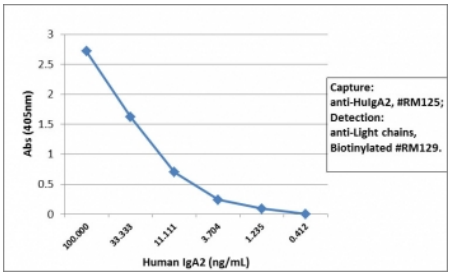
Human IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody [clone RM125] (R20184BTN)

Catalog No.	Formulation	Size
R20184BTN-50UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	50 ug

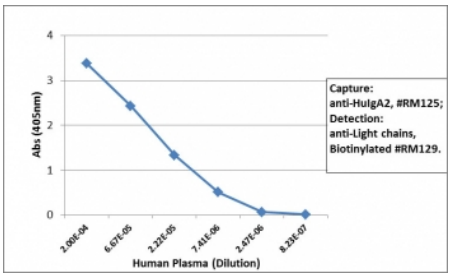
Recombinant RABBIT MONOCLONAL

Bulk quote request

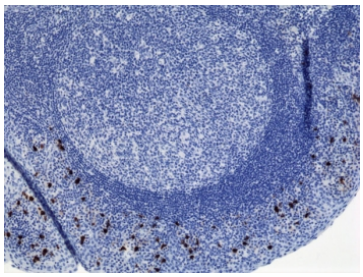
Availability	1-3 business days
Species Reactivity	Human
Format	Biotin Conjugate
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM125
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01877
Gene ID	3494
Applications	ELISA : 50ng/well-200ng/well (Capture); 0.05-0.2ug/ml (Detection) Immunocytochemistry : 0.5-2ug/ml Immunohistochemistry : 0.1-1ug/ml
Limitations	This Human IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody is available for research use only.



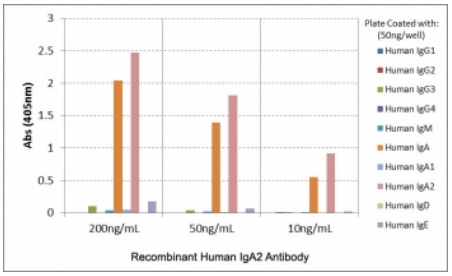
Human IgA2 Antibody Biotin Sandwich ELISA Human IgA2. Sandwich ELISA analysis using purified human IgA2 demonstrates that the parent clone RM125 antibody functions effectively as a capture antibody for Human IgA2 / IGHA2, with signal intensity decreasing proportionally with antigen concentration, indicating strong and concentration-dependent detection. Captured IgA2 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 RM125 and are representative of the characteristics retained in the biotinylated format of the Human IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody.



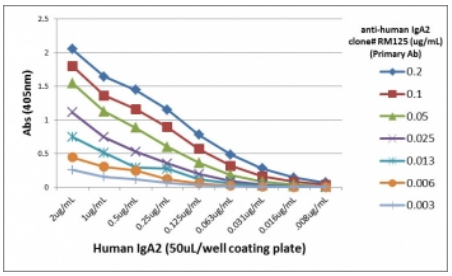
Human IgA2 Antibody Biotin Sandwich ELISA Human Plasma. Sandwich ELISA analysis demonstrates that the parent clone RM125 antibody functions effectively as a capture antibody for Human IgA2 / IGHA2, with signal intensity decreasing proportionally with plasma dilution, indicating strong and concentration-dependent detection. Captured IgA2 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 RM125 and is representative of the characteristics retained in the biotinylated format of the Human IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody.



Human IgA2 Antibody Biotin Immunohistochemistry Human Tonsil Tissue. Immunohistochemistry analysis of FFPE human tonsil tissue demonstrates that the parent clone RM125 antibody produces cytoplasmic staining in plasma cells distributed within interfollicular and subepithelial regions, with minimal background in surrounding lymphoid cells. This staining pattern supports detection of IgA2 / IGHA2 in mucosal-associated antibody-producing cells and is representative of the performance retained in the biotinylated format of the Human IgA2 Antibody / Biotinylated Anti-IgA2 Detection Antibody. Heat-induced epitope retrieval was performed using pH6 citrate buffer or pH9 Tris-EDTA buffer prior to antibody incubation.



Human IgA2 Antibody Biotin ELISA Subclass Specificity Analysis. ELISA analysis of human immunoglobulins demonstrates that the parent clone RM125 antibody selectively recognizes Human IgA2 / IGHA2, with strong signal observed across tested concentrations, indicating specific binding to the alpha 2 heavy chain. No detectable cross-reactivity is observed with IgA1 or other immunoglobulin classes including IgG1, IgG2, IgG3, IgG4, IgM, IgD, or IgE. This binding profile reflects highly selective IgA2 recognition and is representative of the performance retained in the biotinylated format of the Human IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody.



Human IgA2 Antibody Biotin ELISA Titration Curve. ELISA titration using plates coated with serial dilutions of human IgA2 demonstrates strong, concentration-dependent binding of clone RM125 across a broad dynamic range. Signal intensity decreases proportionally with antibody dilution and antigen concentration, confirming consistent binding kinetics and high sensitivity. 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 RM125 antibody and is representative of the characteristics retained in the biotinylated format of the Human IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody.

Description

Human immunoglobulin alpha 2 (IGHA2) encodes the heavy chain constant region of IgA2, a subclass of IgA that is enriched at mucosal surfaces and serves as a key mediator of barrier immunity. Unlike IgA1, IgA2 contains a shorter hinge region with distinct glycosylation features that provide increased resistance to proteolytic degradation by microbial enzymes. This structural adaptation allows IgA2 to function effectively in protease-rich environments such as the gastrointestinal tract, where it contributes to immune exclusion and maintenance of microbial homeostasis.

Human IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody is engineered for enhanced sensitivity and selective detection of IgA2 in ELISA workflows utilizing streptavidin-based signal amplification systems. Human IgA2 antibody, also referred to as anti-IGHA2 antibody or IgA2 immunoglobulin antibody, enables accurate detection of IgA2 in mucosal secretions, serum, and other biological samples. This biotinylated recombinant rabbit monoclonal antibody clone RM125 provides selective recognition of human IgA2 while enabling amplified signal generation for improved assay performance, particularly in low-abundance or complex sample types.

In sandwich ELISA configurations, biotinylated detection antibodies provide increased assay sensitivity and expanded dynamic range through streptavidin-mediated amplification. The Human IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody supports accurate detection across a wide concentration range while maintaining specificity against other immunoglobulin classes and subclasses. This is especially valuable in studies requiring precise quantification of IgA2 and differentiation from IgA1 in mixed biological samples derived from mucosal tissues or secretions.

Clone RM125 antibody recognizes human IgA2 while maintaining specificity against IgA1 and other immunoglobulin classes including IgG, IgM, 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 IgA2 using biotinylated detection antibodies is widely applied in immunology research, microbiome studies, and investigations of mucosal immune function. Because IgA2 is structurally adapted for stability in barrier environments, accurate detection provides critical insight into immune responses at epithelial surfaces, microbial interactions, and host defense mechanisms. This antibody supports these applications by enabling sensitive and reliable detection of IGHA2-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 IgA2 Antibody for ELISA / Biotinylated Anti-IgA2 Detection Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human IgA2 was used as the immunogen for this biotinylated recombinant Human IgA2 antibody.

Storage

Store the recombinant Human IgA2 antibody at -20oC.

Alternate Names

Biotin anti-IgA2 antibody, Biotinylated IGHA2 antibody, Human IgA2 biotin ELISA antibody, IgA2 detection biotin antibody, IgA subclass 2 antibody