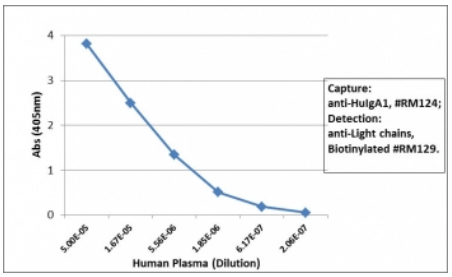
Recombinant Human IgA1 Antibody [clone RM124] (R20183)

Catalog No.	Formulation	Size
R20183-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

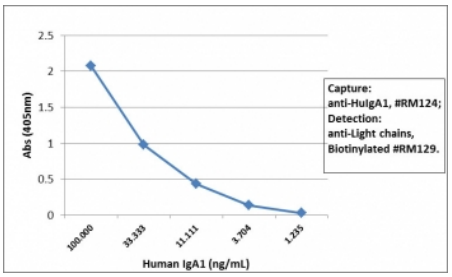
Recombinant RABBIT MONOCLONAL

Bulk quote request

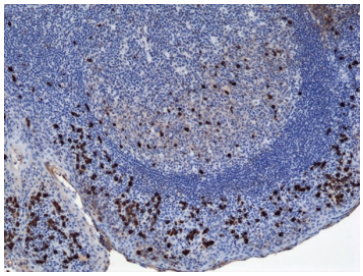
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM124
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01876
Gene ID	3493
Applications	ELISA : 50ng/well-200ng/well (Capture); 0.05-0.2ug/ml (Detection) Immunocytochemistry : 0.5-2ug/ml Immunohistochemistry : 0.1-1ug/ml
Limitations	This recombinant Human IgA1 antibody is available for research use only.



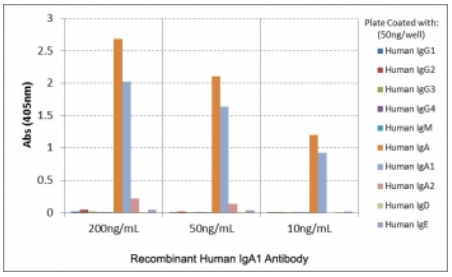
Sandwich ELISA of human plasma using the recombinant human plasma antibody as the capture (100ng/well), and biotinylated anti-human light chains (?+?) antibody clone RM129 as the detect, followed by an alkaline phosphatase conjugated streptavidin.



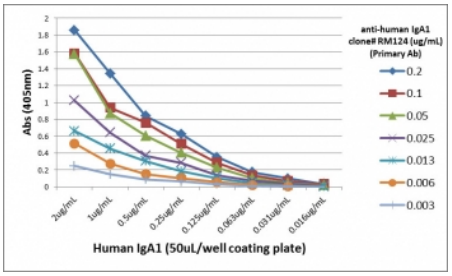
Sandwich ELISA of human IgA1 using the recombinant Human IgA1 antibody as the capture (100ng/well), and biotinylated anti-human light chains (?+?) antibody clone RM129 as the detect, followed by an alkaline phosphatase conjugated streptavidin.



IHC testing of FFPE human tonsil tissue with recombinant Human IgA1 antibody. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.



ELISA of human immunoglobulins shows the recombinant Human IgA1 antibody reacts only to IgA. Very slightly cross reacts with IgA2. No cross reactivity with IgG, IgM, IgD, or IgE.



ELISA Titration: the plate was coated with different amounts of human IgA1. A serial dilution of recombinant Human IgA1 antibody was used as the primary and an alkaline phosphatase conjugated anti-rabbit IgG as the secondary.

Description

The Recombinant Human IgA1 antibody is produced as a recombinant reagent that represents the IgA1 subclass of human immunoglobulin A. IgA1 is the predominant subclass in human serum and mucosal secretions, accounting for the majority of IgA found at epithelial surfaces. It plays an essential role in immune defense by neutralizing pathogens and toxins at mucosal barriers, thereby preventing colonization and infection. The Recombinant Human IgA1 antibody preserves the structural features of this subclass while being engineered without antigen specificity, providing an important isotype control and reference reagent in immunoassays.

Structurally, IgA1 consists of two heavy and two light chains, forming the classic Y shaped antibody structure. It contains a hinge region that is longer than that of IgA2, giving it greater flexibility but also making it more susceptible to cleavage by bacterial proteases. The Fc portion of IgA1 binds to FcÎ±RI receptors, enabling effector functions such as phagocytosis and cytokine release. The Recombinant Human IgA1 antibody replicates these features but lacks antigen recognition, allowing it to serve as a negative control for background staining and nonspecific interactions in experimental systems.

The Recombinant Human IgA1 antibody is widely used in ELISA to verify assay specificity and to distinguish between true antigen antibody binding and nonspecific adherence. In flow cytometry, it provides baseline fluorescence controls and identifies nonspecific binding to FcÎ± receptors. In immunohistochemistry, the Recombinant Human IgA1 antibody highlights background reactivity in mucosal and lymphoid tissues. Recombinant production ensures lot to lot consistency, avoiding variability associated with hybridoma derived or serum derived reagents.

This reagent is also valuable in assay development and optimization, serving as a substitute during method refinement or secondary antibody validation. In clinical and translational research, analysis of IgA1 expression is important for understanding host defense at mucosal sites. IgA1 deficiencies or imbalances with IgA2 can contribute to recurrent infections, autoimmune disorders, and inflammatory diseases. Synonym terms such as recombinant human immunoglobulin A1 antibody and recombinant IgA1 isotype control antibody improve accessibility for users searching

under alternate nomenclature.

By providing validated and reproducible detection, the Recombinant Human IgA1 antibody supports accurate interpretation of immunoassay results. NSJ Bioreagents ensures strict quality control for this reagent, giving investigators confidence in its consistent performance across multiple applications. With the Recombinant Human IgA1 antibody, researchers can reliably differentiate antigen specific responses from nonspecific background, strengthening studies of mucosal immunity and systemic immunology.

This recombinant Human IgA1 antibody reacts to human IgA1, and very slightly cross reacts with IgA2. No cross reactivity with human IgG, IgM, IgD, or IgE.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Human IgA1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human IgA was used as the immunogen for this recombinant Human IgA1 antibody.

Storage

Store the recombinant Human IgA1 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).