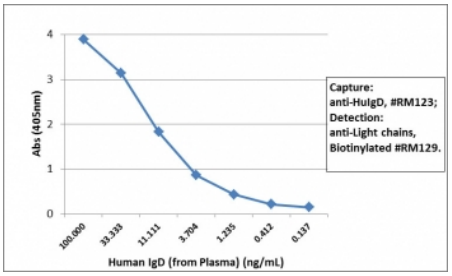
Human IgD Antibody for ELISA / IgD B Cell Marker Detection Antibody [clone RM123] (R20185)

Catalog No.	Formulation	Size
R20185-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

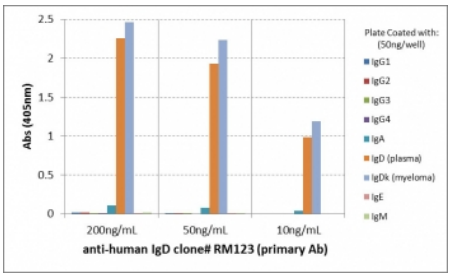
Recombinant RABBIT MONOCLONAL

Bulk quote request

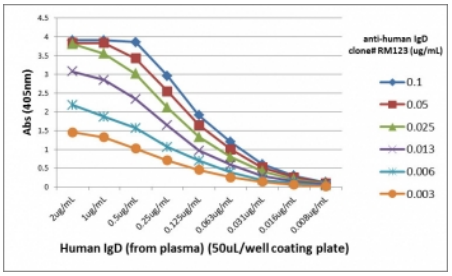
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM123
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01880
Gene ID	3495
Applications	ELISA: 25ng/well-200ng/well (Capture); 0.01-0.1ug/ml (Detection)
Limitations	This Human IgD Antibody for ELISA / IgD B Cell Marker Detection Antibody is available for research use only.



Human IgD Antibody for ELISA Sandwich ELISA Human Plasma. Sandwich ELISA analysis demonstrates that clone RM123 functions effectively as a capture antibody for Human IgD / IGHD, with signal intensity decreasing proportionally with plasma dilution, indicating sensitive and concentration-dependent detection. Captured IgD 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 low-abundance IgD in plasma and highlights the utility of this Human IgD Antibody for ELISA / IgD B Cell Marker Detection Antibody in ELISA-based immunoassays.



Human IgD Antibody for ELISA Subclass Specificity Analysis. ELISA analysis of human immunoglobulins demonstrates that clone RM123 selectively recognizes Human IgD / IGHD, with strong signal observed for IgD derived from human plasma and IgD kappa from human myeloma samples across tested concentrations. No cross-reactivity is detected with other immunoglobulin classes including IgG, IgM, IgA, or IgE. This binding profile supports highly specific detection of IgD and highlights the utility of this Human IgD Antibody for ELISA / IgD B Cell Marker Detection Antibody for subclass-specific ELISA-based immunoassays.



Human IgD Antibody for ELISA Titration Curve. ELISA titration analysis using plates coated with serial dilutions of human IgD derived from plasma demonstrates strong, concentration-dependent binding of clone RM123 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 IgD / IGHD in ELISA-based immunoassays.

Description

Human immunoglobulin delta (IGHD) encodes the heavy chain constant region of IgD, a distinct immunoglobulin isotype primarily expressed on the surface of naive B cells as a key component of the B cell receptor complex. IgD is co-expressed with IgM during early B cell development and participates in antigen recognition, signal transduction, and regulation of B cell activation. This coordinated expression of IgM and IgD defines the naive B cell stage and plays a central role in maintaining immune surveillance and tolerance prior to antigen-driven class switching.

Human IgD Antibody for ELISA / IgD B Cell Marker Detection Antibody is specifically optimized for sensitive and selective detection of IgD in ELISA-based immunoassays. Human IgD antibody, also known as anti-IGHD antibody or IgD immunoglobulin antibody, enables detection of IgD in biological samples and supports analysis of B cell-associated immune responses. This recombinant rabbit monoclonal antibody clone RM123 recognizes human IgD and provides a reliable tool for measuring IgD in serum, plasma, and cell culture systems where concentrations are typically low compared to other immunoglobulin classes.

In ELISA workflows, detection of IgD presents a unique analytical challenge due to its relatively low abundance in circulation and its dynamic regulation during B cell maturation and activation. The Human IgD Antibody for ELISA / IgD B Cell Marker Detection Antibody functions effectively in ELISA formats to enable accurate quantification of IgD while minimizing background from other immunoglobulin classes. This makes it particularly valuable in studies of naive B cell populations, early immune responses, and immunological profiling where IgD levels provide insight into immune status.

Clone RM123 antibody recognizes human IgD, ensuring selective detection without cross-reactivity to other immunoglobulin classes such as IgG, IgA, IgM, or IgE. The recombinant rabbit monoclonal format provides high affinity binding, strong reproducibility, and minimal lot-to-lot variability, supporting consistent assay performance across experiments. This antibody is well suited for applications requiring precise and sensitive detection of IgD in complex biological matrices.

Detection of IgD is widely applied in immunology research, particularly in studies of B cell development, immune system regulation, and mucosal immunity. In addition to its role on naive B cells, IgD has been implicated in interactions with basophils and other immune cells, suggesting broader functions in immune modulation. Because IgD expression reflects early-stage B cell biology and immune readiness, accurate measurement provides valuable insight into immune dynamics and antibody regulation. This antibody supports these applications by enabling reliable detection of IGHD-containing immunoglobulins in ELISA-based systems requiring high sensitivity, specificity, and consistent 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 IgD Antibody for ELISA / IgD B Cell Marker Detection Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human IgD was used as the immunogen for this recombinant Human IgD antibody.

Storage

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

Alternate Names

IgD B cell marker antibody, IGHD detection antibody, Human IgD ELISA antibody, IgD immunoglobulin antibody, IgD naive B cell antibody

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