human IgM Antibody for ELISA / Anti-IgM Detection Antibody in sandwich ELISA-based immunoassays.



Human IgM Antibody for ELISA Subclass Specificity Analysis. ELISA analysis of human immunoglobulins demonstrates that clone RM121 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 supports highly specific detection of IgM and highlights the utility of this Human IgM Antibody for ELISA / Anti-IgM Detection Antibody for subclass-specific ELISA-based immunoassays.



Human IgM Antibody for ELISA Titration Curve. ELISA titration analysis 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 performance. Detection was performed using an alkaline phosphatase-conjugated anti-rabbit IgG secondary antibody, supporting reliable quantification of Human IgM / IGHM in ELISA-based immunoassays.

Description

Human immunoglobulin mu (IGHM) encodes the heavy chain constant region of IgM, the first antibody isotype produced during primary immune responses and a key marker of early immune activation. IgM is predominantly secreted as a pentameric complex, composed of five immunoglobulin units linked by a joining chain, which enables exceptionally high avidity binding to antigen. This multivalent structure allows IgM to efficiently capture targets even at low affinity and strongly activate the classical complement pathway, making it a critical component of the innate-like humoral immune response.

Human IgM Antibody for ELISA / Anti-IgM Detection Antibody is specifically optimized for sensitive and selective detection of IgM in ELISA-based immunoassays. Human IgM antibody, also known as anti-IGHM antibody or IgM immunoglobulin antibody, enables accurate quantification of IgM in serum, plasma, and cell culture samples. This recombinant rabbit monoclonal antibody clone RM121 recognizes human IgM and provides a reliable tool for measuring early-stage antibody responses in biological matrices where IgM levels reflect recent or ongoing immune activation.

In ELISA workflows, IgM detection is particularly valuable in serological assays where it serves as an indicator of acute infection or early immune response prior to class switching to IgG or IgA. The pentameric structure of IgM contributes to strong signal generation, but selective detection is required to avoid background from more abundant immunoglobulin classes. The Human IgM Antibody for ELISA / Anti-IgM Detection Antibody functions effectively in ELISA formats to support precise quantification of IgM with minimal cross-reactivity and high signal fidelity, enabling accurate interpretation of immune status.

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 high affinity binding, strong reproducibility, and minimal lot-to-lot variability, supporting consistent ELISA performance across

experiments. This antibody is well suited for applications requiring reliable detection of IgM in complex biological samples including serum and plasma.

Detection of IgM is widely applied in immunology research, infectious disease studies, and diagnostic assay development. Because IgM is produced rapidly following antigen exposure and declines as adaptive immune responses mature, its measurement provides critical insight into the timing and progression of immune responses. This antibody supports these applications by enabling sensitive and specific detection of IGHM-containing immunoglobulins in ELISA-based systems requiring high performance, reproducibility, and accurate quantification.

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 / 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 recombinant Human IgM antibody.

Storage

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

Alternate Names

Anti-IgM ELISA antibody, IGHM detection antibody, Human IgM detection antibody, IgM immunoglobulin antibody, IgM ELISA detection antibody

Copyright © NSJ Bioreagents. All rights reserved.