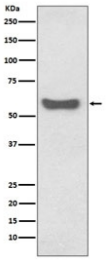
IgA Antibody AOII-9 / Rabbit Monoclonal [clone AOII-9] (RQ5074)

Catalog No.	Formulation	Size
RQ5074	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	AOII-9
Purity	Affinity purified
UniProt	P01876
Applications	Western blot: 1:500-1:2000
Limitations	This IgA Antibody AOII-9 is available for research use only.



Western blot IgA Antibody AOII-9 Rabbit Monoclonal in human serum. Human serum lysate was analyzed by western blot using IgA Antibody Rabbit Monoclonal AOII-9. A band is detected at approximately 55-60 kDa, consistent with the predicted molecular weight of the Immunoglobulin alpha heavy chain (IGHA), which forms the heavy chain component of IgA antibodies. The detected band corresponds to the IgA heavy chain present in circulating serum immunoglobulins and reflects the expected migration of reduced IgA heavy chains during SDS-PAGE analysis.

Description

Immunoglobulin alpha heavy chain (IGHA) is the defining heavy chain component of immunoglobulin A (IgA), an antibody class that plays a central role in mucosal immune protection. IgA antibodies are produced by differentiated B lymphocytes and plasma cells and function as an important defense mechanism at epithelial surfaces exposed to environmental pathogens. The IgA Antibody AOII-9 Rabbit Monoclonal recognizes the alpha heavy chain of IgA and is commonly used to examine IgA-producing plasma cells and antibody-mediated immune responses in lymphoid and mucosal tissues. IgA antibodies are abundant in mucosal organs including the gastrointestinal tract, respiratory tract, and genitourinary tract

where they contribute to immune defense by binding pathogens and preventing microbial attachment to epithelial surfaces.

IgA antibody reagents are widely used to detect Immunoglobulin A, also referred to as IgA or Immunoglobulin alpha heavy chain in immunology literature. The IGHA gene encodes the heavy chain that defines the IgA antibody class. Humans produce two subclasses of IgA, IgA1 and IgA2, both of which contain the IGHA heavy chain but differ in hinge region structure and tissue distribution. Plasma cells located in mucosa-associated lymphoid tissues such as tonsils, lymph nodes, Peyer's patches, and intestinal mucosa produce IgA antibodies that are secreted into mucosal fluids where they contribute to immune surveillance and pathogen neutralization.

Secretory IgA is generated when polymeric IgA antibodies interact with the polymeric immunoglobulin receptor on epithelial cells and are transported across the epithelial barrier. During this process the antibody is released into mucosal secretions as a stabilized complex containing a secretory component that protects the immunoglobulin from enzymatic degradation. In mucosal environments IgA antibodies bind microbial antigens and toxins, preventing attachment to epithelial surfaces and limiting inflammatory responses while maintaining immune protection.

Because IgA-producing plasma cells are widely distributed in lymphoid tissues and mucosal immune sites, an IgA antibody is frequently used to identify plasma cell populations and study humoral immune responses. Detection of Immunoglobulin alpha heavy chain expression provides insight into antibody production, plasma cell differentiation, and mucosal immune activity. Increased numbers of IgA-positive plasma cells may be observed in inflammatory responses, immune reactions to infection, and disorders involving B cell or plasma cell differentiation, making IGHA expression an informative marker for investigating antibody-mediated immunity.

For an antibody developed for total human IgA detection, see our Human IgA Antibody for ELISA / Anti-IgA Detection Antibody page.

Application Notes

Optimal dilution of the IgA Antibody AOII-9 / Rabbit Monoclonal should be determined by the researcher.

Immunogen

A synthetic peptide specific to human IgA / IGHA1 was used as the immunogen for the rabbit monoclonal IgA Antibody AOII-9.

Storage

Store the IgA Antibody AOII-9 at -20oC.

Alternate Names

Immunoglobulin A antibody, IGHA antibody, Ig alpha heavy chain antibody, IGHA1 antibody, IGHA2 antibody

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